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CENTRAL PATENTS INDEX

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WEEK B07
4 APRIL 79
11896B - 14157B

Section D:

FOOD
DETERGENTS

ABSTRACTS

INDEXES

- **II – PATENTEE**
- **V – BASIC NUMBER**
- **VII – PATENT NUMBER**
- **VIII – PRIORITY CONCORDANCE**

COUNTRY	PUB. DATE(S)	NUMBER RANGE
BELGIUM		
-Delayed	6 FEB - 12 FEB 79	869,567 - 869,724
-Non Delayed	1 FEB 79	870,917 - 870,077
BRAZIL	6 FEB 79	7,704,783 - 7,806,239
CANADA	30 JAN 79	1,047,201 - 1,047,700
DENMARK	22 JAN 79	7,702,721 - 7,802,847
E.GERMANY	6 DEC 78 + 13 DEC 78 + 20 DEC 78 + 27 DEC 78	133,067 - 133,387
W.GERMANY		
-DAS	8 FEB 79	1,470,087 - 2,828,304
-OLS	8 FEB 79	2,242,181 - 2,834,381
EUROPE	21 FEB 79	00,689 - 00,858
FRANCE*	8 DEC 78 (BOPI 12 JAN 79)	2,390,078 - 2,390,890
UNITED KINGDOM	14 FEB 79	1,539,351 - 1,540,870 2,001,831 - 2,002,210
HUNGARY	27 JAN 79	H002,398 - H002,401 T015,921 - T016,029
JAPAN		
-Unexamined	—	46,006,064 - 53,029,091
	5 JAN - 13 JAN 79	54,000,001 - 54,004,800
-Examined	18 JAN - 24 JAN 79	79,000,881 - 79,001,440
NETHERLANDS	29 JAN - 4 FEB 79	7,610,074 - 7,810,718
NORWAY	22 JAN 79	7,702,192 - 7,803,332
PORTUGAL	24 JAN 79	57,925 - 67,488
SOVIET UNION	—	599,085 - 600,489
SWEDEN	29 JAN 79	7,705,660 - 7,807,623
UNITED STATES		
-Reissues	6 FEB 79	Re29,897 - Re29,903
-Defensives	6 FEB 79	T979,001 - T979,008
-Patents	6 FEB 79	4,137,572 - 4,138,741

*Printed patents actually published late January, 1979

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Arrangement of Abstracts

See Appendix I for definition of 'Major' and 'Minor' Countries.

'MAJOR' COUNTRIES – An alerting abstract of every basic and examined equivalent document is provided except for equivalents from Canada, East Germany and Switzerland. The abstracts are arranged in CPI class order and within any one of the 135 classes are in country and patent number order.

'MINOR' COUNTRIES – Basic headings are included in sequence with the entries from the 'Major' countries.

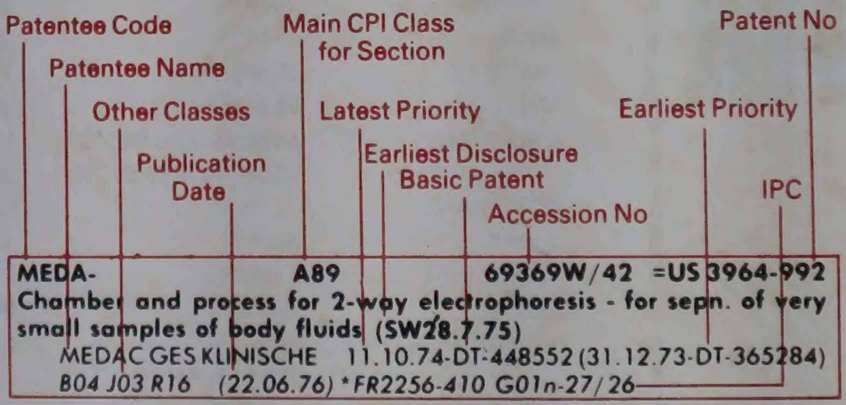
CPI Section Headings

See inside cover for further details.

A	Polymer Chemistry
A+	Polymer Applns.
AE	Polymer & General Chemistry
B	Pharmaceuticals
C	Agricultural Chemistry
D	Food, Disinfectants, Detergents
E	General Chemistry
E+	General Chemistry Applns.
F	Textiles, Paper, Cellulose
G	Printing, Coating, Photographic Chemistry
H	Petroleum
J	Chemical Engineering
K	Nucleonics, Explosives, Protection
L	Refractories, Ceramics
M	Metallurgy

Typical Abstract Heading

See CPI/WPI Instruction Manual No. 1A for explanation of the various flagged descriptors.


Patentee Code
Patentee Name
Other Classes
Publication Date
Main CPI Class for Section
Latest Priority
Earliest Disclosure Basic Patent
Accession No
Earliest Priority
IPC
Patent No

MEDA- A89 69369W/42 =US 3964-992
Chamber and process for 2-way electrophoresis - for sepn. of very small samples of body fluids (SW28.7.75)
MEDAC GES KLINISCHE 11.10.74-DT-448552 (31.12.73-DT-365284)
*B04 J03 R16 (22.06.76) *FR2256-410 G01n-27/26*

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D1: FOOD; FERMENTATION

D11: BAKING

HAYB D11 57180V/32 =DS 2402-437
Low calorie food esp bakery prodt - contains pullulane and amylose, having no tendency to stick to the teeth
HAYASHIBARA BIOCHEM 19.01.73-JA-008406
*(08.02.79) *DT2402-437 A21d-13*

A baked prod. contains pullulan (I) and wheat flour or starch (II) in which the wt. ratio of (I):(II) is 1:0.5-5 and 30-170 wt.% (based on (I)) amylose having a degree of poly-msn. of 20-500.

The prod. e.g. bread, biscuits etc., contains the non-toxic and calorie-free (I). It does not adhere to teeth and has a better appearnace and texture than known (I)-contg. prods. 18.1.74 as 402437 (6pp922)

MULL- ★ D11 12134B/07 ★DT 2733-097
Bread slicing machine - having blades passing through solid vegetable fat particles to prevent adhesion of crumbs
MULLER J & SOHNE 22.07.77-DT-733097
P62 (08.02.79) A21c-15/04 B26d-03/24

Pastry and other baked food, e.g. bread, is cut mechanically by blades which are lined on both sides with solid vegetable fat before a cut or at regular intervals.

This prevents crumbs from adhering to the cutters. The solid fat has a much better adhesion than the conventional vegetable oils, it does not oxidise, has no taste, and does not contaminate the machine. 22.7.77 as 733097 (14pp39)

MAUE- ★ D11 12164B/07 ★DT 2734-018
Multideck baking oven - with cantilever shelves on trestle and sealing strips for each deck
MAUERMANN J BACKOF 28.07.77-DT-734018
(08.02.79) A21b-03/07

A baking oven with several decks has, between the oven spaces and the common door, enough space to accommodate the upright frame of a trestle on rollers. Cantilever shelves extend from this frame into each oven deck. Sealing strips around the decks and on the door separate each deck from the next.

This allows smaller quantities of different pastry to be baked under different conditions in each deck. 28.7.77 as 734018 (16pp39)

MECH- ★ D11 12250B/07 ★DT 2831-154
Doughnut icing applicator - with separate dip container for circulating icing from heated storage tank
VEB MECHAN LEIPZIG 26.07.77-DL-200279
(08.02.79) A21b-05/08 A21c-09/04

A device for the icing of pastry, e.g. doughnuts, has in the upper part of a heated storage tank for the icing an immersion container which receives a constant supply from a disc with a scraper and channel and has an overflow. The doughnuts are dipped into this container together with their transport containers.

This saves the manual labour for the application of the icing. It ensures a uniform quality of the icing and recovers all surplus material. 15.7.78 as 831154 (7pp39)

WERN D11 70957Y/40 =GB 1540-694
Dough portion delivering machine with piston and stripper - has compressed air blast releasing dough tending to adhere
WERNER & PFLEIDERER 27.03.76-DT-613139
*(14.02.79) *DT2613-139 A21c-05*

A dough dividing machine comprises a piston moving horizontally through a chamber supplied with dough through a funnel to drive the dough into a dividing chamber which then moves vertically in a direction transvers to the piston. In the lowest position of the chamber a second piston ejects the dough.

A stripper element extends along the width of the dividing chamber to remove the dough piece from the piston face as the chamber rises. A blast of compressed air is delivered radially from a pipe mounted parallel and above the stripper element. The dough piece is dislodged at the moment when the stripper element has traversed almost the full surface of the ejector piston.

Clean delivery of a dough piece from the divider without the need to apply oil is provided. 17.2.77 as 006677 (3pp1364)

TAID ★ D11 12946B/07 ★J5 4002-377
Instant choux prepn. - from aq. emulsion of edible oil and fat, starch, sodium casein and alkali salt; and egg white albumin and wheat protein
TAIYO FOOD KK 03.06.77-JA-066001
(09.01.79) A21d-08

Method comprises (1) heat-treating a mixt. of 100 pts.wt. edible oil and fat, 20-90 pts.wt. starch, 10-30 pts.wt. sodium casein, 0.5-5.0 pts.wt. alkali salt and 200-800 pts.wt. water, at below the gelatinising temp. of starch, (2) homogenising, (3) drying the emulsion instantaneously with hot air, (4) combining 10-40 pts.wt. powdery egg white albumin, 5-20 pts.wt. of active wheat protein and opt. >1 of yolk powder, common salt, colourant and perfume with 100 pts.wt. of the powder obtd. in (3), (5) kneading the obtd. powder with water and (6) baking the obtd. dough.

From the dough, soft voluminous choux can be prepd. stably in a short baking time by a simple cooking process. The dough obtd. in (5) has a moisture content 40-50% and the value is much less than that of conventional dough for choux (by 15-25%). 3.6.77 as 066001 (6pp5)

D12: MEAT; FISH PROCESSING

MUNC- ★ D12 11937B/07 ★BE -870-932
Machine to cut open and clean stomach of chickens, etc. - comprises rotary carrier wheel with pockets contg. the stomach which is carried across the edge of a blade
MUNCHMEYER & CO 03.10.77-DT-744456
(01.02.79) A22b

The machine has a rotary carrier wheel having pockets around its circumference. Each pocket is loaded with a stomach which is carried by wheel rotation across the edge of a blade which cuts open the stomach. The opened stomach is transferred to a subsequent machine which cleans out the stomach. From the loading point to the cutting zone, in the direction of rotation, the vol. of each pocket becomes progressively smaller. On leaving the cutting zone, each stomach is carried along a dividing tool which opens the stomach cut and roots out the callous area.

The carrier wheel is pref. made up of three parallel, circular plates. The outer plates are both concentric with the axis of rotation of the wheel. The sandwiched plate is of smaller dia. than and eccentric to the other two. In the direction of rotation from the loading point the circumference is closely encircled with a pocket pressure plate which is slotted to allow the cutter to reach pocketed stomachs.

Used for cleaning out chicken stomachs and stomachs of other small animals. Stomachs varying over a with range of sizes are all compressed to a similar thickness before meeting the cutting blade. The machine can now be set to ensure adequate cutting of small stomachs without unduly gashing stomachs at the upper end of the size range. 2.10.78 as 870932 (11pp448)

FARH D12 30141X/17 =DS 2447-757
Cellulose hydrate sausage casings - having internal coating containing albumen modified with (alkoxylated) N-methylol-(meth)acrylamide, and humectant
HOECHST AG 07.10.74-DT-447757
*A97 +P42 P73 (A11) (08.02.79) *BE-834-242 A22c-13 B05d-07/02*

Surfaces of mouldings, esp. cellulose hydrate tubing are coated with polymers by applying to the still gel like tubing a liq. layer consisting of an aq. soln. of an albumen condensation product (ACP), warming the coated tubing and moistening it.

The ACP is produced by addn. of the reactive gps. of albumen molecules to the reactive double bonds of aliphatic polyfunctional cpds. contg. ≥1 reactive C=C and ≥1 reactive N-methylol gp. per molecule. These cpds. are pref. N-methylol-(meth)acrylamide or N,N'-methylene-bis-(meth) acrylamide. The albumen is pref. casein.

Method is simple. The tubing is highly suitable for use as sausage skin as it adheres strongly to the sausage filling, preventing unsightly shrinkage, which could allow mould growth at the shrinkage sites. The skins can be easily peeled off. 7.10.74 as 447757 (7pp260)

NMHB ★ D12 12098B/07 ★DS 2753-111
Press liquoring machine for meat or fish - with safety guards for charging area and sideways feed openings
NORDISCH MASCH R BAADER 29.11.77-DT-753111
(08.02.79) A22c-17/04

Press liquoring maching for meat or fish has an inlet opening for the charge covered by a rectangular plate, with access slots below it on two sides. The storage tray for the charge which is attached to the top of the machine has in its bottom a cut-out to suit this plate.

Appts. is easy to charge by sliding the feed material along the bottom of the storage tray. It is wuiable for all sizes and types of plasticity and it operates with a high throughput rate. When the storage tray is removed, it can be run for cleaning without endangering the personnel. 29.11.77 as 753111 (4pp39)

KOLL/ ★ D12 12161B/07 ★DT 2733-996
Sausage skin sheath - made of extruded plastic foil with longitudinal sliding clasp-type fastener
KOLLROSS G 28.07.77-DT-733996
A92 (08.02.79) A22c-13

Lengths of shirred flexible hose, i.e. artificial skins for use in sausage filling machines, are transported and stored in sheaths made of extruded plastic foil. The foil is extruded near one selvage with a nearly closed groove and near the other selvage with a ridge which forms a sliding clasp fastener.

The arrangement provides the desired protection of the skin against damage during storage and transport. When pushed over the filler tube of a sausage machine, the sheath can be easily removed without pulling off the skin with it. 28.7.77 as 733996 (12pp39)

NMHB D12 38621A/22 #GB 1540-686
Fish processing machine feeder - with V/shaped cover in V/shaped conveyor feeder gap
NORDISCH MASCH R BAADER 10.09.77-DT-740820 (18.10.77-GB-043264)
*(14.02.79) *DS2740-820 A22c-25/08*

Appts. for collecting and feeding beheaded fish, belly foremost, to a fish processing machine comprises a V-shaped channel formed between guide plates over whose surface endless bands move; these bands pass around deflecting rollers set at an inclined angle corresp. to that of the guide plates.

A V-shaped cover is positioned at the end of the channel remote from the rollers and has a groove inclined to th channel base to engage the tail end of a fish not travelling head end first; the cover has openings through which wate is supplied. The cover collects fish travelling tail end first and these are withdrawn from the feed zone by the conveying bands; the water supply facilitates the removal of the fish from the cover.

Uninterrupted introduction of different fish sizes into a processing machine is provided 18.10.77 as 043264 (3pp1364)

GRAC D12 10675A/06 =GB 1540-77
Poultry storage and package system - by chilling after sealing draw and pressed chicken in evacuated plastics bags
GRACE W R CO 28.07.76-US-709572
*+Q31 (14.02.79) *DT2733-352 A23b-04/06*

Preparing and preserving poultry comprises washing the eviscerated birds (e.g. with high pressure water sprays) without cooling; the birds are bagged in shrinkable, thermoplastic bags of low gas permeability (e.g. < 100 cc/mil/ m^2/24 hours) which are then evacuated and sealed. The bags are passed through a chiller to reduce body temp. to within the range 26°-34°F before storage at this temp. In the evacuating step the moisture content of the bird is pref. lowered to < 3%.

Freezing of the birds is avoided and purge or weeping is prevented without a series of cooling and freezing step 26.7.77 (5pp1364)

BARO- ★ D12 B/07 ★HU T015-92
Meat hooks for processing plant - esp. in precooling units for poultr processors
BAROMFIFELDOLGOZO 01.12.76-HU-BA3488
(27.01.79) A22b-05

ORSZ- ★ D12 B/07 ★HU T015-92
Meat prods. mfr. - using continuous operating machinery fo producing chopped filler mass
ORSZAGOS HUSIPARI 12.03.76-HU-OA0562
(27.01.79) A22c-05

MATS/ ★ D12 12944B/07 ★J5 4002-36
Smoked fish meat prepn. - comprises adding sodium bi:carbonate di:sodium hydrogen phosphate, sorbite and salt to fish; op washing; drying and smoking
MATSUMURA S 06.06.77-JA-066469
(09.01.79) A23b-04/04 A23l-01/32

The method comprises (1) adding sodim bicarbonate, disodium hydrogen phosphate and sorbite to fish meat, (2) adding common salt to the mixt., (3) opt. washing it wit water, (4) drying it and (5) smoking it. The meat of bonito and other fishes can be processed to soft delicious smoked meat and its pigment is stabilised.

The meat of bonito is structured of the bundle of stron muscle fibres and while it is fresh, the voids between mu sle fibres are filled with blood body fluid, etc. When it is dried or heat-treated, the liq. in the voids is lost and muscle fibres are adhered closely. The muscle fibre is covered with the sheath mainly of collagen and the meat gets hard. By the invented method the sheath can be softened and the pigment in the meat can be stabilised with sodium bicarbonate and disodium hydrogen phosphate. Steps (1) and (2) can take place in reverse order. Sodiun bicarbonate, disodium hydrogen phosphate and sorbite ar sprinkled on fish meat or fish meat is immersed in the a liq. contg. them. Step (3) is used to effect desalting. 6.6.77 as 066469 (3pp5)

KIMU/ D12 55948A/31 =J7 9000-98
Binding meat lumps together - by covering with mixt. of milk casei salt glucono-lactone and gum material opt. contg. milk powder an calcium salt, then gelling
KIMURA S 07.12.76-JA-146215
*(18.01.79) *J53072-854 A23l-01/31 +A22c-11*

The method comprises by mixing water soluble salt of molk casein and opt. molk powder and calcium salt; adding gluconolactone, in an amt. which would make the pH of an aq. soln. of the compsn. ca. 4.6, gradually adding natural gum such as guar gum, locust bean gum, etc. to increase the hygroscopicity and adhesive property of the composition; covering meat lumps with the obtd. powder compsn. and gelling the compsn. gradually by standing, press-moulding or refrigeration.

Usually gluconolactone is used at 15-25% on milk casein. The milk powder and calcium salt assist the binding property of milk casein. 7.12.76 as 146215 A231-1/31; A22c-11/00 (18.1.79) KIMURAS (3pp)(J53072854)

KYOK- D12 59478A/33 =J7 9000-985

Food prod. from Euphausia superba - by boiling without shelling, adding antioxidant, drying, pulverising mixing with organic acid and moulding

KYOKUYO KK 20.12.76-JA-153131

*(18.01.79) *J53079-053 A23l-01/32*

Method comprises boiling Euphausia superba without removing its shell, adding antioxidant to boiled E. superba, drying it to moisture content $<$ 5 wt.% pulverising the dried prod. below 100 mesh, mixing it with organic acid and moulding it to granules or tablets.

Highly nutritive, palatable, digestive and preserved food can be prepd. from E. superba.

As antioxidant tocopherol 0.01-0.05 w/w% or ascorbic acid or its alkali salt 0.05-0.1 w/w% is applied singly or together. By drying unpalatable components and amine-like components can be removed. The drying should be practised to moisture content $<$ 5w/w%, favourably $<$ 3-w/w% and the preservative properties can be improved remarkably. 20.12.76 as 153131 A23d-1/325 (18.1.79) KYOKUYO KK (3pp)(J53079053)

POPR= ★ D12 13628B/07 ★SU-599-781

Fine meat mincer for sausage meat prodn. - to which coarsely minced meat is fed and passes through stages of paired movable and stationary knives

POLT PROVISION MACH 16.09.75-SU-174399

(13.03.78) A22c-17

Equipment for fine mincing of meat, during the prodn. of minced meat for sausages and cutlets, as well as raw fatty materials, fish, etc., consists of a loading head, body with an assembly of fixed circular toothed knives, a rotor mounted on a shaft inside the body plus a loading wheel, and an assembly of movable circular toothed knives, and a mechanism to control the distance between the front cutting edges of both sets of knives, together with a loading channel.

Productivity is increased, due to much finer mincing, by increasing the diameter of the movable knives proceeding in a direction towards the discharge channel. The widths of the paired stationary knives are reduced. Each tooth of both sets of knives has two cutting edges - one along the edge of the tooth and the other on the top head of the tooth. The knives are mounted on the rotor shaft and can move along it by means of an elastic buffer. The gaps between the teeth are equal.

Paramonov, V.A., Taturevich, A.N., Batishchev, V.P. Bul. 12/30.3.78. 16.9.75 as 174399 (4pp29)

UZME= ★ D12 13629B/07 ★SU-599-782

Cutter for meat used in soups etc. - has toothed disc knives to convert meat into strips and transverse flat knives to cut strips into small lumps

UZB MEAT DAIRY MIN 27.12.76-SU-437040

P62 (11.04.78) A22c-17 B26d-04/24

Equipment for cutting meat into lumps has an attachment for feeding the meat to be cut, disc knives mounted vertically on shafts, and an attachment to remove the lumps as they are cut.

Quality of cut is improved by positioning guiding plates, with slots to allow the disc knives to pass through, in front of flat knives, plus an extra attachment to take away the cut lumps.

The flat knives and removal attachments are made as assemblies of plates fitted longitudinally on to shafts. The meat feeding attachment is a trough mounted in front of the disc knives. Each shaft of the flat knives is kinematically connected to the corresp. shaft of the meat-removing attachment. The disc and flat knives shafts are installed so that the knives rotate towards one another.

Gulyammakhmudov, A.G., Lankov, V.I. Bul. 12/30.3.78 27.12.76 as 437040 (3pp29)

AZCH= ★ D12 13630B/07 ★SU-599-783

Appts. for sorting fish according to thickness - has chain conveyors with sorting grilles formed by rollers, above which brushes rotate

AZCHERRYBA BUR 12.11.75-SU-189378

(13.03.78) A22c-25/04

Equipment for sorting fish according to thickness, on production lines for processing smaller fish, such as anchovies, sprats, etc., in ship and shore establishments, consists of chain conveyor with sorting grilles, formed by hinge-mounted and rotary-driven rollers, guiding templates positioned along the upper and lower arms of the conveyor, and a loading attachment. Productivity and sorting quality are increased by mounting the rollers on vertical supports and firmly fastening them to the links in the chain.

The guiding templates are placed on both sides of each conveyor arm and joined directly to the chain links. The templates are also interchangeable, with different radii of curvature to control the distance between the rollers. The fish are turned along the rollers by installing elastic brushes underneath the latter.

Raikov, N.N. Bul. 12/30.3.78. 12.11.75 as 189378 (4pp 29)

ZHIL/ ★ D12 13631B/07 ★SU-599-784

Fish centring and orienting conveyor for filleting machine - has magazines with troughs for head and undulating motion for final positioning

ZHILIN N I 09.11.76-SU-419586

(03.04.78) A22c-25/06

Transporter for fish, towards a filletting machine, comprises magazines with centering grippers for the heads, needle-like holders, and a base which can be given a rocking motion, plus a template. The reliability with which the fish are oriented is increased along the plane of the magazines, by providing each magazine with an inclined T-shaped trough for the head underneath the centering gripper, which is rigidly fastened to the bottom.

The template for actuating the bottom is wave-shaped. The rocking motion is enhanced by connecting the bottom and the channel at a given height of the latter, with the needle-like grippers, by means of a hinge in the form of a parallelogram.

Zhilin, N.I. Bul. 12/30.3.78. 9.11.76 as 419586 (3pp29)

FARE= ★ D12 13632B/07 ★SU-599-785

Fish decapitating equipment - with disc knives on each side of conveyor and electronic control circuits, to determine fish position and movement

FAR EAST POLY 16.10.75-SU-181612

(13.04.78) A22c-25/14

Device to cut the heads off fish as part of an automated and mechanised process, comprises a feeding conveyor, attachment to change the position of the fish with its own drive, disc knives, measuring mechanism, with control system connected to the disc knife, sensors and working unit. Decapitation of fish, which have not been oriented as they are placed in the trays can be done by adding an extra disc knife, sensor, working unit, terminal switch, control system for the working unit, and changeover relay.

The first group of contacts in the relay are connected to the outputs of both sensors; the second group of contacts to the terminal switches, and the third through the current source to the working units and the attachemnt which changes the position of the fish.

Sobchenko, V.V. Bul. 12/30.3.78. 16.10.75 as 181612 (4pp29)

UMEA= ★ D12 13633B/07 ★SU-599-786

Sausages heat treatment and smoking - by heating at 20-25 degrees C for 6-12 hours and treating with smoking preparation at 60-70 degrees C for 10-15 minutes

UKR MEAT DAIRY IND 22.12.76-SU-432805

(30.03.78) A23b-04/04

Heat-treatment of sausage-type articles, e.g. moist-smoking, involves settling curing while treating the surfaces with a smoke preparation, and drying. Product quality is improved and the process cycle is reduced by treating the sausage article, after settling, at 20-25°C. and relative humidity of air 65-75% for 6-12 hrs., until the temp. inside the sausages reaches 15-20°C.

This means that the surfaces are partially dried before treating with the smoke preparation. After smoking, the article is cooled in the drier to 2-4°C and a relative humidity of 85-95% for 12-24 hours. Treatment with the smoke preparation is done at 60-70°C. for 10-15 minutes.

Berezenko, A.M., Gorodinskaya, V.D., Yavorskii, M.I. et al. Bul. 12/30.3.78. 22.12.76 as 432805 (2pp29)

FORM- ★ D12 13933B/07 ★US 4137-604
Stacker-processor for papered food patties etc. - in which discharge end of conveyor belt is reciprocated horizontally in synchronism with arrival of patties
FORMAX INC 02.11.77-US-847703
Q35 (06.02.79) A22c-07 B65g-57

Food patties are placed on paper sheets and advanced on a belt conveyor. The patties pass beneath a station which pref. forms depressions in the upper surface of each patty. At its discharge end the conveyor belt is reciprocated horizontally in synchronism with the arrival of patties.

The reciprocation is achieved by a shuttle which includes the discharge roller of the conveyor and also an idler roller. The shuttle retracts rapidly to drop a patty from the end of the conveyor onto a stack formed beneath the conveyor. After a predetermined number of patties have been assembled the stack is removed.

The appts. processes the upper surface of a patty and then stacks it. The processing may comprise the application of a topping or the cutting of a pattern. Rapid action of the shuttle allows the patty to fall onto the stack with a dropping action which does not cause the patty to tilt. 2.11.77 as 847703 (8pp295)

UNIL D12 04174A/03 =US 4137-605
Meat deboning process and machine - separates structurally intact meat pieces from bone gripped by power press plungers
LEVER BROTHERS CO 14.07.76-GB-029341
*(06.02.79) *BE-856-786 A22c-17*

To remove meat from bone, a portion of meat containing bone is compressed between movable plungers such that substantial pieces of meat move laterally relative to the remainder.

Compression continues until the bone is gripped between the plungers, the meat then being severed. The compressed mass, mostly bone, is then removed from the press. The meat moving laterally during compression is pref. collected in an annular chamber surrounding the press, and severing is pref. effected by movement between the press and the annular chamber.

The process is particularly suited to the primary stage of meat separation, in which it produces large pieces of bone-free meat of higher quality than hitherto attained. 14.7.77 as 815775 (4pp1379)

PRYO/ ★ D12 13983B/07 ★US 4137-868
Growing seafood on land - by treating phytoplankton species in brackish or salt-water reservoir
PRYOR T A 29.09.76-US-727944
C03 P14 (06.02.79) A01k-61

Seafood is grown by passing brackish or salt water to an algal reservoir and then inoculating the reservoir with a number of phytoplankton species. Then adding organic animal manure and inorganic fertiliser to the reservoir, and then subjecting it to sunlight so that the phytoplankton density increases. The liq. is passed continuously to a prodn trench in which seafood is placed and it feeds on the phytoplankton.

Highly efficient system for growing seafood on land, esp. shellfish such as oysters, clams and lobsters, in commercial quantities is provided. Pollution and disease problems are avoided and loss due to predators, etc. does not occur. 29.9.76 as 727944 (15pp1248)

TEEP ★ D12 13989B/07 ★US 4137-947
Internally coated cellulose sausage casings - coated with cellulose ether, sorbitan or mannitan ester and polyalkoxylated alcohol
TEE PAK INC 28.09.77-US-837080
A97 Q67 (06.02.79) A22c-13 F16l-11/02

Regenerated cellulose sausage casings of improved meat release properties and resistance to breaking is prepd. by applying to the internal surface of the casings a homogeneous aq. soln. contg. a water-sol. cellulose ether, a partial fatty acid ester of sorbitan or nannitan, and a water-sol. polyalkylene glycol ether of formula RO.$(C_2H_4O)_nH$ where R is 8-16C alkyl and n is 4-40.

In an example, casting strands 19.5-20.5 mm in dia. were coated with a soln. contg. 0.75 wt.% CMC (7 < I RTM Hercules), 1.0 wt.% Span 85 (RTM) and 0.05 wt.% Brij 35 (RTM). They had high strength (2 breakages in 3250 strands shirred) and no defects in a sample of 100. 28.9.77 as 837080 (5pp955)

JOHJ D12 58111X/31 =US 4138-503
Edible sausage skins - produced from collagen gel extruded to strings in two spiral layers of opposite pitc (BE160776)
DEVRO INC 16.01.75-US-541465 (03.08.77-US-821450)
*A97 Q34 +Q32 (A11 A32) (06.02.79) *DT2600-716 A22c-13 +A23p-01*

Tubular collagen casing is made by directing an inner collagen gel and an outer collagen gel to an extruder; feeding inner gel radially outwardly through a first gp. of radially extending orifices to form > 1 inner gel ropes; feeding th outer gel radially inwardly through second gp. of radially extending orifices to form > 1 outer gel ropes.

Radially directed outer and inner gels are brought together to form a fluid mass having an annular cross section with the ropes from outer gel located on outer border of annulus and ropes from inner gel, located adjacent inner border of annulus; feeding annular mass between 2 couter-rotating concentric surfaces to direct outer and inner ropes in opposite helical directions and form a 2-layered tubular casing.

Casings are used for fresh pork sausages which must be cooked before consumption, as well as weiner or frankfurter sausages. 3.8.77 as 821450 Div. ex. 4060361 (7pp931)

See Also

D13 J7 9000986

D13: OTHER FOODSTUFFS

STAD ★ D13 11930B/07 ★BE -869-716
Simulated french fried potatoes - oven cooked using novel yeast, vegetable oil and water coating compsn.
STANDARD OIL CO (IND) 19.08.77-US-825863
(12.02.79) A23l

The prod. is prepd. by (a) forming a mixt. comprising 2-10% of inactive dried yeast, 50-100 pts. vegetable oil, and 0-50 pts. of water, (b) emulsifying the mixt. (c) coating uncooked french fried potatoes with the emulsified mixt. and then (d) cooking the potatoes at 190-230°C in an oven for 5-20 mins. The emulsified mixture is novel.

A particular process embodiment comprises forming a mixt. of about 5% dried inactive. CANDIDA UTILIS, abo 75% vegetable oil, and about 20% water, emulsifying, coating the apt. frozen potatoes, and then cooking at 230°C for 20 mins.

The process enables french fried potatoes of the same taste and texture as potatoes fried in deep fat, thereby avoiding the need for a large costly volume of oil with accompanying fire risks. 11.8.78 as 869716 (8pp597)

GRAM- ★ D13 11966B/07 ★BE -871-063

Deeply inlaid decoration of iced lollies with contrast material - projected at high pressure from nozzles set in required pattern

BRODRENE GRAM A/S 06.10.77-DK-004438

(01.02.79) A23g

The decoration comprises an inlaid design in material with a colour contrasting to the colour of the lolly. The decorative material is projected at high pressure from a set of nozzles arranged in the required design. Two sets of opposed nozzles are pref. employed simultaneously on opposite surfaces of a lolly.

Design projection is pref. carried out immediately after withdrawing a lolly from its freezer mould. Projection pressure at the nozzle is pref. between 50 and 1000 atmos. The mechanism is pref. fitted to a radial-armed, rotary machine for freezing lollies in rows on sticks suspended from each radial arm.

The projected material enters deeply into the lolly so the pattern remains as the lolly is consumed. There is no contact between the nozzles and the lolly, which is more hygenic than using injection needles. The projected material sets almost instantly so does not spread over the lolly surface. 6. 10. 78 as 871063 (14pp448)

GRAM- ★ D13 11967B/07 ★BE -871-064

Decoration of iced lollies with patterned imprint - cleanly and precisely impressed with heated branding tools

BRODRENE GRAM A/S 06.10.77-DK-004439

(01.02.79) A23g

A lolly is pref. decorated on opposite surfaces simultaneoulsy by a pair of spaced branding irons moving towards each other. Decoration by branding is pref. carried out immediately after withdrawing a lolly from its freezer mould. The branding mechanism is pref. fitted to a radial-armed, rotary machine for freezing lollies on sticks suspended from rows of clips fixed to each radial arm.

When the mechanism comprises a pair of spaced branding irons for decorating opposite faces of a lolly the tools are pref. actuated by automatically programmed, pneumatic cylinders.

The imprint can be deep so that it exists throughout the consumption of the lolly. The imprint is clean and precise and is formed without danger of splintering the lolly. 6. 10. 78 as 871064 (14pp448)

SCHI/ ★ D13 12011B/07 ★DL -133-191

Form meat heat treatment - in two tanks with thermostat controlled hot water circulation

SCHIFFNER E 06.06.77-DL-199309

(20.12.78) A23l-01/31

The industrial mfr. of form meat which was described in parent paten demands that a temp. of 53°C is maintained with a max. deviation of ±2°C. This can be achieved by two stainless steel tanks, linked by a pipe system with a circulating pump for hot water. Two heating elements are mounted in one tank, and one with a thermostat in the second tank.

No other known system can hold the maximum fluctuation of ± 2°C. The new system promotes a fast heat exchange with the charge, has a high throughput and meets all hygienic requirements. 6. 6. 77 as 199309 Add to 123158 (7pp39)

NEST D13 09816U/08 =DS 1792-739

Tea extract prodn - by maturing suspension of tea leaves or extract

SOC PROD NESTLE SA 11.11.65-CH-015582 (14.05.65-CH-006736)

*(08.02.79) *DT1792-739 A23f-03/02*

A process is described for producing a tea extract from green tea leaves by forming a suspn. of the comminuted leaves with de-cationised or acidulated water, extraction of the solubles, separating the insolubles and concentrating and opt. drying the extract.

At least part of the suspn. is fermented at 20-60°C and the fermented suspn. (or its extract) allowed to ripen anaerobically at 60-0°C for 10 mins-24 hrs.

This improves the taste smell and colour of the extract used for making 'instant' tea. 26. 4. 66 as 792739 Div ex 1692270 (4pp922)

GREH D13 94314R/51 =DS 1910-512

Direct fluid passage pressure accumulators

GREER HYDRAULICS INC (OLA -) 10.04.68-US-720138

*P13 Q67 (08.02.79) *FR1600-645 +F16l-55/04*

A hydraulic pressure accumulator for direct passage through of the medium has a rigid cylindrical mantle and two end covers having an axial opening. A tubular membrane is attached to the covered and can be filled with gas under pressure, whilst inside the membrane there is a rigid sleeve with passages into it.

The design makes the cleaning of the membrane and the sleeve much more easy and there is no laborious and pain-staking effort necessary for the reassembly. The sleeve is attached to the covers independently of the membrane and, at one end it has a journal which engages in the hub of the cover and is fastened outside. At the other end the sleeve is centralised freely in the cover. 1. 3. 69 as 910512 (5pp1045)

MEGG D13 08490T/06 =DS 2034-692

Trace element concentrates - in liquid whey for animal food

MEGGLE MILCHIND GMB 13.07.70-DT-034692

*C03 (08.02.79) *DT2034-692 A23k-01/17*

Prepn. of concentrates contg. essential trace elements comprises dissolving corresp. soluble salts or cpds. (1-8 wt. %) in dairy prods. at pH 3-7. Pref. dairy prods. are whey concentrate, partially sweetened whey, whey contg. additional protein degradation prods. and partially sweetened whey which has been subjected to proteolytic degradation.

The prods. are valuable nutrients, esp. for young farm animals. 13. 7. 70 as 034692 (4pp047)

TEXC D13 46376W/28 =DS 2364-333

Purification of slack wax - by adsorption of aromatics on metal-charged cation-exchange resin

DEUTSCHE TEXACO AG 22.12.73-DT-364333

*B07 H08 (D16 D21) (08.02.79) *DT2364-333 C10g-25/02*

Sepn. of aromatic hydrocarbons from n-paraffin mixts. comprises treatment with anhydrous macroporous cation exchange resin. In partic., liq. paraffin mixt. (esp. from natural oil sources) contg. aromatics, (0.001-5 wt.%), are treated with cation exchange resin (Ag or Cu form) at 20-200°. The resin is regenerated by desorption with dioxane, MeCOEt or MeCOisoBu, followed by washing with satd. hydrocarbons.

Prods. may be applicable in 'petro-protein' processes, in packaging e.g. milk cartons, for petroleum jelly in pharmaceutical/cosmetic industries etc. 22. 12. 73 as 364333 (5pp047)

AAIN= ★ D13 12242B/07 ★DT 2830-324

Chewing gum base - of vinyl acetate oligomer plasticised with water

AS ARMN INORG CHEM 21.03.78-SU-588355 (19.07.77-SU-500302)

A97 (A14) (08.02.79) A23g-03/30 C08f-02/16 C08f-118/08

Polymeric binder for chewing gum comprises (by wt.) 70-80% of a vinyl acetate oligomer with mol. wt. 2500-6000, and (b) 30-20 % water. Pref. the binders are made by oligomerisation of vinyl acetate in aq. medium using a wt. ratio vinyl acetate to water of 70-80 : 30-20, in the presence of 10-16 % (on vinyl acetate) of acetaldehyde as mol. wt. regulator and an oil/water soluble initiator system consisting of 0.3-0.4% benzoyl peroxide and 0.02-0.3% ammonium or potassium persulphate (on vinyl acetate).

The oligomerisation is at 50-55°C and the unconverted vinyl acetate and acetaldehyde are then removed from the prod. by washing with water at 80-90°C or by direct treatment with steam.

The prods. have good plastic-elastic properties, a low softening point and low adhesive properties, so that they do not stick to the teeth. 10. 7. 78 as 830324 (22pp513)

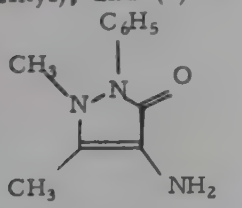
WAKP ★ D13 12313B/07 ★DT 2833-612

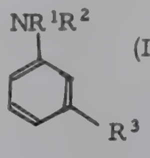
Hydrogen peroxide determination - using 4-amino-antipyrine, an N-substd. 3-alkyl aniline and a hydrogen peroxide activating agent e.g. peroxidase

WAKO PURE CHEM IND KK 29.07.77-JA-090989

B04 E13 J04 R16 (08.02.79) G01n-31/22

New agents for the prodn. of colour-forming reagents for the determination of H_2O contain (a) 4-aminoantipyrine (I) (b) an N-substd. 3-alkyl-aniline of formula (II) (where R^1 and R^2 are 1-5C alkyl or hydroxyalkyl; and R^3 is lower alkyl), and (c) an H_2O_2-activating agent.


(I)


(II)

In a new procedure for the determn. of H_2O_2, (I) in combination with (II) is reacted in the presence of an H_2O_2-activating agent to form a colouring material.

Used in colorimetric determination of H_2O_2 in clinical diagnoses, food additive analyses, and general analysis. Clinical diagnostic applications include enzymatic determinations of glucose, uric acid, cholesterol, cholinesterase, phospholipid, creatine, and creatinine in body fluids. The new colour-forming reagents are sensitive and colour-stable over an extremely wide pH range, and the stability of the reagents as such is good.

Pref. cpds. (II) include N-ethyl-N-hydroxyethyl-3-methyl-aniline. Pref. H_2O_2-activating agents are peroxidase and mixtures of iodine with tungstic or molybdenic acid or their salts. An example describes the determn. of uric acid using uricase, peroxidase, (I) and N-ethyl-N-hydroxyethyl-3-methylaniline. 31. 7. 78 as 833612 (18pp280)

MERI ★ D13 12402B/07 ★FR 2390-105

Compsn. for preparing yoghurt by direct acidification - uses novel thickening mixture contg. acid-stable starch, sodium CMC and xanthan and carob gums

MERCK & CO INC 12.05.77-US-796251

A97 (A11) (12.01.79) A23c-09/12

The compsn. consists of 80-98 pts milk, 0. 5-1. 2 pts of an acidifying agent, 1. 8-4. 5 pts of a thickening mixture and opt. ≤ 18 pts of a carbohydrate sweetener. The thickening mixtures consists of 40-80 pts. of starch which is stable at low pH, 20-45 pts of sodium carboxymethyl cellulose, 3-8 pts of xanthane gum and 0. 7-3 pts of carob gum.

The thickening mixture, which is novel, is mixed with the milk and opt the sugar, followed by pasteurising. The acidifying agent is added followed by a shearing treatment.

The process may be applied to whale milk or to reconstituted milk from milk powder with or without fats. It enables the formation of yoghurt of the same consistency as cultured yoghurt. 10. 5. 78 as 013905 (6pp597)

BALL/ ★ D13 12403B/07 ★FR 2390-109

Ruminant feed compsns. - contg. brewers grains, beet molasses, nitrogen source and edible absorbent

BALLEIX R 10.05.77-FR-014235

C03 (12.01.79) A23k-01/02

Animal feed compsns, esp. for ruminants, contain brewers grains, beet molasses, a nitrogen source, and an edible absorbent for the humidity in the brewers grains. The nitrogen source is typically urea, aminoacids, or yeasts and the absorbent is bran or potato, grape or coffee residues, 10. 5. 77 as 014235 (7pp520)

SOLA- ★ D13 12404B/07 ★FR 2390-110

Ruminant feed blocks - contg. lactoserum, ammonium poly:phosphate and calcium sulphate

SOLAIPA SOC LAITIER 10.05.77-FR-014251

C03 (12.01.79) A23k-01/17

Ruminant feed blocks, partic. for cattle, sheep and goats, contains ammonium phosphate, lactoserum and a hydrated calcium sulphate binder. The blocks provide adequate nutritional value, partic. as supplements to natural or artificial forage, they are weather-resistant, easily stored and easily mfd.

The blocks may also contain other feed materials such as mineral salts, vegetable materials, proteins and vitamins. In an example, a mixt. was prepd. from 35-50% lactoserum at pH 5.2-4.35, 10-25% calcium sulphate hemihydrate, 5-20% ammonium phosphate and 2% propylene glycol as preservative. The rest of the mixt. comprised 3/4. mineral supplement and 1/4. nitrogen supplement. 10.5. 77 as 014251 (7pp520).

DREV/ ★ D13 12450B/07 ★GB 1510-144

Animal feed prodn. from cocoa fruit flesh - by swelling in aq. alkali, peeling, separating beans and drying flesh

DREVICI U 00.00.77-GB-044128 (09.04.74-US-459318)

C03 (10.05.78) A23k-01/14

Animal feeds are produced by swelling cocoa fruits in aq. alkali at 50-100°C and peeling the fruits to expose the parenchymatous tissue (I). The peeled fruits are then opened and the beans and pulp separated from (I) which is then recovered for use as animal feed.

Pref. (I) is dried, comminuted and pref. intimately mixed with edible fat and/or animal feed grain. The juice may first be expressed and separated from (I) before drying and comminuting.

The prod. is esp. useful for feeding small animals, e. g. rabbits, chickens, etc., using waste otherwise difficult to dispose of. 1. 4. 75 as 44128/77 Add to 1411591 Div. ex 1510142 (5pp949)

UNIL ★ D13 12451B/07 ★GB 1540-376

Ultrafiltration concn. of globular protein solns. - with incorporation of alkali metal salts to give increased filtration rates at high protein concns.

UNILEVER LTD 19.02.75-GB-006979

(14.02.79) C07g-07

Solns. of globular proteins (I) are concd. by ultrafiltration in the presence of an alkali metal salt (II) at an ionic strength of ≮ 0.25.

Incorporation of (II) affords solns. which can be conc. by ultrafiltration at much higher rates than conventional solns. when the (I) concn. reaches ≥ 10% or more. A variety of (I) may be used (groundnut, soya, rape, sunflower, etc.) esp. those spun to filaments to be incorporated into meat-simulating prods.

In an example, a soy protein soln. (4%) was conc. by ultrafiltration at 20° to ca. 8% by wt. protein. NaCl was added (to ionic strength 0. 5), and the ultrafiltration was continued to protein concn. ca. 18% by wt. 18. 2. 76 (2pp478)

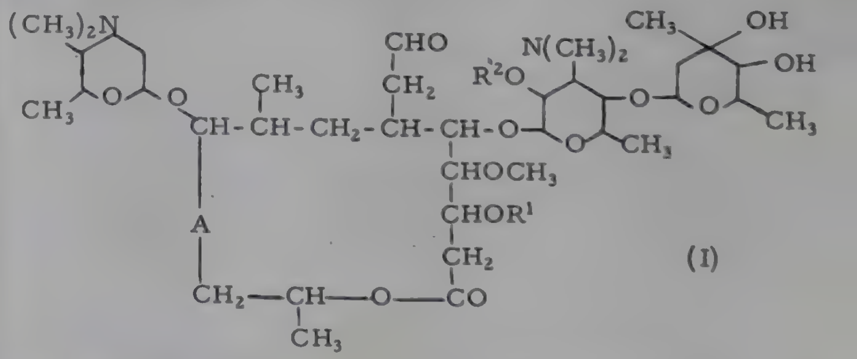
MAYB D13 42169A/24 =GB 1540-397

Spiramycin di:carboxylic acid ester(s) - useful as antibacterial agents and animal growth promoters

MAY & BAKER LTD 08.12.76-GB-051257

*B03 C02 (14.02.79) *BE-861-603 A61k-31/33 +C07d-407*

Spiramycin derivs. of formula (I):


(I)

are novel antibiotics and possess antibacterial properties useful in treating Staphylococcus aureus, pneumococcal and streptococcal infections; they are also used in treating mycoplastmosis in turkeys. (I) are less bitter than similar cpds. from which they may be prepd. Some have practically no taste at all.

R^1 is acetyl, propionyl or H. A is butenylene or butadienylene (in which double bonds are trans). R^2 is -COZ-COYR^3. Z is opt. satd., opt. branched 1-6C alkylene. Y is S or O. R^3 is opt. the alkylene moiety is opt. branched and contains 1-6C.

Specific cpds. include the 2'-ethyl succinate and the 2'-ethyl glutarate of spiramycin I. 6. 12. 77 (13pp393)

GENO D13 05533Y/03 =GB 1540-515

Carbonated candy mfr. - by solififying carbonated melt under press. in polished vessel and releasing press. to shatter prod. for removal

GENERAL FOODS CORP 01.07.76-US-701835

*(14.02.79) *US4001-457 A23g-03/02*

Gas-contg. candy is prepd. by obtaining a hot candy melt; introducing melt to first pressure vessel (I); introducing gas at superatmospheric pressure to disperse in melt; introducing a gas at superatmospheric pressure equiv. to that in (I) into second vessel (II), having polished inner surfaces, there being a connecting line between (I) vessel and bottom of (II).

The gasified hot melt is transferred to (II) through line by creating a pressure differential between (I) and (II) by regulating superatmospheric pressure so that pressure in (II) is less than that in (I) and venting the top of (II); isolating (II) while continuing to maintain superatmospheric pressure; cooling (II) and maintaining pressure so that melt becomes a gas-contg. solid matrix; venting (II) comprising matrix to shatter into multiple fragments; and opening (II) to effect prod. removal.

Prod. is carbonated candy contg. CO_2 gas. Shattered end prod. has more desirable, more consistent site than that obtd. by previous methods. 29. 6. 77 as 027265 (4pp931)

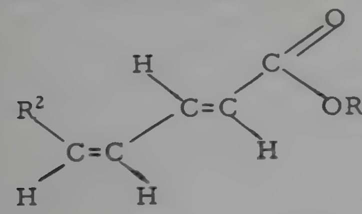
BADI D13 14033Y/08 =GB 1540-584

(2E)- (4Z)- unsatd. esters prepn. for use as flavouring agents - by reacting a phosphorane and a fumaraldehyde acid ester in etherial soln.

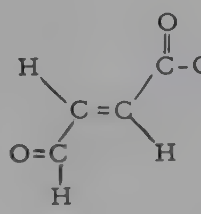
BASF AG 05.08.75-DT-534859

*E17 (14.02.79) *NL7608-675 C07c-69/52*

Prodn. of α, β, γ, δ -unsaturated esters of formula (I) (where R^1 is 1-4C saturated hydrocarbon, and R^2 is linear or branched 1-10C hydrocarbon) comprises slowly introducing a soln. of phosphorane of formula $R^2-CH=P(R^3)_3$ (where R^3 is phenyl or tolyl) in an ether solvent at 60-150°C into a soln. of a fumaraldehyde-acid ester of formula (II) in an ether solvent.



(I)



(II)

Pref. reaction mixt. formed by introduction of phosphorane soln. is maintained at 60-150°C for ≯ 30 mins. after completion of such introduction and afterwards worked up. Solutions of phosphorane in ether is obtd. by adding an alkyltriarylphosphorane halide.

Prods. are scent- or aroma-imparting cpds. 4. 8. 76 as 032448 (6pp931)

HOOR/ D13 40329Y/23 =GB 1540-607

Gelatine and protein concentrate prepn. - by treating ossein and heat waste with enzyme obtd. from Streptomyces fradiae cultures

HOOREMAN M 01.12.75-FR-036723

*B07 C03 (D16) (14.02.79) *DT2654-093 +C07g-07*

Gelatin is produced by treating ossein and/or meat cuttings with an enzymatic mixt. obtd. from Streptomyces fradiae, and recovering gelatin from the resulting insol. residue. Pref. the enzymic mixt. is obtd. from Streptomyces fradiae No. 2019 or 1998.

The treatment is pref. carried out at 10-50°C for 30 min-15 hours (17-20 hours) in aq. medium at pH 3-9. The gelatin is used in food and pharmaceutical industries. 1. 12. 76 as 050097 (3pp964)

PETZ- D13 74184X/40 =GB 1540-636

Milk chocolate mass continuous prodn. - with homogeniser relieved of task of expelling excess water and odours

PETZHOLDT MACH J S 12.03.75-DT-510708

*(14.02.79) *DT2510-708 A23g-01*

Process for the continuous production of milk chocolate comprises passing roasted cocoa kernal fragments through a grinding mill to make up, with cocoa butter and powdered milk, a charge in a batch mixer with two troughs; while charging and mixing in the first trough the second is discharging a similar mixing thus giving effectively a continuous treatment. The two troughs discharge alternately to a thin layer refiner; sugar and lecithin are added after refining and before entering a second two-trough mixer arrangement similar to the first to be homogenised and subsequently discharged continuously.

Excess water and noxious flavours from the powdered milk are removed in the refining treatment with the cocoa mass so that a relatively long conche treatment is unnecessary and a continuous process is provided. 9. 3. 76 (8pp1364)

CEVY- D13 79379A/44 #GB 1540-793

Heat treatment of granular fruit seeds - with precise control of heating rate, temperature and duration (OE 15.9.78)

CESKE VYSOKE TECHN 12.04.77-OE-002519 (26.04.77-GB-017230)

*+P41 (14.02.79) *NL7704-170 B02b-05/02*

Starch-contg. edible substances such as cereal, pulses or oil-seeds are thermally treated by action of an electromagnetic oscillation as ultra-violet or infra-red radiation.

Substance is heated for 5-120 secs. from ambient temp. to 100-200°C; maintaining at raised temp. for 5-200 secs. and gradually increasing to ≯ 220°C and/or gradually decreasing to ≯60°C. Temp. change in first stage is by control of infra-red intensity or electromagnetic waves of wavelength 0. 7-0. 1 m and crushing or flocculating the substance when hot; then cooling down to <40°C. Temp. control in second stage is by maintenance of infrared radiation or electromagnetic waves or by an electric resistor heater and/or using thermal insulation of second stage.

Method is esp. useful to provide vegetable prods. as nutritionally-acceptable produce for human consumption, without wastage of raw material. 26. 4. 77 as 017230 (4pp931)

HAMP/ ★ D13 12519B/07 ★GB 2002-099

Drying moist fermented tea leaf - by hot air flow with portion of air flow being recycled

HAMPTON M G 12.07.78-GB-029616 (12.07.77-GB-029123)

Q76 (14.02.79) F26b-21/04

Tea is dried by directing primary drying air over it so that the air becomes laden with moisture. A wetter portion of the laden air is directly exhausted while at least a portion of the remaining laden air is redirected over the tea to be dried. The condition of the air flow over the tea is controlled.

Pref. the humidity of the laden air is monitored to control the condition of the air flow. This may be achieved by measuring the temp. of the laden air. If desired, primary drying air may be mixed with the redirected air in varying proportions depending on the measured humidity.

The method is used for drying tea during the mfr. of black leaf tea by drying moist fermented leaf known as dhool. The efficiency of the drier is improved cf. known devices. Additionally by selection of the appropriate proportion of gases to be recycled a higher level of desirable volatiles may be retained and thus an improvement in the quality of the final prod. is obtd. 12. 7. 78 as 029616 (10pp295)

ARAD/ ★ D13 B/07 ★HU T015-930

Phosphate-contg. fodder mfr. - by reacting components in liquid and/or solid system

ARADI L 28.03.77-HU-AA0882

C03 (27.01.79) A23k-01/16 C01b-25/32

HITA ★ D13 12666B/07 ★J5 4001-103

Ink compsn. for jet printing on food, e.g. fruit or eggs - includes water soluble red dye in aq. alkali soln. contg. shellac binder and morpholine fatty acid salt

HITACHI KK 06.06.77-JA-065798

E24 G02 (06.01.79) C09d-11

An ink of pH 8. 0-10. 0 consists mainly of water-soluble dye and binder in alkali aq. soln. The dye is New Coccine (food red dye 102), Phloxine (food red dye 104) on Acid Red (food red dye 106). Shellac binder and morpholine fatty acid salt are also included.

The ink is excellent in adhesiveness and water resistance, and has excellent properties for food hygiene.

In an example, white lac aq. soln. (solid content 25% contg. 1% of morpholine fatty acid salt) 20 pts. wt., Phloxine 1 pt. wt., ethyl alcohol 50 pts. wt. and water 35 pts. wt. were mixed and stirred for 1 hr. at room temp., and filtered, obtaining an ink of viscosity 4 cps. pH 8. 5. 6. 6. 77 as 065798 (3pp50)

AJIN ★ D13 12938B/07 ★J5 4002-351
Starch-contg. heat-processed food prodn. - in which processed starch of specific swelling degree obtd. by gelatinising, drying and pulverising, is used
AJINOMOTO KK 07.06.77-JA-066959
(D17) (09.01.79) A23b-04 A23l-01/10 A23l-03

Method comprises using processed starch powder of swelling degree 3.0-6.0 singly or together with other starch as the starch component.

The processed starch is obtd. by heat-gelatinising starch, cooling it, drying it and pulverising it. Firstly water is added in an amt. of 30-60 (40-55)% on the solid starch and the mixt. is gelatinised at 70-150 (80-120)°C. To obt. the starch of proper swelling degree, the gelatinisation is practiced with stirring and it is desirable to use the extruder having small screw compressing ratio and to extrude the mixt. under relatively low pressure.

The heat-processed foods (e.g. pasty food, retort food, etc.) which can keep excellent properties on heat-processing and are excellent in taste and flavour, texture and preservative property, can be prepd. 7.6.77 as 066959 (7pp5)

IZAW/ ★ D13 12939B/07 ★J5 4002-354
Chinese noodles prepn. - from kneaded mixt. of flour with water contg. propylene glycol, saline water, sodium glutamate, salt and powder obtd. from e.g. beef
IZAWA Y 07.06.77-JA-067072
(09.01.79) A23l-01/16

Method comprises kneading powdery material consisting mainly of flour with water (I) contg. (a) 1-2% of dry powder obtd. by boiling oily meat or skin of chicken, pork, beef, etc., removing oil and fat from them and powdering, (b) 2-4% of propylene glycol, (c) 1-2% of saline water, (d) 0.2-0.3% of sodium glutamate and (e) 1-2% of common salt, rolling the obtd. dough and cutting it to form noodles.

Prepn. of steamed Chinese noodles comprises (1) steaming raw noodles for 2-3 mins., boiling for 1-2 mins., washing with water and removing water, (2) immersing the treated noodles in (I) for 20-30 seconds, (3) packaging the prod. in air-tight bags and steam-sterilising at 90-95°C for 20-30 mins. and (4) cooling with cold air under vibration.

Raw Chinese noodles and steamed Chinese noodles which are highly preservative and excellent in texture, taste and flavour can be obtd. By including propylene glycol in saline water the odour of saline water can be suppressed, the decomposition of vitamins can be suppressed and the antiseptic effect can be improved. 7.6.77 as 067072 (3pp5)

YOSH- ★ D13 12940B/07 ★J5 4002-358
Coagulating bean milk - by adding a small amt. of coagulant to low temp. bean milk, and adding this to the rest of the coagulant at a higher temp.
YOSHIKAWA SHOJI KK 02.06.77-JA-066166
(09.01.79) A23l-01/20

The method comprises using a rapidly effective coagulating agent, and comprises adding a small amt. of the coagulating agent to the bean milk which is kept at a low temp. such that the coagulation is suppressed; and mixing the cold bean milk with a large amt. of bean milk which is kept at a high temp. such that coagulation occurs.

The process gives bean curd which is palatable, soft, voluminous and has good water-holding property and texture, without using particular additives. Energy consumption is low. Pref. the coagulant is magnesium chloride, calcium chloride, calcium lactate, etc. Usually, 2.5-5% bean milk is previously cooled to <15°C and the coagulant is added in it, and it is added to the remaining bean milk at 65-95°C. 2.6.77 as 066166 (3pp5)

KOIK- ★ D13 12941B/07 ★J5 4002-360
Dried gourd shavings pickled in plum vinegar - have good colour and taste stability on storage
KOIKE SHOTEN KK 03.06.77-JA-064870
(09.01.79) A23b-07/10 A23l-01/21

Process comprises washing dried gourd shavings with water, boiling in water, immersing in mixed soln. contg. plum vinegar, sodium citrate, sugar, common salt, sodium glutamate, pigment and sorbic acid for a prescribed time to impregnate the soln. and to colour the shavings, and finally cutting the shavings.

The pickled prod. is bottled or packaged in bags and palatable food which can be preserved without change in colour and taste for long time, can be obtd. 3.6.77 as 064870 (2pp5)

NIGY ★ D13 12942B/07 ★J5 4002-36
Meat loaf-like smoked salmon prod. - prepd. by mixing mince smoked salmon, cod fish, shortening, soft cheese and sodiu caseinate, adding hard cheese, moulding and sterilising
NICHIRO GYOGO KK 23.12.76-JA-156015
(09.01.79) A23l-01/32

Process comprises kneading minced smoked salmon and minced codfish, adding shortening of m.pt. 30-40°C, sof cheese and sodium caseinate, kneading, adding fine piec of hard cheese, moulding and steam-sterilising.

The taste of smoked salmon and cheese are well matched. Smoked salmon is used in amt. 50-60% and minced codfish in amt. 10-20%. The minced codfish improves th texture of the prod. 23.12.76 as 156015 (2pp5)

TAIF ★ D13 12943B/07 ★J5 4002-36
Food having meat-like properties obtd. from fish - by impregnatin with pH-adjusting additives, standing and freezing
TAIYO FISHERY KK 08.06.77-JA-066777
(09.01.79) A23j-03 A23l-01/32

Method comprises cutting fish meat in pieces of 5-15 mm size, adding common salt 1.5-3.0 wt.% on fish meat, adjusting pH of the mixt. in the range of 6.8-7.3 with 0.15-0.25 wt.% on fish meat of sodium phosphate or sodium bicarbonate, mixing them so that meat pieces are not broken and the additives are impregnated well inside of meat pieces, standing them for structuring the reticular tissue and freeze-storing them at -3 to -25°C for longer than a day to freeze-modify the fish meat and to form animal meat-like texture.

Fish meat of low fat content or defatted fish meat (obtd. by defatting the fish meat of high fat content with slightly alkaline cold water) can be used. The fish meat pieces and additives are mixed at 5-25°C for 2-5 minutes The standing is effected at 15-40°C for 0.5-3 hrs. or at 3.15°C for 3-16 hrs. pref. in the presence of potassium bromate or calcium chloride.

Food material similar to animal meat in elasticity, touch, texture and taste and flavour, can be obtd. from fish meat. 8.6.77 as 066777 (5pp5)

ROKK- ★ D13 12945B/07 ★J5 4002-37
Soft cheese having excellent heat stability - prepd. by adding fuse salt and albumin to natural cheese, melting, emulsifying wit water, shaping and cooling
ROKKO BUTTER KK 06.06.77-JA-067168
(09.01.79) A23c-19/12

Process comprises adding 1-4 pts. wt. of >1 fused salt and 1-20 pts. wt. of albumin to 100 pts. wt. of natural cheese, heating, melting and emulsifying the mixt. with water so that the moisture content of the final prod. is 50-6 %, shaping and cooling.

The soft cheese is not melted at 60-150°C and can be directly mixed in pasty foods and heat-treated without melting.

Fused salt is e.g. sodium or potassium salt of polyphosphate, condensed phosphate, primary phosphate, secondary phosphate. The heat-melting and emulsifying is practiced at 70-90°C in an emulsifying pan and the cheese i sterilised. After melting, the cheese is degassed under reduced pressure. 6.6.77 as 067168 (3pp5)

SANE ★ D13 12947B/07 ★J5 4002-38
Sweetener contg. stevia - contains alkali metal salt of an organ acid as improving agent
SAN EI CHEM IND KK 01.06.77-JA-065180
B05 E17 (B03 E13) (09.01.79) A23l-01/22

The sweetener is obtd. by combining alkali metal salt of organic acid in stevia. The salts are applied in an amt. w/w% on stevia. Those salts and stevia may be added seperately in food or as the mixt. By combining those salts the sweetness of stevia can be improved to similar sweetness as that of sucrose and the good sweetness can be maintained even in acidic condition.

The alkali metal salts of organic acid partic. alkali metal salts of di-malic acid, acetic acid and d-tartaric acid are useful as the improving agent for the sweetness of stevia. 1.6.77 as 065180 (3pp5)

TEIJ ★ D13 12952B/07 ★J5 4002-399
Prepn. of dry bean paste for miso soup with slow sedimentation - by adding at least one of liq. or solid oil or fat, unsatd. fatty acid, fatty acid alcohol ester and fatty acid ascorbic acid ester
TEIJIN KK 02.06.77-JA-063960
(09.01.79) A23l-01/20

Method comprises adding 0.2-1.4 (pref. 0.4-1)% of >1 liq. and solid oil and fat, unsatd. fatty acid e.g. oleic acid, etc., higher fatty acid-higher alcohol ester e.g. bees wax, wood wax, etc. and higher fatty acid-ascorbic acid ester e.g. ascorbic acid ester of stearic acid, lauric acid, etc. to raw bean paste, mixing them homogeneously, drying the mixt. and powdering the dry mixt.

The liq. oily substances are added as they are and the solid oily substances are first pulverised to ca. 25 mesh and then mixed with the raw bean paste. They are mixed in a mixer and the mixt. is dried by e.g. freeze-drying, vacuum-drying, air-drying under low humidity, etc.

The dry bean paste can be made into 'miso' soup by adding hot water to it, and 'miso' soup obtd. is a stable dispersion which gives a slow sedimentation of a small amt. of bean paste. 2.6.77 as 063960 (4pp5)

SUEH- ★ D13 13113B/07 ★J5 4003-099
Dehydration of animal material - by mincing raw material and heating with fat and oils in cookers under reduced pressure
SUEHIRO TEKKOSHO KK 09.06.77-JA-068252
(11.01.79) C07g-07 C07g-17

Process comprises (a) mincing raw materials; (b) conveying to cookers through supply pumps; (c) heating them through fats and oils in the cookers under reduced pressure and thereby evaporating and dehydrating the water contained in the raw materials; and (d) discharging the dehydrated raw materials from the cookers through discharging pumps.

As the process is effected under reduced pressure, a heating temp. is low as <100°C can be used. As the raw materials do not come in contact with air in the dehydrating appts., the raw materials are not decomposed. Continuous method shows high heat efficiency and improves productivity. 9.6.77 as 068252 (3pp136)

NIOF ★ D13 13117B/07 ★J5 4003-106
Refining fatty oils - to give prods. of good colour, stability and low peroxide value
NIPPON OILS & FATS KK 10.06.77-JA-067843
(11.01.79) C11b-03

Fatty oil is contacted with (a), (b) or (c) below before acid sepg. process, in addn. to the ordinary refining process. (a) are cpds. having amino and carboxyl gps., e.g. aspartic acid, lysine, valine, methionine, cystine, alanine, phenylalanine, arginine, glutamic acid, leucine, glycine, serine, threonine, histidine, tryptophan, anthranilic acid, aminosalicyclic acid, aminophthalic acid, or HCl-, Na- or K-salt of these materials. (b) are cpds. having amino and sulpho gps., e.g. sulphamide, 4-sulphoanthranilic acid, 4-nitro-aniline-2-sulphonic acid 1-amino-2-naphthol-3,6-disulphonic acid, or Na- or K-salt of these materials. (c) are alkanolamines or their salts, e.g. monoethanolamine, diethanolamine, triethanolamine or HCl-salt of these materials.

Refined fatty oil having good hue and high stability (i.e. high preservability, low peroxide value) is obtd. 10.6.77 as 067843(4pp170)

KYOW ★ D13 13442B/07 ★J5 4004-766
Storable feedstuff for marine creatures - is kneaded with water and binder and coated onto substrate
KYOWA FERMENTATION KK 15.06.77-JA-069789
A97 C03 (13.01.79) A23k-01/20

Feedstuff for roll shell (Sic) and sea urchin is obtd. by kneading the feedstuff, digestable binder and water together coating the kneaded prod. onto a water-absorptive base material and then drying the resulting prod. The feedstuff can be stored for a long periods of time, has the high intake efficiency and prevents the pollution of water.

Antiseptics, fungicides, colouring agents and attractants can be added to increase the intake efficiency and to prevent the putrefication of the feedstuff. As feedstuff there are used fish meal, wheat flour, starch, algae powder, vitamin mix, mineral mix, bone powder, soy bean dregs, rice bran, wheat bran. As binder there are used arginate, cmc, gelatin, gum arabic, casein, PVA resin, agar powder, polysaccharide, protein, etc. As water-absorptive base material are used paper, cloth, unwoven textile, wood, clay plate and sponge. One or both sides of the base material can be coated. 15.6.77 as 069789 (5pp108)

ASAH- ★ D13 13443B/07 ★J5 4004-767
Feedstuff for racehorses - contains Spirulina algae which improves hair lustre
ASAHI CARBON KK 08.06.77-JA-067480
C03 (13.01.79) A23k-01/18

Spirulina algae is cultured by inoculating Spirulina algae into a culture liq. contg. nutrients and blowing in air contg. CO_2 while irradiating with light. As Spirulina algae there are used S platensis, S maxima, S major, S princeps, S laxissima, S sutilisima, S caldaria, S curta and S spirulissima. The Spirulina algae recovered from the culture liq. is washed with water and spray-dried at 130-160°C.

The Spifulina algae can be directly given to horses as granules or is mixed with a feedstuff and then given to horses. It is pref. mixed with a feedstuff contg. garlic. The amt. of Spirulina used is 4-12 (6-8)g, per 100 kg body weight, per day. 8.6.77 as 067480 (6pp108)

KIKK ★ D13 13513B/07 ★J7 8043-599
Soy sauce prepn. - by heating raw soy sauce then rapidly cooling to remove non-denatured protein
KIKKOMAN SHOYU KK 09.08.73-JA-088805
(D16) (21.11.78) A23l-01/23

Raw soy sauce having N-character (soy sauce contg. non-modified protein, forming gray-white ppte. on heating) is heated at ≥110°C for ≤ 2 minutes, and then cooled rapidly to ≤ 85°C. The substance causing N-character is removed.

In the prepn. of soy sauce, protein in soybean reamins incompletely denatured, if boiling is insufficient, and the non-denatured protein component cannot be subjected to the action of Koji mould (e.g. Aspergillus oryzae); in such a case, when the resultant is diluted with water and boiled, the non-denatured protein coagulates to cause turbidity or precipitation. 9.8.73 as 088805 A231-1/238 (21.11.78) KIKKOMAN SHOYU KK (5pp22)(J50040794)

KAOS ✓ D13 96831X/52 =J7 9000-982
Chemically peeling fruits or vegetables - using aq. alkali contg. polyoxysorbitan fatty ester and another fatty ester, e.g. of glycerol
KAO SOAP KK 30.04.75-JA-052192
*A97 E19 (18.01.79) *J51128-453 A23l-01/21*

Fruits or vegetables are steeped in alkaline aq. soln. contg. (a) fatty ester of polyoxysorbitan, fatty ester of sugar having HLB > 9 and mixture; and (b) ≥ 1 fatty ester of glycerin, sorbitan, propylene glycol or sugar having HLB < 9. Large HLB (Hydrophilic Lipophilic Balance) indicates a surfactant which is hydrophilic. Low HLB indicates lipophilic property.

Fruits obtd. have better flavour and polish and a better hardness. Waste water is easily cleaned with $Ca(OH)_2$. 30.4.75 as 052192 A231-1/21 (18.1.79) KAO SOAP KK (9pp)(J51128453)

KAOS D13 96832X/52 =J7 9000-983
Chemically peeling fruits or vegetables - by steeping in aq. alkaline soln. contg. nonionic surfactant(s)
KAO SOAP KK 30.04.75-JA-052193
*A97 E19 (18.01.79) *J51128-454 A23l-01/21*

Fruits or vegetables are steeped in aq. alkaline soln. contg. nonionic surface active agent(s) selected from fatty ester of polyoxyethylene sorbitan, fatty ester of sugar fatty ester of sorbitan, fatty ester of glycerine and fatty ester of propylene glycol, and orthophosphate and methaphosphate. The nonionic surface active agents have HLB

7-16. Fatty ester of polyoxyethylene sorbitan having HLB 7-16 is prepd. by reacting 3-30 moles of ethylene oxide with fatty ester of sorbitan derived from 8-18C fatty acid.

The yield and properties of fruits or vegetables, processing properties and processing cost are improved. The waste water can be easily cleaned using $Ca(OH)_2$. 30.4.75 as 052193 A231-1/212, (18.1.79) KAO SOAP KK (8pp) (J51128454)

KYOW D13 72934X/39 =J7 9000-986

Euphausia superba autolysis prevention - using one or more of phosphoric acid, citric acid, their salts

KYOWA FERMENTATION KK 06.02.75-JA-014888

*(D12) (18.01.79) *J51091-356 A22c-29/02 A23l-01/32*

Method for qualtiy preservation of Euphausia superba is characterised by contacting it with at least one cpd. selected from phosphoric acid, citric acid and their salts, in order to prevent autolysis. The Euphausia superba is, as it is or after treatment of mashing or of removing shells, either added with above cpds. or immersed in their aq. soln. and is freeze-dried conventionally.

The cpds. are applied as 0.1-5% on Euphausia superba or as 0.1-10% aq. soln. for immersing. The contact time depends on the amt. of cpds. applied, and in the case of immersion, is usually 1-30 mins. The preventing effect for autolysis can be promoted by applying other cpds. such as ethanol. 6.2.75 as 014888 A231-1/325;A22c-29/02 (18.1.79) KYOWA HAKKO KOGYO K (3pp)(J5109 1356)

NEST D13 15362S/08 =J7 9000-987

Fruit flavoured beverage powder

SOC PROD NESTLE SA 05.09.69-CH-013483

*(18.01.79) *BE-755-303*

GENO D13 02274S/02 =J7 9000-988

Raw coffee pressure and heat treatment

GENERAL FOODS CORP 20.06.69-US-835234

*(18.01.79) *DT2030-376*

KIKK D13 45162W/27 =J7 9001-000

Viscous shoyu prodn from a koji - obtd by inoculation of Aerobacter cloacae (FERM-P 1779)

KIKKOMAN SHOYU KK 25.06.73-JA-070878

*(D16) (18.01.79) *J50019-996 +A23l-01/23 C12k-03*

A viscous shoyu was produced using a koji made by inoculating Aerobacter cloacae (FERM-P 1779) prod. a high viscous polysaccharide together with Aspergillus.

In an example, the microbe was inoculated to 40 g wheat bran contg. 30 ml water and pasteurized at 1 kg/cm^2 for 60 min. at 7×10^5 cells together with 1×10^8 cells of A. sojae IAM 2669 and cultured at 30°C for 60 min. To 3.3 kg defatted soybean steamed at $1kg/cm^2$ for 45 min. 10g of the inoculum and 3.1 kg roasted and crushed wheat were added and cultivated at 28-35°C for 65 hr. To the finished koji, 12 l. of 23% NaCl soln. were added and fermented at 25-30° for 6 mths. The resulting shoyu had sp. viscosity 81.50 and total N 1.460 formol N 0.950, NH_3-0.216, reducing sugar 2.35, and alc. 2.20%. 25.6.73 as 070878 A231-1/23; C12k-3/00 (18.1.79) KIKKOMAN SHOYU LTD (9pp)(J50019996)

ALWA- D13 60500U/41 =J7 9001-260

Concentrating aq proteinaceous sludge - by coagulating esp with blood and calcium hydroxide and extg water

ALWATECH A/S (ALW -) 20.03.72-NO-000903

*(23.01.79) *DT2311-568 C02c-03 +A23k-01/10 B01j-01*

Conc. an aq. protein-contg. sludge to a solids concn. allowing use as raw material for meat- and bone-meal prodn. is effected by admixing the sludge with a coagulating assistant (I) having a basic and/or high buffer capacity; heating the mixt. obtd. to ⩾ 60°C, opt. by directly supplying steam and if necessary with stirring, and sepg. the water freed, esp. by centrifuging and/or by means of at least one sludge settling tank, from coagulated. agglomerated material.

The sludge treated with (I) may be heated in 2 steps, (i) by first heating with stirring until coagulation starts to set in, and (ii) quickly to ⩾ 60°C by steaming, esp. continuously. (I) may consist of heat-coagulatable proteins of high buffer capacity, esp. blood and/or ground meat, or of inorganic basic cpds., esp. of 2- or polyvalent metals, partic. $Ca(OH)_2$. Pref. (I) contains blood, Ca(OH
and opt. also fatty acids. 20.3.73 as 031519 (clg.20.3.72 -NO-000903) B01j-1/00;A23k-1/10;C02c-3/00 (23.1.79) ALWATECH A/S. (3pp)(J49131956)

HUNT- ★ D13 13588B/07 ★NL 7807-853

Prodn. of instant powders, esp. of whole milk - by spray drying with lecithin soln.

HUNTER VALLEY COOP 26.07.77-AU-000971

(30.01.79) A23c-09/16 B01d-01/18

An instant powder is produced from a liq. (esp. whole mil
which normally gives a hydrophobic powder on drying. The process comprises simultaneously spraying the liq. and an aq. lecithin soln. into a spray-drying chamber through which a hot gas is passed, so that the 2 spray streams mix.

Products which dissolve rapidly in water can be obtd. using small amts. of lecithin, with only minor modifications to conventional spray-drying equipment.

The lecithin soln. pref. contains 5-18 (esp. 15) pts. wt. H_2O per pt. wt. lecithin. It is pref. used in an amt. sufficient to give an instant powder contg. 0.1-0.5 (esp. 15)pts
wt. H_2O per pt. wt. lecithin. It is pref. used in an amt. sufficient to give an instant powder contg. 0.1-0.5 (esp. 0.2-0.3) wt.% lecithin. 24.7.78 as 007853 (10pp367)

AGRI= ★ D13 13605B/07 ★SU -599-186

Silage and hay drilling sampler - with drill on end of column and contg. vessel into which sample passes after cutting

AGRIC AGROCHEM SERV 27.02.76-SU-328653

R16 (03.03.78) G01n-01/20

Sampler for silage and hay, using drilling techniques for cutting into the unbroken structure of storage piles, pits, trenches, silos, and other stores, comprises a drill bit, column pipe, intake vessel, and transfer attachment.

To extract samples of silage and hay without disturbing the structure or moisture content of the raw material at any depth of storage, and minimizing the driving-in force, the bit is made from wedge-shaped, diametrically-positioned cutters, with outer cutting edges. The latter are set at an angle of 10-15°. The external diameters of the bit and the intake vessel are equal.

Komolov, I.A., Irbichin, A.S., Bakhtin, S.N. et al.
Bul. 11/25.3.78. 27.2.76 as 328653 (3pp29)

PROV= ★ D13 13626B/07 ★SU -599-773

Milk homogeniser of increased output - with piston and valve movements synchronised to prevent backflow into suction manifold

PROVISIONS ENG RES 24.12.76-SU-433950

P13 (07.04.78) A01j-11/16 B01f-05/08

A homogeniser comprises a piston unit, a suction and delivery valve system, a homogenising head, and a crank drive. The piston unit has a cam shaft with push rods on which the suction valves are located. The suction valves and pistons are moved synchronously by a chain transmission from the crank drive. Such arrangement synchronises piston and valve movements to prevent liquid back-flow

Mukhin, A.A., Nikanorov, E.V., Katsnelson, M.Ů. et a
Bul. 12/30.3.78. 24.12.76 as 433950 (3pp1358)

ALTA= ★ D13 13627B/07 ★SU -599-77

Cheese-pressing mould without filter cloths - has flexible sealin collar which covers gap between cover and mould to prevent ri formation on cheeses

ALTAI BUTTER CHEESE 23.11.76-SU-423829

P13 (07.04.78) A01j-25/13

Mould includes a cover and drainage inserts.

The formation of ''fins'' on the surface of the cheese during pressing is avoided by providing the body of the co
-er with a shell, perforated plate, and sealing collar, wi
a channel on the outside to receive the shell and a bevelle
edge in its lower part, made at an angle of 30-45° to the internal wall of the collar.

Dobrovolskii, I.S., Sveshchinskii, O.B. Bul. 12/30.3.7
23.11.76 as 423829 (3pp29)

DAIR= ★ D13 13634B/07 ★SU -599-787

Fungal strain for alcoholic fermentation of milk - is preserved by incubating with reactivation medium and freeze drying at specified temp.

DAIRY IND RES INST 16.12.76-SU-431605

(D16) (30.03.78) A23c-09/12 C12k-01/08

The fungal culture used in the alcoholic fermentation of milk for the mfr. of 'Kefir' (RTM) drink, is preserved in a dry form for posting etc. The fungal culture is grown on fat-free milk nutrient at 18-22°C. for 24 hrs., then mixed with activation medium (contg. whey and nutrients and partly fermented with symbiotic lactic floria strain and yeast) and freeze dried at (-)15 to (-)18°C. It is additionally dried at 40-42°C. for 8-10 hrs. The dry culture can be stored for long periods in adverse conditions and quickly reactivated.

Lagoda, I.V., Bannikova, L.A., Bavina, N.A., et al.
Bul. 12/30.3.78. 16.12.76 as 431605 (3pp938)

PROV= ★ D13 13635B/07 ★SU -599-788

High moisture butter mfr. from high fat cream - includes specified cooling and high pressure short-time treatment before extrusion to improve emulsion stability

PROVISION MACH RES 21.07.76-SU-390538

(03.05.78) A23c-15/02

Production of butter containing an increased amount of moisture, e.g. "Krestyanskii" ("Farmbutter"), primarily by obtd. high-fat cream, cooling it to a temp. at which there is a bulk crystallisation of the butter fat. This is treated mechanically, extruded and packed.

Product quality is increased, by carrying out the mechanical treatment at a pressure of 50-150 atm. with subsequent restructuring over 120-200 seconds.

Cream, with a fat content of 75% is cooled to 15-20°C. so that the butter fat crystallises out in bulk. This is subjected to mechanical processing by homogenising at a pressure of 50-150 atm. for a fraction of a second and subsequently restructuring over a period of 120-200 secs. The final mechanical processing consists in extruding and packing.

Mukhin, A.A., Kuzmin, Yu.N., Vinogradov, A.A. et al.
Bul. 12/30.3.78. 21.7.76 as 390538 (2pp29)

BUTT= ★ D13 13636B/07 ★SU -599-789

Cheese enriched in milk protein(s) prepn. - by ultrafiltration with simultaneous coagulation with bacterial preparation, renet and calcium chloride

BUTTER CHEESE IND 27.05.76-SU-366394

(03.05.78) A23c-19/02

Cheese based on a milk protein concentrate is produced by souring milk with a bacterial prepn. at elevated temp.; cooling, subjecting to ultrafiltration to a predetermined content of dry defatted substances; introducing renet; coagulating the milk enriched in proteins; forming curd and processing it by the visual methods.

The process control is improved by effecting the renet coagulation during the ultrafiltration process, and accelerating the coagulation by raising the temp. from 6-10° to 30-40°C. or by adding $CaCl_2$. Pref. the bacterial prepn., the renet and $CaCl_2$ are added 1.5-4.5 hr. before the end of the ultrafiltration and the heating of the mixt. is carried out 0.4-2.5 hr. before the end of the ultrafiltration. The structure and consistency of the prod. are improved and the process is accelerated.

Tabachnikov, V.P.; Krasheninin, P.F., Konanykhin, A.V. et al. Bul. 12/30.3.79 27.5.76 as 366399 (2pp70)

GOME= ★ D13 13637B/07 ★SU -599-791

Caramel lumps feeder for wrapping machine - with vibro-chute and channelled sloping chute with supply and orienting rotating brushes above

GOMEL SPARTAK CONFE 25.12.76-SU-435523

(30.03.78) A23g-03

The feeder suppling caramel lumps to a wrapping machine in the correctly-oriented position.

It includes a vibro-chute, sloping chute with longitudinal channels, and has propelling brushes mounted transversely above them. The caramel lumps are uniformly dis- [illegible] and productivity is increased by adding extra brushes, mounted off-centre on a drive shaft.

The axis of this shaft is parallel to the axis of the main brushes, and placed between them and the vibro-chute. The main and supplementary brushes can rotate in the same direction.

Kalinenko, V.P., Spodabaev, M.R., Antoshkina, L.M.
Bul. 12/30.3.78. 25.12.76 as 435523 (2pp29)

C.F.T.R.I., MYSORE

ASEL= ★ D13 13638B/07 ★SU -599-792

Gelled fruit flavoured confectionery prodn. - including mixing thick sugar syrup with acid contg. casein soln. at elevated temp. before moulding

AS USSR ELEMENT ORG 29.11.76-SU-424455

(30.03.78) A23l-01/06

The fruit flavoured confectionary of type similar to gelled fruit-paste candy is obtd. without the use of traditional gelling agents and with improved nutrient value by dissolving powdered casein in hot acid medium, adding sugar with stirring, pouring the mixt. into moulds and cooling it.

To obtain more commercially useful prod. the sugar syrup (75-90% sucrose content) at 90-115°C. is mixed with 18-35% casein soln. in the presence of anti-foam agent (I). The final prod. is obtained by drying the cooled moulded mixt. and coating it with castor sugar.

Bezrukov, M.G., Andrianov, V.V., Bernova, G.I. et al.
Bul. 12/30.3.78. 29.11.76 as 424455 (3pp938)

AUMO= ★ D13 13826B/07 ★SU -600-175

Biosynthesis of biologically active cpds. e.g. microbial enzyme - includes addn. of lysis-inducing microbial strain to thermally treated producer strain

AS UKR MOLEC BIOL 01.08.76-SU-391670

B04 (D16) (28.03.78) C12d-13/10

Microbial enzymes, e.g. β-galactosidase, are useful in food mfg. industry, e.g. milk waste processing and in medicine.

They are biosynthesised by culturing producer microbial strain in corresp. medium with the addn. of a lysis inducing microbial strain at required moment to regulate the biosynthesis so as to obtain condition for max. prod. yield. To increase the yield and to simplify the process so that it can have industrial application, the lysogenic strain is preheated at 40-45°C. before adding it to culture medium. The thermoinduction activates the lysogenic strain.

Kordyum, V.A., Chernykh, S.I. Bul. 12/30.3.78.
1.8.76 as 391670 (2pp938)

CHAL- D13 59773Y/34 =US 4137-836

Cheese making in perforated vertical tube - with serum sepd. by gravity and using reduced pressure to increase rate of sepn.

ETAB CHALON-MEGARD 18.11.75-FR-035744

*P13 (06.02.79) *FR2331-954 A01j-25/11 +A01j-11/06*

Cheese-making appts. includes a perforated tube for holding curd and whey and in which the curd sediments out, a non-perforated envelope surrounding the tube and being hermetically sealed to allow evacuation of the space between the envelope and tube, a reservoir connected to the space for the receipt of whey and a suction pump connected to the upper portion of the envelope. The bottom of the tube has a device for sepg. the sedimented curd into portions. The bottom of the reservoir is connected to the top of the envelope.

Evacuation of the spaces increases the density of the curd to produce a uniform semi-ripe cheese free of moulding holes. 17.11.76 as 742453 (8pp1376)

WARR/ ★ D13 13973B/07 ★US 4137-837

Automatic machine for sepg. egg white from yolk - has spirally slotted separating section around and above yolk support cup

WARREN W H 28.02.77-US-772674 (08.01.76-US-647444)

(06.02.79) A23j-01/09

A machine includes a separator cup located above a white receiving pan. The cup has a imperforate upwardly concave yolk support with a white drain section fixed to and extending upwardly from the support rim. The section has a spiral drain slot over more than one turn around the section.

The section adjacent the slot is a spiral extending up from the support top and with at least the first full turn having its innermost edge directly above the support outer edge as a secondary support for the outermost parts of large yolks. The arrangement permits higher operating speeds in a machine with a number of such separators moved below egg breakers. 28.2.77 as 772674 (7pp1358)

WARR/ D13 52818A/29 =US 4137-838

Egg breaking, yolk and white sepg. machine - requires only one operator, gives improved control and draining

WARREN W H 29.12.76-US-755236

*P28 (06.02.79) *NL7714-046 A47j-43/14 +A23j-01/09*

An egg cracking head includes a device for mounting the head on a conveyor, a pair of knives moveably mounted on the head for cracking the eggs, a support for the eggs, a device for moving the knives to crack the egg, a device for moving the cracked shells to a fully opened draining position and a control for moving the egg support to an only partially opened final draining position.

Pref. the egg support is formed by a pair of pivotally connected arms. The opening device pref. has a cam for swinging the support arms apart. A resilient member which urges the arms together pref. forms the control. Albumen and yolk are pref. sepd.

The device operates at high speed and occupies minimal floor space. 29.12.76 as 755236 (15pp1376)

STRA/ ★ D13 14019B/07 ★US 4138-212

Curcumin colouring agent prodn. - by extracting turmeric with soap soln.

STRANSKY C E 10.08.77-US-823242

E24 (06.02.79) A23l-01/28 C09b-62

A water-soluble liq. curcumin-contg. food colouring is obtd. by mixing ground turmeric root and an aq. soap soln. obtd. by reacting vegetable oil and alkali metal hydroxide, to obtain a soln. of curcumin in the liq., and sepg. the root and the liq.

A fat soluble colouring agent is obtd. by adding acid to the above extract, to ppte a solid contg. curcumin which is dispersible in fatty materials.

A simple and cheap extractant is used, and toxic solvents are avoided, and more complete recovery of curcumin from the root is possible. 10.8.77 as 823242 (5pp955)

AJIN D13 11069A/06 #US 4138-271

Powdered caramel prodn. from starch or dextrin - by regulating moisture content and pH and extruding under pressure

AJINOMOTO KK 15.06.76-JA-070302 (14.10.77-US-842252)

*(06.02.79) *J52154-564 A23g-03 +C13l-01/08*

Caramel prod. is prepd. by admixing a pre-gelatinised starch or dextrin with water and an acidic reagent to total moisture content 10-30 wt.% and pH 1.5-4.0, extruding at an elevated temp. and pressure through an orifice into an atmos. environment to cause caramelisation.

Pref. extrusion is at 150-280°C at 2-50 Kg/cm^2 pressure. Pre-gelatinised starch is derived from potato starch tapioca, sweet potato starch or waxy corn starch. Dextrin has dextrose equiv. < 30. Caramel prod. is finally pulverised after extrusion and aggregation to yield powdered prod.

Caramel is used as a natural colouring agent eliminating safety problems of synthetic ones. Process produces caramel having uniform quality without using mono- or disaccharides, nor using spray drying techniques. 14.10.77 as 842252 (3pp931)

FIRM D13 75057T/47 =US 4138-410

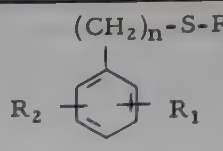
Pyrazine sulphur cpd - as flavour modifiers for food products part coffee

FIRMENICH SA 08.09.70-US-070560 (30.04.65-US-452342)

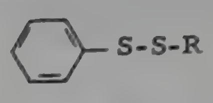
*E13 (06.02.79) *US3702-253 +A23l-03/36 C07d-333/24*

New thiophene sulphur'cpds. are chosen from 2-(thienyl-2)-ethanethiol and 2-(thienyl-2)-ethanethiol acetate. The thiophene sulphur cpds. are useful as flavouring agents whicy may be used singly or in combination to alter the flavour or flavour notes of compsns. for food use.

The parent patent claimed a soluble coffee material contg. aromatic sulphur cpds. of formula (I) or (II) as flavour modifiers.



(I)



(II)

In the formulae, n is 0-2; R_1 is H, OH, Me, Et, MeO or EtO; R_2 is H or Me; R_3 is Me or benzyl, or may also H when n is O; R is Me or phenyl. 29.5.75 as 581609 Di ex. 3702253, 3968264 (+18.4.66, 8.9.70, 13.4.72, 24.7.74-US-543069, 070560, 243866, 482820)(28pp910)

GRAC D13 42538A/24 =US 4138-49

Feed supplement for ruminants to prevent lactic acidosis - contai cells of Megaspaera elsdenii and a propionic acid synthesisin bacteria

GRACE W R CO 07.12.76-US-748210

*C03 (D16) (06.02.79) *DT2754-150 A23k-01/18*

Compsn. for facilitating the adaption of ruminants from a roughage or normal pasture ration to high energy ration, comprises a mixt. of bacterial cultures consisting of Me sphaera elsdenii and Selenorionas ruminantium.

The cultures are admixed with an orally ingestible animal feed additive selected from dried grain, alfalfa, corn, meal, citrus meal, fermentation residues, ground oyster shells, attapulgus clay, wheat shorts, molasses so ubles, corn cob meal, edible vegetable substances, toasted dehulked soya flour, soybean with feed, antibiotic mycelis, vermiculite, soya grits and crushed limestone.

The compsn. reduces or eliminates the symptoms of lactic acidosis during adaption of the ruminants to high e ergy ration. 7.12.76 as 748210 (8pp924)

KELL ★ D13 14122B/07 ★US 4138-50

Bland, non-odorous, acid-soluble acylated protein - prepd. b acylation of protein hydrolysates, suitable for incorporation int acidic or carbonated drinks

KELLOGG M W CO 02.05.77-US-792973

(06.02.79) A23l-01/20

Prepn. of a modified proteinaceous food is described:(a) a protein (I) obtd. from oleaginous seeds is hydrolysed with a proteolytic enzyme to form an acid-soluble polypeptide mixt. (II); and (b) (II) is acylated to form an acylated hydrolysate (III).

(III) has a very mild or bland odour and flavour, and does not develop objectional flavours when dissolved in acid solns. (pH 2-6). (III) is thus suitable for incorporation into a variety of acidic or carbonated drinks to provide protein fortification.

In an example, succinic anhydride was added slowly to a soln. of a bland acid soluble protein in H_2O and NaOH (to pH 7.05) at 37°F, while the pH was kept at 7-7.2 by addn. of NaOH. Finally, the soln. was dialysed, then freeze-dried. 2.5.77 as 792973 (3pp478)

NEST D13 89955A/50 =US 4138-50

Demineralisation of whey - by electrodialysis followed by io exchange (NL 27.11.78)

ASSIS TECH NESTLE S 23.05.77-FR-015732

*(06.02.79) *DT2822-000 +A23c-09/14*

Milk serum is treated inyield demineralised serum by subjecting serum in a clarified and skimmed state to ele trodialysis, then to ion exchange using a strong cationic resin in the H^+ cycle and a weak anionic resin in the OH cycle.

Pref. milk serum is clarified by removing particles having size > 100 microns. Skimming yields residual fats content < 0.05%. Serum contains 18-25 wt.% dry material. Electrodialysis is at 10-20°C under a curren intensity of 15-40 mA per cm^2 of membrane. Deminera isation is to 30-60 wt.% w.r.t. starting milk serum. Electrodialysis intermediate product is pasteurised befo ion exchange. Ion exchange is at 4-10°C.

Prod. is esp. used in baby foods where conventional foods are too high in mineral salts content. 1.5.78 as 901524 (5pp931)

GENO ★ D13 14123B/07 ★US 4138-502
Darkened freeze dried coffee prodn. - using specific pressure during first part of drying then lowering pressure
GENERAL FOODS CORP 17.07.74-US-485854 (08.10.70-US-079340)
(06.02.79) A23f-01/04

A darkened freeze dried coffee is made by rapidly freezing a coffee extract. After the frozen extract has been ground it is dried in a vacuum chamber using a two phase pressure cycle.

During the first phase the pressure is at 400-500 micron Hg while in the second phase the pressure is lowered to below 300 micron Hg. The first phase lasts for 1-5 hrs. and comprises $1/4$-$\frac{1}{2}$ of the drying cycle. This process darkens the surface of the product without melting the frozen interior or allowing it to puff.

The process produces freeze dried coffee with a darker surface which resembles that of roasted ground coffee. 17.7.74 as 485854 (+3.12.73-US-421019)(3pp295)

BLUE- ★ D13 14124B/07 ★US 4138-505
Mfr. of nutrient compsn. for animal feed supplement - by heating aq. blood solids with lipid, making alkaline and adding aldehyde
BLUE WING CORP 28.10.76-US-736411
C03 (06.02.79) A23k-01/04 A23l-01/31

Nutrient compsn. is obtd. by heating an aq. medium contg. ⩾ 10% blood solids to 20-60°C, adjusting the medium to pH 8-11 and adding a nutrient lipid to give a ratio of lipid to blood solids of 0.1:1-6:1. The pH is adjusted to 11.7-13 to form a gel, and 0.1-6% (based on blood solids) of an aldehyde is dispersed in the gel to react with the blood solids and finally the prod. is recovered.

Used as supplement for animal feeds, esp. for ruminants, contg. assimilable lipids at higher than normal levels (4-6%) and the animals assimilate them without digestive disturbances. Supplement is resistant to degradation at the neutral pH in the rumen, but is digested in the abomasum and lower git. 28.10.76 as 736411 (9pp1248)

MEIJ D13 80682Y/45 #US 4138-506
Deodorising soybean or defatted soybean - by adding sulphurous acid reducing agent and treating with activated carbon
MEIJI SEIKA KAISHA 30.03.73-JA-035600 (28.11.75-US-635836)
*(06.02.79) *J77041-343 A23l-01/20 + A23c-11*

Soybean milk is obtd. from soybeans or defatted soybeans by sequentially extracting beans with water, adding a sulphurous acid reducing agent of sodium or potassium sulphite to 1500-4000 ppm w.r.t. total solids (or 200-1000 ppm if defatted beans are used) to form soybean milk mixt.

Mixt. is heated at 100-160°C for 1-60 secs. at 2-6 Kg/cm^2 gauge pressure; quenching heated mixt. to 15-40°C; contacting cooled mixt. with activated carbon to adsorb odorous components and remaining sulphurous acid reducing agent; recovering milk. Pref. heating temp. is 115-160°C for 1-5 secs. Activated carbon is granular.

Process is esp. used to rid system of non-vaporisable components in the milk, without denaturing it. 25.7.77 as 818705 (3pp931)

KEWP- D13 06650A/04 =US 4138-507
Coagulated protein food compsn. - contg. coagulated egg white, a material combining with water, a viscosity increasing agent and a starch hydrolysate
KEWPIE KK 05.07.76-JA-079587
*A97 (A11) (06.02.79) *DT2651-815 A23l-01/32*

Freeze-thaw stable, heat coagulated, frozen egg white food prod. contains ⩾ 70 wt.% coagulated egg white, 1-15 wt.% water-combinable material, 0.1-1.0 wt.% viscosity increasing agent and 2-15 wt.% starch hydrolysate, w.r.t. total raw materials.

Pref. coagulated egg white is obtd. by coagulating the egg-white liq. from a chicken egg. Water-combinable material is corn starch, agar-agar, wheat flour or rice flour. Viscosity increasing agent is guar gum, tragacanth and xanthene gum. Starch hydrolysate is a dextrine alcohol or dextrine. Pref. water-combinable material is 1-10 wt.% viscosity increasing agent is 0.2-0.7 wt.% starch hydrolysate is 2.5-10 wt.% w.r.t. total raw materials. Dextrin alcohols have degree of polymerisation of 12, dextrins have D.E. value of 5-25.

Foodstuffs prepd. show little or no water separation with no occurrence of increase in hardness on thawing, yet retaining excellent palatability. 16.11.76 as 742502 (4pp)

See Also

D15 US 4138334
D16 BE 869589
D16 J5 4002393
D16 SU 599793
D23 DS 2240311
D23 DT 2832137
D23 US 4138413

D14: FOODSTUFF MACHINERY

GENE ★ D14 B/07 ★BR 7803-317
Juice extracting appts.
GENERAL ELECTRIC CO 23.05.77-US-799497
(06.02.79) A23p-01 23.5.78 as 003317

WEIS- ★ D14 12139B/07 ★DT 2733-362
Roasting time control - with microprocessor converting code number into pre- and post-roasting time settings
WEISS A KG 23.07.77-DT-733362
P28 R59 (08.02.79) A21b-07 A23l-01/ A47j-37/06 H05b-01/02*

In an automatic roasting or grilling system in an oven, the total time is adapted to suit the type, mass, temp. and other properties of the food by setting, on a microprocessor, the preroasting and/or postroasting time.

This covers, e.g. meat of all sorts and of greatly different wt. Small quantities are thus roasted for correspondingly reduced times. 23.7.77 as 733362 (17pp39)

VANI/ ★ D14 12246B/07 ★DT 2830-976
Oven drop door for domestic cooker - with slotted hinge articulation and rotary catch disc for easy door extraction
VANINI A 19.07.77-IT-012696
Q74 (08.02.79) A21b-03/02 F24c-15/02

A drop door for the oven of a domestic cooker has hinges which are located in a hinge connecting piece. The latter is pushed into slots and held in a detent. The lever adjoining the oven frame to the door frame is spring-loaded and is held by a hook on an oven frame roller. A rotary catch disc forms a rigid or articulated joint of the lever with the door.

The system enables the user to take off the drop door for cleaning or other purposes. This is partic. useful for units built into a kitchen at breast height. 14.7.78 as 830976 (19pp39)

NATR ★ D14 12464B/07 ★GB 1540-837
Dehusking coconut by pushing past knives - arranged in two sets and opening as coconut passes
NATIONAL RES DEV CORP 07.08.75-GB-033039
(14.02.79) A23n-05/08

A coconut is dehusked by advancing it through a set of blades. The set comprises an upper pair of blades and a lower pair of blades which are initially parallel and aligned with the advancement axis of the nut. The blades make an initial longitudinal cut through the husk and the blades then separate to form wedges which prise the husk from the nut.

This sepn. of the blades is achieved by a combination of cams and gears which detect advancement of the coconut. Pref. a pair of guide blades is provides in a plane transverse to the initial plane of the cutting blades.

The appts. removes the husk from a coconut. 3.8.76 (17pp295)

KANE ★ D14 12715B/07 ★J5 4001-280

Tablets prodn. from powder, e.g. cocoa powder - using a horizontal hollow drum with moulding holes and speed changing devices

KANEBO KK 06.06.77-JA-067170

P71 (08.01.79) A21c-11/08 B01j-02/22 B30b-11/18

A hollow drum having moulding holes formed on the barrel is provided with a speed changer and quick brake and disposed horizontally. A hopper is disposed in the drum to feed a raw powder into the drum. It is rotated at low speed while the moulding holes are charged with the raw powder and it is matured therein for a specified time. The drum is changed to high speed to drain the moulded tablets.

The tablets may have a dia. of 2mm and can quickly be dissolved in water. They are of increased strength and uniform size distribution. 6.6.77 as 067170 (4pp26)

TEIJ ★ D14 13555B/07 ★J7 9001-266

Appts. for sepg. fluid e.g. juice - has treatment chamber contg.. hollow fibres and filler

TEIJIN KK 14.12.71-JA-101284

J01 (23.01.79) B01d-13 B01d-53/22

Appts. comprises hollow fibres bundled and sealed up in a treatment chamber; the remaining space is charged with an elastic and fluid-permeable filler. 14.12.71 as 101284 B01d-13/00;53/22 (23.1.79) TEIJIN KK (6pp26)(J48066079)

HISA- ★ D14 13556B/07 ★J7 9001-267

Filter assembly for water, blood or juices - comprising laminated cells formed by ultrafiltration membranes and reinforcing plates

HISAKA SEISAKUSHO (HOND) 22.01.72-JA-008552

J01 (23.01.79) B01d-13 B01d-31

Device for filtering a fluid such as water, blood, and juices to produce a concentrated fluid, comprises plates, membranes for ultrafiltration, and reinforcing plates. Each latter plate carries two membranes at both side faces, and the former and latter plates are alternately laminated to form filter cells. 22.1.72 as 008552 B01d-13/00;31/00(23.1.79) HIZAKA SEISAKUSHO KK; HONDA MOTOR IND KK (3pp26)(J48078086)

AGRI= ★ D14 13624B/07 ★SU -599-765

Farm animal fodder press - has horizontal circular die contg. radial channels with end walls lengthened and bent downwards to break off extruded mass

AGRIC MECHANISAT RE 14.07.75-SU-156090

P12 (19.04.78) A01f-15

The press consists of a horizontal circular die, with radiating channels in it, at the exit from which breakers are mounted. Pressing rollers, with drive mechanism, are arranged inside the die. Construction is simplified by lengthening one of the vertical walls of each channel in the direction of the exit and distributing the line of the breaker at an angle to the longitudinal axis of the channel.

Volkov, F.N., Sobolev, G.V., Skarin, P.A. et al. Bul. 12/30.3.78. 14.7.75 as 156090 (2pp29)

PROV= ★ D14 13665B/07 ★SU -599-850

Centrifugal separator for liquid systems e.g. milk - employs hydraulic coupling whose working chamber gradually fills with oil through channels containing adjustable throttles

PROVISION MACH RES 29.11.76-SU-424458

J01 P41 (25.05.78) B04b-01 B04b-09/08

Smooth acceleration of the rotor of centrifugal separator for liquid systems, as used in creameries or generally in food, chemical, pharmaceutical etc. inds., and reduction of electric power consumption, are ensured by using a hydraulic coupling, with shafts of the drum and of the motor disconnected during the start of the motor. The chamber for the oil in the hydraulic coupling is located under the pumping wheel and connected to the working chamber of the latter by channels in the bottom of the coupling. In the channels are mounted adjustable throttles.

Karamzin, V.A., Borisovets, E.M., Aleshukin, V.I. Bul. 12/30.3.78. 29.11.76 as 424458 (3pp135)

KDGR= ★ D14 13894B/07 ★SU -600-362

Maize cob dryer with compartments - connected to gas ducts and linked by common collector with three-position screen

KRASD GRASS SEEDS (ODFO=) 26.11.75-SU-194097

Q76 (06.04.78) F26b-09/06

Maize cob dryer comprises drying chambers with grille bottoms to take the maize and a corridor between them di ided by horizontal baffles into compartments which have turning valves, and every other one of which is connected to gas ducts with their own fans. The ones between are connected to atmosphere.

For better drying and to reduce power requirements the gas ducts are connected by a common collector with three-position screen. The turning valves have individual drives. The compartments connected to the gas ducts hav turning gas-flow distributors. At least two chambers hav monorails with electric telphers.

Aleinikov, V.I., Lukyashko, A.K., Tolstonosov, L.I. Bul. 12/30.3.78. 26.11.75 as 194097 (4pp18)

TYRE/ ★ D14 13952B/07 ★US 4137-723

Direct contact liq. carbon di:oxide cooling - with recovery of carbon di:oxide vapour for freezing foodstuffs in coolant reservoir contg carbon di:oxide slush

TYREE L 07.09.77-US-831227

Q75 (06.02.79) F25d-17/02

Material is cooled by direct contact with liq. CO_2 and the CO_2 vapour recovered by supplying liq. CO_2 to a cooling chamber contg. the material. The resulting contaminated CO_2 vapour is directed to a coolant reservoir in which CO vapour, liq. and solid CO_2 exist in equilibrium in the form of slush plus vapour.

In the reservoir the CO_2 vapour and any contaminants which liquefy above -69°F are condensed by melting solid CO_2. Clean CO_2 vapour and any noncondensables are withdrawn and the CO_2 vapour reliquefied and passed to a CO_2 storage vessel. Condensable contaminants are periodically removed by heating to a temp. at which they can be blown out of the system.

Used for freezing foodstuffs, esp. shrimp, beef, tuna, chicken and vegetables. A high percentage of CO_2 vapour is recovered for re-use. The process is esp. suitable fo combining with a pressure cooking arrangement to provid a system for cooking and freezing foodstuffs. 7.9.77 as 831227 (8pp67)

PETE/ ★ D14 13972B/07 ★US 4137-835

Food can warmer and mixer - with grippers holding can in hot wate and oscillated by motor on cover

PETERSEN R K 21.01.77-US-761065

P28 (06.02.79) A23l-03/10 A47j-27/10 A47j-36/24

Mixer comprises an open-top housing with a heater for fluid and a flat top cover carrying a depending container support within the housing. The support has spaced opposed grippers oscillatable about an axis parallel to the plane of the cover, so that the container contents are agitated and the container is moved relative to the surrounding fluid.

A motor is mounted on the cover and is connected to th grippers via a linkage. The support pref. comprises two standards with lower end axles carrying rotatable discs. One axle is pref. spring-biased towards the container and can be moved against the bias by a cam to release a container. 21.1.77 as 761065 (9pp1358)

COUT/ ★ D14 13974B/07 ★US 4137-83

Spiral peeling of axially rotated vegetable - using adjacen longitudinally advancing cutter head pressed onto vegetable

COUTURE F 13.06.77-US-805985

(06.02.79) A23n-07/02

Vegetable peeler includes a rotating spiked mounting which engages one end of a vegetable to rotate it axially while the other end rotates about a support. A cutter hea is mounted at one end of an arm the other end of which is attached to a carriage capable of moving along a guide shaft running parallel with the axis of rotation of the vege table. The cutter head includes a cylindrical blade which is biassed against the vegetable by a spring.

The carrier moves along the guide shaft while the veg table rotates so that the cutter makes a spiral peeling cu from the surface of the vegetable. A sensing finger attached to a pivoting mechanism within the cutting head allows it to follow irregularities in the profile of the vegetable. 13.6.77 as 805985 (8pp295)

See Also

D15 J5 4004893

D15: WATER TREATMENT

WINK/ ★ D15 12025B/07 ★DL-133-224
Removing toxic residues from effluent water - esp. of agricultural chemicals, by treating with solid fuel ash
WINKLER R 08.08.77-DL-200481
(20.12.78) C02c-05/02

A process is claimed for eliminating toxic residues e.g. of plant protection agents and materials for modifying biological processes from effluent waters, by contacting the water with ashes of solid fuels, esp. coal to adsorb the prods. of the hydrolysis, pptn., flocculation and sedimentation reactions caused by the ashes.

The process is cheap and economical to operate and gives good removal of toxic residues from effluent water. The treated effluents are suitable e.g. for watering plants or for discharge into the main drains without causing environmental pollution. The process is esp. useful for treating effluents from agricultural establishments. 8.8.77 as 200481 (18pp513)

BOHM/ ★ D15 12045B/07 ★DL-133-249
Illuminator for large volumes of liquid media - consists of transparent tube holding isolated fluorescent lamps with their conductors
BOHM H 23.12.75-DL-190395
(20.12.78) C12b-01/22

Large volumes of liquid media are illuminated by fluorescent lamps of types obtainable normally in commerce, in deep thick layers as e.g. in towers, without the walls being transparent. Lamps of any capacity and quality of light are inserted separately or in numbers together with their electrical conductors into a tube of tranpsarent material sealed at its bottom. The tube can then be immersed in a volume of liquid of any size desired, without danger, independently of the shape and dimensions of the container. 23.12.75 as 190395 (5pp1045)

WEND/ ★ D15 12061B/07 ★DL-133-281
Radioactive liquid effluent decontamination - using immersed removable filter unit fitted with submersible pump, esp. for use with nuclear power plant
WENDIG E 22.09.77-DL-201150
K07 (20.12.78) G21f-09/20

Appts. for decontaminating radioactive water in a pond or tank, esp. in the shaft of a 'hot chamber' operates by ion exchange. A purification vessel is mounted inside the pond or tank and consists of two parts, the upper part contains a submersible pump held in place by detachable fixings, while the lower part contains one or more ion exchange filters.

The upper and lower parts can be disconnected from each other, The pump has a lifting shackle at the top to enable it to be removed when released from the upper part of the vessel. Pref. both the sumersible pump and the lower part of the vessel are designed as 'throw-away' units.

For use with any nuclear plant, but partic. for a nuclear power plant. No separate piping systems and vessels etc. are required, since the entire purificn. unit is lowered into or mounted in the pond, tank or shaft. 22.9.77 as 201150 (7pp236)

KRPP D15 27045T/17 =DS 2050-874
Liquid effluent treatment - by catalytic oxidn with active carbon
KRUPP F GMBH 16.10.70-DT-050874
*(08.02.79) *BE-773-896 C02c-05/04*

Effluent from the paper, leather, textile, cleaning foodstuffs and plastics industries, contg. emulsified and dissolved oxidisable organic and, opt. inorganic substances (e.g. H_2S) and which is free of cyanide, nitrite, hydrazine, dimethylhydrazine and N_2O_4 is purified by mixing it with air in the presence of an active C or aion exchange catalyst.

This is simpler than known biological processes and more cost effective than either chemical or biological processes. Abraded catalyst is easily removed by filtration and the abraded surfaces remaining constantly present fresh catalytic interfaces. 16.10.70 as 050874 (4pp922)

WIES/ D15 64797V/37 =DS 2307-877
Sterilising liqs. eg. drinking water - by radiation with simultaneous ozonification of air stream
WIEST R 17.02.73-DT-307877
*P34 (D22) (08.02.79) *DT2307-877 +A61l-03 C02b-01/38*

Fluids are sterilised by ultraviolet radiation in an installation in which, with the min. of constructional outlay, the maximal sterilising action if achieved in the most economical manner.

In partic. that part of the UV spectrum between 1800 and 3000 A, i.e. the wavelengths having an ozonising action, is used, and the plant includes a radiating chamber behind which a reacting and collecting vessel is located. The radiation chamber and the collecting vessel extending down to the bottom zone of the vessel and terminating in a circular distribution with outlet nozzles. 17.2.73 as 307877 (5pp1045)

SCHU- D15 79702Y/45 =DS 2618-034
Holder and seal for filtration or aeration cartridge - with internal seal rings squeezed axially to give radial contact
FA SCHULER W 24.04.76-DT-618034
*J01 (08.02.79) *DT2618-034 B01d-29/32*

A fastener to secure the hollow cylindrical body of a filtration candle for handling gases or fluids, has an elastic sealing and holding ring compressible between flanges against the inner wall of the candle. The fastener forms an assembly unit with the candle allowing separate candles to be attached to any support in any arrangement, and to be removed individually without interference with the others.

The fastener consists of two pipe sections positioned axially relatively to the candle, one of which screws into the other. The outer section has a flange resting on the end face of the candle and a screwed stub extending outwards from it. The elastic sealing and holding rings are on the inner pipe section between an end flange and a metal ring pressing against the face of the outer pipe.

The compression against the inner wall of the filter candle prevents the inner pipe from moving when the outer pipe is turned. 24.4.76 as 618034 Div in 2660223 (4pp1045)

SOCE- D15 25635Y/15 =DS 2645-150
Sewage sludge disposal system - by heating under pressure from steam produced by sludge boiling and incineration
SOCEA EAU AND ASSAINISSE 06.10.75-FR-030544
*+Q73 (08.02.79) *DT2645-150 C02c-03*

A technique for the processing of sludge in which the sludge is heated, pressurised and raised to boiling point, concentrated under pressure and reduced to ashes, makes it possible to dispense with high pressure pumps which are very sensitive to dirt and wear.

The sludge in the heating zone is pressurised by the energy developed during the boiling process. The sludge can thus be circulated by simple, low pressure, centrifugal pumps. Pref. the sludge is heated before pressurising by steam for which water from the boiling and concentrating operations is used. 6.10.76 as 645150 (6pp1045)

BOEF ★ D15 12099B/07 ★DS 2757-859
Biological sugar refinery effluent treatment - with aeration rotors spraying against plastic web ending in biogenic culture box
SUDDEUTSCHE ZUCKER 23.12.77-DT-757859
A97 (D17) (08.02.79) C02c-01/02 C02c-05/10

A biological treatment of industrial wastes carrying a heavy burden, e.g. to waste effluent from a sugar refinery is carried out in an oxidation pool. The pool water is sprayed by aeration rotors against webs of plastic tissue which hang above water level at a slight angle and extend into a culture and colonising box for biogenic matter. The box pref. has a wooden frame with a wide meshed plastic netting on top and bottom, stainless steel mesh on the narrow sides, and a filling of polystyrene or other open-celled plastic foam cubes.

System can adapt itself to great fluctuations in the flow rate and composition of heavily burdened industrial wastes. It has a better purification efficiency than conventional processes. 23.12.77 as 757859 (4pp39)

EUMA/ ★ D15 12202B/07 ★DT 2734-531
Water carbonate hardness and salt content adjustment - by treating with a cation exchanger, removing carbon di:oxide with air and mixing with a reaction prod. of lime water and carbonated water
EUMANN H H 30.07.77-DT-734531
(08.02.79) C02b-01

The original water is led over $\geqslant 1$ acid cation exchangers and the stream is then split into two parts. One part is led through a trickle column in counterflow with a constant volume of air, which gives complete removal of all the free CO_2 present. The other partial stream, which is acid and contains at least CO_2, is led to a vessel (I) together with satd. lime water of a constant concn. The resulting carbonate soln. is added in the required amt. to the effluent from the trickle column.

The vessel (I) is constructed in the form of a funnel whose rim is sealed to the inner wall of the trickle column. A vat is situated centrally beneath the funnel, having a larger dia. than the dia. of the funnel outlet. The leads from the lime water saturation unit and the cation exchanger feed in just above the funnel.

(I) is made in the form of a funnel to overcome problems of blocking of the tubes, which were encountered in previous designs. 30.7.77 as 734531 (6pp513)

PASE ★ D15 12204B/07 ★DT 2734-629
Sewage aerator cowl - resting on floats for uniform immersion conditions (NL 5.2.79)
PASSAVANTW MICHELBACHER 01.08.77-DT-734629
(08.02.79) B01f-03/04 C02c-01/10

A surface aerator for sewage is fitted with a cowl, the rim of which is drawn down to the liquid level. Floats ensure that the distance between the cowl rim and the surface level is kept constant under all circumstances.

This ensures that there is neither too much gap for harmful bacteria to be spread by aerosols nor too deep an immersion which affects the aeration efficiency. The new system can deal with all fluctuations of the sewage inflow. 1.8.77 as 734629 (16pp39)

RESN/ ★ D15 12211B/07 ★DT 2735-055
Thermoelectric breakdown of water - using electrolytic cell with DC supply in which the anode and cathode are sepd. by insulation shield
REZNIK S 03.08.77-DT-735055
E36 J03 (08.02.79) C25b-01/04

Water is decomposed into H_2 and O_2 by a thermoelectric process. The water conductivity is raised by the addition of an electrolyte and is located in a device having at least one anode and one cathode. These are separated by an insulating shield. They are subjected to a voltage of 15 to 1000V at a current density of 0.001 to 100 Amp/dm^2.

The anode and cathode are located at a spacing such that breakdown occurs with the above voltage and current density. The mixture so produced of O_2 and H_2 will contain some evaporated water and this is subsequently condensed out. The voltage and current bands can be narrowed down. The mixture so released is subsequently ignited and the thermal energy used.

Used for creating combustible fuel and purifying seawater. 3.8.77 as 735055 (14pp1053)

REPR- ★ D15 12412B/07 ★FR 2390-19
Effluent belt filter - which applies suction to the collection vesse and includes a screw to remove the solids
REPROCOM SOC RECH 13.05.77-FR-015472 (05.05.69-FR-01517
J01 (12.01.79) B01d-33/04

The equipment consists of a filter cloth formed into a closed loop and moving around a course, in one area of whic filtration occurs and in another area cake removal occurs A filtrate receiver is placed below the filter area and a sediment collection area is placed under the cleaning are Cleaning is achieved by blowing a gas under pressure across the filter cloth.

The additions to the original design comprise (1) a suction apparatus to lower the pressure in the filtrate receiver, (2) a suction apparatus associated with the sediment collection vessel and (3) a helicoidal screw, whic is placed in the base of the sediment collection vessel to move the solids toward an outlet the base of the vessel being pierced by holes covered by a grill to remove the liq. squeezed out of the sediment. The vessel is connect to the outlet through a conical section which causes the sediment to be further compressed.

The filtration efficiency is increased due to the lowering of the pressure in the filtrate receiver. The fine liq. droplets in suspension ejected by the filter cloth are removed by the suction apparatus associated with the sedimen collection vessel. Increased drying of the sediment is achieved due to the screw and to the compression of the sediment in the cone linking the collection vessel to the outlet. 13.5.77 as 015472 Add to 5.5.69-015170 (11pp1330

UNIC D15 30923Y/18 =GB 1540-46
Removing phosphates from effluent by the activated sludge proces - with countercurrent extn. of the phosphate contg. sludge
UNION CARBIDE CORP 28.10.75-US-626459
*(14.02.79) *BE-847-702 C02c-01/02 + C02b-01/23*

Activated sludge wastewater treatment process for removing phosphate from BOD-contg. water comprises mixing phosphate-contg. influent with activated sludge and oxyge contg. gas in aeration zone and simultaneously circulatin one such fluid against the other to ensure reduction of BO of wastewater and cause microorganisms of sludge to tak up phosphate to form aerated mixed liquor contg. phospha -enriched sludge.

Sludge formed is sepd. from liq. to yield phosphate-free effluent; sludge is passed to phosphate stripping zone where most of sludge releases phosphate under anaerobic conditions to formed phosphate-enriched and -lower sludges and -enriched liq. Liq. is withdrawn from upper section of stripping zone; and lower sludge from lower sectio and recycled to aeration zone as activated sludge.

Sludge resides in stripping zone for 2-10 hrs., low solid/phosphate stripping medium flows upwardly to carr released phosphate from sludge. Medium has $\ngtr 20$ mg/litre suspended solids and flows at 0.7-2.0 times volumetric flow rate on withdrawn phosphate-enriched liq. 27.10.76 as 044562 (21pp931)

VAJN/ D15 77548X/42 =GB 1540-48
Industrial ion exchange process for effluent treatment etc. - reduce regeneration costs by recycling reaction fractions to rais conversion efficiency
VAJNA S (DYNN) 30.09.75-DT-543573 (01.04.75-DT-514222)
*J01 (14.02.79) *BE-840-285 B01j-01/09*

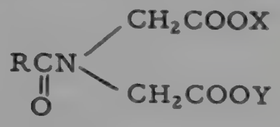
Ion exchange process is claimed where repeated cycles o operations are carried out on exchanger bed in container having liq. supply and removed duct means, each cycle comprising the sequential supply to the bed charged with ions to be exchanged and washed and filled with water of $\geqslant 1$ reaction fractions stored in vessel after outflow from bed during previous cycle; a soln. contg. exchangi ions is introduced to bed externally, and water, and sequential outflow from bed, a prod. soln. for removal externally and $\geqslant 1$ reaction fractions equal to those in fractio storage vessel for use in second cycle.

Any tendency for liq. portions delivered simultaneous or successively to bed to undergo displacement of flow d ection and relatively to one another is prevented until di charge has occurred. Co-ion content of reaction fraction (s) is kept constant by keeping constant vols. of soln. fractions supplied from external and of liq. discharged from one cycle to the next, the co-ion content of supply soln. being kept constant.

Process is of fraction type used for regeneration, e. g. in the desalination of water. 31. 3. 76 as 013111 (19pp931)

CIBA D15 33403A/19 =GB 1540-603
Aq. compsns. contg. salts of N,N-di:carboxymethyl alkyl amide(s) - used for treating water, esp. to flocculate iron
CIBA GEIGY AG 02.11.76-GB-045464
*E16 M14 (E12) (14.02.79) *BE-860-334 C02c-05/02*

Aq. compsns. contain an oleaginous vehicle and an acyliminodi-acetic or propionic acid (or salt) of formula (I) where R is 10-17C alkyl, and X and Y each is alkali(ne earth) metal, ammonium, amine or H.


(I)

Pref. R is 11-15C alkyl, esp. 11C alkyl or n-undecyl gp. X and/or Y is pref. a Na, K or ammonium radical. (I) is used in compsns. at 0. 1-500 ppm, w. r. t. water to be treated, esp. 2-100 ppm.

Compsn. is esp. used to selectively flocculate iron salts by addition of a minor proportion of (I), in conjunction with dispersing and/or threshold agents and/or scale control agents, precipitating agents, oxygen scavengers, sequestering agents, corrosion inhibitors and anti-foaming agents. 31. 10. 77 (11pp931)

PERU ★ D15 12472B/07 ★GB 2001-863
Ion exchange element for polishing water or radioactive condensate - has porous core covered by wound layers of fibres of ion exchange resin
PERMUTIT-BOBY LTD 18.08.78-GB-033876 (14.06.77-GB-024735)
J01 K07 (14.02.79) B01j-01/06 C02b-01/40

Ion exchange element comprises a core through which liq. can pass radially covered by wound layers of fibres of ion exchange resin. Pref. the core consists of a porous or perforated cylindrical tube, e. g. a strainer as used in an ion exchange vessel or a candle filter. The element is made by winding fibrous ion exchange resin onto the core to build up the layers.

Used in polishing water purified by a mixed bed and in polishing radioactive condensate. Good contact between the liq. and the resin is achieved in a small space. The resin fibres have a smaller dia. than the resin beads conventionally used. Thus, in a polishing operation the same degree of ion exchange can be achieved with a reduced number of contacts in a much smaller thickness. 18. 8. 78 as 033876 (4pp67)

ENVI ★ D15 12488B/07 ★GB 2001-932
Appts. for taking liq. sample from flowing stream - in which stream is passed over vertical rotating disc to form peripheral bead
ENVIROTECH CORP 03.08.77-US-821403
J04 R16 (14.02.79) G01n-01/20

A liquid sample is taken from a flowing stream using a rotating disc over which the stream of liquid is discharged. As the disc rotates a bead of the liquid is formed along the peripheral surface of the disc under the action of centrifugal force.

A device adjacent the peripheral surface engages the bead and collects a sample. Pref. the point of discharge and the collecting device are diametrically opposed. Pref. the disc rotates about a horizontal axis and the liq. is discharged downwardly in the direction of rotation of the discs.

Appts. is used to collect a liquid sample for subsequent chemical analysis from e. g. a municipal water supply or a waste water monitoring system. The sample collected is relatively free from solid particles and is collected continuously. 28. 7. 78 as 031588 (5pp295)

OKAN/ ★ D15 12605B/07 ★J5 4000-461
Mfr. of waste water treatment agent for heavy metal removal - by condensing organic matter with reductive functional gps. and phosphoric acid to form fused benzene ring cpd., and hydrolysing
OKANO K 25.05.77-JA-061438
(05.01.79) C02b-01/14 C02c-05/02

Agent is prepd. by forming condensed benzene ringed cpd. with phosphoric acid gp. by the condensn. of an organic matter with reductive functional gps. and phosphoric acid under a steam pressure of ordinary to 30 and at a dry distn. temp. of 100-600°C and adding water to the cpd. obtd. The organic matter used includes wood sawdust, bamboo, straw, rice hulls, etc., having hydroxyl gp., aldehyde gp. carboxyl gp., ketone gp., etc., in their molecules.

The agent is effectively applicable to waste water discharged from organic cpd. - synthesising factories, e. g., for dyes, medecines, etc., dyeing processing factory, leather processing factory, plating factory, etc., contg. such heavy metals as hexavalent Cr, Cu, Hg, Cd, etc., exhibiting a great removal efficiency for various heavy metals, esp. for dichromate ion. 25. 5. 77 as 061438 (4pp117)

FUJD ★ D15 12606B/07 ★J5 4000-462
Purifying acidic aluminium-contg. waste water - by addn. of base and electrolysis to ppte. aluminium hydroxide
FUJIKURA CABLE WORKS KK 02.06.77-JA-065132
E33 J03 M11 (05.01.79) C02c-05/12

The acid aluminium-contg. waste water is first adjusted to pH 3-7 by the addition of a mixt. of NaOH and $Ca(OH)_2$, and then subjected to electrolysis to accelerate the coagulating pptn. of aluminium hydroxide while adjusting the pH to the neutral range.

The method can attain $>$ 95% clarification of treated water because the pptn. of aluminium hydroxide is accelerated and the generation of hydrogen gas upon electrolysis brings about the adjustment of pH to the neutral range at which nearly all aluminium ions are converted into aluminium hydroxide in a very settleable ppte. form. Water comes e. g. from aluminite electrolytic prodn. 2. 6. 77 as 065132 (5pp117)

MINS- ★ D15 12709B/07 ★J5 4001-270
Removal and recovery of hexavalent chromium from waste plating water - by electrolytic redn. to trivalent chromium which is pptd. as the hydroxide
MINSEI KAGAKU KENKY 07.06.77-JA-066335
E31 J01 M11 (08.01.79) C02c-05/12

The method comprises electrolytically reducing hexavalent Cr contained in the waste water to trivalent Cr with mild steel and carbon used as an anode and with stainless steel and mild steel used as a cathode, producing the trivalent Cr as the hydroxide, and thereafter aggregating the hydroxide with an aggregating agent.

In an example waste chromium plating water of 3. 3 pH contg. 320 PPM of hexavalent Cr and 20 PPM of trivalent Cr was adjusted with an aq. soln. of caustic soda to pH 6. The resulting soln. was electrolysed with voltage of 8 ± 1 V, current density of 1 ± 0. 5 A/dm^2, and for period of 10-30 minutes. As a result, removal rate of trivalent Cr was 70. 59-99. 99%.

Hexavalent Cr contained in the waste water can be removed in a short period, and the resulting treated water is harmless. 7. 6. 77 as 066335 (3pp51)

ISEK- ★ D15 12710B/07 ★J5 4001-271
Liq. sludge concentrator - has filter units immersed in sludge treating tank, in which vacuum filter suction and pressure reverse washing are performed
ISE KAGAKU KOGYO KK 06.06.77-JA-065723
J01 (08.01.79) B01d-31 B01j-01 C02c-03

Filter units are disposed in a sludge treating tank so as to be immersed in the sludge liquid contained in the tank, in which a vacuum filter suction and pressure reverse washing are alternately and continuously performed through suction pipes. Each filter unit comprises a filter pipe having small pores formed through the side wall and both ends closed, filtering membrane wound around the pipe, and suction pipe inserted into the filter pipe and connected to means for evacuating the latter pipe and for pressuring the liquid, through three-way cocks.

Sludge liquids are effectively concentrated in a simple structure at low cost. 6.6.77 as 065723 (4pp26)

TABU/ ★ D15 12711B/07 ★J5 4001-273

Sepn. of ferric ion from aq. phase by contact with hydrophobic liq. - contg. quat. ammonium salt followed by contact of hydrophobic liq. with second aq. phase

TABUSHI I 04.06.77-JA-065276

E31 (E16) (08.01.79) B01d-11/04 C01g-49/02

Method comprises contacting an aq. phase (I) contg. ferric ion coordinated with chlorine ion with hydrophobic liq. (II) contg. methyl trialkyl ammonium halide, and contacting (II) with aq. phase (III) without contacting (III) with (I).

The methyl trialkyl ammonium halide is pref. methyltrioctylammonium chloride, methyltrinonylammonium chloride, or methyltridecylammonium chloride. The hydrophobic liquid is pref. chloromethylene or chloroform. (III) pref. contains a ferric ion sepg. agent.

In an example an aq. phase contg. 0.05 mol./l. of ferric chloride, a chloroform hydrophobic liq. contg. 1.0 mol./l. of methyltrioctylammonium chloride, and an aq. phase contg. HCl at a pH of 2 were placed, in order, in a glass U tube. The hydrophobic liq. was stirred with a magnetic stirrer at 150 r.p.m., and ferric ion was extracted from the first aq. phase to the hydrophobic liq. and then extracted from the hydrophobic liq. to the second phase. 4.6.77 as 065276 (5pp51)

KURK ★ D15 12714B/07 ★J5 4001-278

Removing impurities from liq. using precoated filtration element - which is separately coated with anion and cation exchange resins

KURITA WATER IND KK 04.06.77-JA-065282

A91 J01 (08.01.79) B01j-01/08 C02c-05/08

In precoating a filtration element with a powdery ion exchange resin to obtain a precoated filtration element through which a liquor to be treated is passed to remove impurities, the improvement comprises seperately precoating the filtration element with a powdery cation exchange resin and a powdery anion exchange resin in any order to form double layers of the resins on the filtration element, and where a macro-molecular electrolyte is added to the resin or a fibre material is added to it.

In an example a slurry of a powdery cation exchange resin, a fibre material, and a macro-molecular electrolyte was provided on a filtration element to form a precoated layer of 2.5mm thickness. A slurry of a powdery anion exchange resin, a fibre material, and a macro-molecular electrolyte was supplied on the layer to form a precoated layer of 2.5mm thickness. Water contg. 500 ppb of $Fe_2O_3nH_2O$ was passed through the filtration element precoated with 2 layers to remove the Fe_2O_3. 4.6.77 as 065282 (3pp51)

NICA ★ D15 12719B/07 ★J5 4001-286

Flocculating agent used in waste water treatment - comprises water-soluble cyanamide-aldehyde polymerisation and condensn. prod.

NIPPON CARBIDE KOGY KK 07.06.77-JA-066269

A81 (08.01.79) B01d-21/ C02c-03 C02c-05/02*

A flocculating agent used for treatment of waste town water or waste industrial water, consists of a water soluble cyanamide-aldehyde polymerisation and condensn. reaction prod. of about 170-300 average mol. wt. The reaction prod. is obtd. by reacting 1 mol. of a cyanamide cpd. with > 2 mol. of an aldehyde cpd. in the presence of > 1 mol. of ammonium chloride per 1 mol. of the cyanamide cpd. The cyanamide cpd. is dicyandiamide, cyanamide, guanidine, or guanyl urea. The aldehyde cpd. is paraform acetoaldehyde, benzoldehyde, or furfural.

In an example 1071 g of 37% formalin was added to 504 g of dicyandiamide during stirring them. 321 g of ammonium chloride was gradually added thereto at 25-27°C for a period of 1.5 hrs. The resulting reaction soln. was heated to 85°C, reacted at that temp. for 4 hrs., and cooled to 65°C. to provide a soln. of a dicyandiamide-ammonium chloride-formaldehyde polymerisation and condensn. cpd. was obtd. 7.6.77 as 066269 (9pp51)

KAWJ ★ D15 12842B/07 ★J5 4001-955

Dechlorination of waste gas treatment liquor - by electrolysing the liquor to release chloride ions as chlorine gas, for use in sodium hypochlorite prodn.

KAWASAKI HEAVY IND KK 04.06.77-JA-066134

E36 J01 (09.01.79) C02c-05/12

In order to prevent corrosion caused by waste gas treatment liquor from equipment for flue gas desulphurisation etc., contg. large quantities of Mg ion and/or Ca ion and other metals, all or part of the used flue gas treatment liquor is passed to an electrolytic bath, in which dil. H_2SO_4 acid is added to the cathode side to regulate pH to < 4.0, for electrolysis without Mg ion, Ca ion, and other various metal ions being pretreated in a closed system.

Method is capable of not only preventing the formation of the hydroxide precipitates of metals but also discharging chloride ion in the form of chlorine gas in spite of the various metals present in large quantities, and enables one to produce sodium hypochlorite by absorbing the chlorine gas in NaOH soln. Thus, the method is applicable to the prevention of slime formation in the cooling water of steam power plants at the flue gas desulphurisation site and the treatment of factory effluents, and is applicable to both flue gas desulphurisation and denitrification processes. 4.6.77 as 066134 (4pp117)

KANA/ ★ D15 12843B/07 ★J5 4001-956

Removal of ammonia from water - by contact with treated sludge and electrolysis in presence of calcium fluoride to absorb ammonia into sludge

KANAI M 04.06.77-JA-066171

J03 (09.01.79) C02c-01/40 C02c-05/02

Method comprises subjecting nitrogenous organics-dominated sludge, e.g. sewage excess sludge, etc. to electrolysis in the presence of a fluoride to completely sterilise virus, bacteria, etc. present, and then adding dehydrated treated sludge to ammonia-contg. water in an amt. corresp. to 1-10 times the amt. of ammonia present, followed by approx. one hour of electrolysis at > 3 V and with DC of 30-50 mA in the presence of > 10mg of CaF_2. The ammonia is then adsorbed into the sludge.

This method gives the sludge a higher adsorption capacity because the fluoride-added electrolysis deprives the sludge of its bound water to form a surface of high interfacial adsorption capacity. The method also eliminates the offensive odours and colour of the nitrogenous sludges and so the treatment is beneficial from a health viewpoint. 4.6.77 as 066171 (2pp117)

SUMD ★ D15 12844B/07 ★J5 4001-957

Raw wool wash water treatment, with by/production of soil stabiliser - involves addn. of lime, carbon di:oxide, aluminium sulphate and high polymer coagulant

SUMITOMO CEMENT KK 07.06.77-JA-066329

C04 F06 (09.01.79) C02c-05 C05g-03/04

To clarify the wash water discharge in washing raw wool and also to effectively use the filter sludge, quick lime or slaked lime is first added to the wash water with stirring; a carbon dioxide gas-contg. gas is injected into the wash water; the calcium carbonate so formed is filtered off; aluminium sulphate is added to the filterate to form hydroxides followed by the addn. of high polymer coagulant; the hydroxides are filtered for removal; and then the filterated and supernatant are treated with a hypochlorite and the ppte. formed is filtered and then converted into dry powder by mixing with quick lime, which is used as soil stabiliser.

This method is capable of almost completely clarifying the wash water from raw wool washing operation with smaller scale treatment appts. and at lower cost, and in addn. can provide a soil stabiliser for agricultural use by effectively recycling the waste sludge.

The amt. of aluminium sulphate added is 3-5 vol.% of a 8% aluminium oxide-contg. aluminium sulphate soln. and the fine ppte. of aluminium hydroxide is formed at a pH 5.3-5.7. The amt. of hypochlorite, e.g. sodium hypochlorite, etc. is pref. 0.2-0.6 wt.% of available chlorine on the basis of the wt. of wash water to be treated. 7.6.7 as 066329 (4pp117)

SUMO ★ D15 12846B/07 ★J5 4001-959

Hexa:valent chromium recovery from waste water in fibre dyeing process - using acid mordant dyes, comprises contacting waste water with pyridine anionic exchange resin, eluting with alkaline soln. reusing eluate

SUMITOMO CHEMICAL KK (KOEI NIWO) 06.06.77-JA-067112

A91 E31 F06 (09.01.79) C02c-05/08 D06p-01/36

Hexavalent chromium (I)-contg. waste water is treated using a highly bridged salt type weak basic anionic exchange resin having a pyridine nucleus on either the main chain or side chains. (I) adsorbed in the anionic exchange resin is liberated by an alkaline soln., and then the (I)-contg. eluate is reused as it is or after treatment as the chroming agent in dyeing using acid mordant dyes.

The pyridine anionic exchange resin used is pref. obtd. from the homopolymerisation or the copolymerisation of vinyl pyridines, e.g., 4-vinyl pyridine, 2-vinyl pyridine, etc., and a cross linking agent, e.g., divinyl benzene, divinyl phthalate, etc., and the pref. resin is a gelled or macroporous sulphate type.

The method is capable of very effectively recovering (I) from the acid mordant dyeing waste water and also giving dyed substances comparable to those dyed with the new conventional chroming agent in hue and colour fastness. 6.6.77 as 067112 (6pp117)

MITQ ★ D15 12847B/07 ★J5 4001-964

Treating waste water contg. cyanogen complexes - by ozone treatment, first using predominantly UV light, then UV-deficient light

MITSUBISHI ELECTRIC CORP 03.06.77-JA-065988

(09.01.79) C02c-05/04

In the treatment of cyanogen complexes-contg. waste water by the combined use of light and ozone, appts. is used which is designed to pass waste water from one of two series-connected tanks, in which mainly UV light is used, to another reaction tank, in which UV-deficient light which predominantly has the wave length of the light absorption range of cyanogen complexes is used.

Method exhibits a great efficiency in the removal of cyanogen complexes present in great quantities in the waste water discharged from plating factories, photo developing factories, etc. by improving the utilisation efficiency of ozone and also by permitting the capacity of light source to be miniaturised. 3.6.77 as 065988 (3pp117)

KENY/ ★ D15 12868B/07 ★J5 4002-226

Recovering rhodium from waste plating and wash liq. - using cation and opt. anion exchange resins

KEN Y 07.06.77-JA-066950

A91 J01 M11 (09.01.79) B01j-01/08 C22b-05/04 C25d-03/50 C25d-21/22

Rhodium plating waste-liq. is passed through H^+ type strong-acid cation exchange resin bed, H^+ type weak-acid cation exchange resin bed, or combined bed of H^+ type strong-acid cation and strong-basic anion exchange resins to adsorb the Rh metal, the resins then being washed with about 1-6N aq. H_2SO_4 to liberate the Rh, and the eluted soln. contg. Rh metal is reused as rhodium plating liq.

Since Rh is chemically stable and hard, the rhodium plating is frequently applied to nickel plating etc. for surface treatment of ornaments. Expensive Rh can be easily recovered by introducing ion exchange method. 7.6.77 as 066950 (3pp53)

NIPC ★ D15 12890B/07 ★J5 4002-269

Treating waste water contg. chromium - using the sodium chromate-diffusion step in sodium chromate prodn., for recovery of hexavalent chromium

NIPPON CHEM IND KK 09.06.77-JA-067277

E31 M11 (09.01.79) C02c-05/02

Treatment of waste water (I) contg. Cr. comprises the treatment of (I) in the sodium chromate-diffusion step in the eatment of (I) in the sodium chromate-diffusion step in the sodium chromate prodn. process, for recovery of 6-valent Cr and sepn. of the impurities, such as heavy metals and fluorine cpds. The impurities of heavy metal cpds. are pref. removed by pptn. as hydroxide and therefore the pH of (I) should be adjusted to > 6 in the sodium chromate-diffusion step.

for treatment of (I) exhausted from the processes for metal surface treatment, such as Cr metal plating process. The recovered Cr can be used as the raw material for the prodn. of sodium dichromate. The consumption of NaOH, slaked lime and other reagents is not necessary. The diffusion residue acts as filter aid in the filtration of the extract. 9.6.77 as 067277 (5pp42)

KUBI ★ D15 12891B/07 ★J5 4002-270

Appts. for heat-treating sludge from waste water treatment etc. - in which the sludge, steam and air are contacted in vertical column having partition plates

KUBOTA KK 07.06.77-JA-068110

(09.01.79) B01d-43 B01j-01 C02c-03

Appts. comprises a column having, at its bottom, an inlet port for sludge, an inlet port for steam, and an inlet port for air. The column contains vertically spaced partition walls defining transfer passages at alternating sides of the column, allowing the sludge to rise to the upper stage in the column.

Each partition wall includes spaced conical protrusions each having perforations in the conical wall through which the bubbles of steam and air are permitted to proceed to the upper stage.

The steam and gas introduced into the sludge at the bottom of the column contact the sludge and produce bubbles which rise vertically through the perforations of the partition wall to the upper stage. The sludge flows upwardly in a tortuous path and contacts with the bubbles as it passes over the partition walls across the width of the column. 7.6.77 as 068110 (3pp47)

MITU ★ D15 12896B/07 ★J5 4002-276

Membrane for use in ultrafiltration and reverse osmosis - comprises porous support, layer of alumina sol or alkali metal aluminate and layer of water soluble polymer

MITSUBISHI CHEM IND KK 08.06.77-JA-067476

A88 J01 (09.01.79) B01d-13

A dynamic membrane consists of (1) porous support, (2) layer of alumina sol. or alkali metal aluminate and (3) layer of water-soluble polymer. The membrane is prepd. by flowing aq. soln., alumina sol. or aluminate and aq. soln. of polymer on the surface of the support in a high pressure.

Specifically the support is made of ceramics, sintered metal powder, sintered glass powder, carbon and organic resins, e.g. cellulose acetate, PVC etc., and has pores of mean dia. of 0.01-1, e.g. (0.025-0.8). Sodium aluminate is pref. used as aluminite. The water soluble polymer is polyacrylic acid, polyvinyl pyridine, etc. 8.6.77 as 067476 (5pp42)

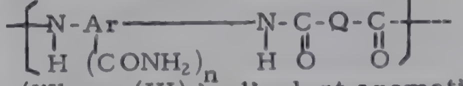
HITA ★ D15 12898B/07 ★J5 4002-279

Polyamide reverse osmosis membrane - has high mechanical strength and pressure resistance

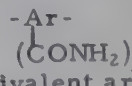
HITACHI KK 08.06.77-JA-066661

A88 J01 (A23) (09.01.79) B01d-13

The membrane (I) comprises polyamide (II) consisting of repeating units of formula



$$\left[-\underset{H}{N}-\underset{(CONH_2)_n}{Ar}-\underset{H}{N}-\underset{O}{\overset{\|}{C}}-Q-\underset{O}{\overset{\|}{C}}- \right] \quad (II)$$



$$-\underset{(CONH_2)_n}{Ar}- \quad (III)$$

(Where (III) is divalent aromatic gp.; Q is divalent aromatic or aliphatic gp.; and n = 1 or 2).

(I) is mfd. by coating a soln. contg. (II), solvent which can dissolve (II) and is water-miscible, and a soluble inorganic salt onto a support; evaporating a part of the solvent; forming a gelled membrane by soaking the support into water; and soaking the support into hot water. Pref, solvent is n-dimethyl formamide, n,n-diethyl formamide, n,n-dimethyl aceto amide, etc.; and the salt is LiCl, LiBr, $LiNO_3$, $CaCl_2$, etc. 8.6.77 as 066661 (8pp42)

TSUK/ ★ D15 12901B/07 ★J5 4002-282

Flocculant for use in waste water treatment - comprises magnetic iron oxide and anaerobic or aerobic bacteria, gives filtration cake of reduced moisture content

TSUKAMOTO K 08.06.77-JA-067628

E31 (D16) (09.01.79) B01d-21 C02c-05

The flocculant is composed of one of anaerobic bacteria, facultative anaerobic bacteria and aerobic bacteria, and magnetic iron oxide (II). Aluminium sulphate, polyaluminium chloride, high molecular polymer etc. may be fixed with (I). As (II), reverse-spinel ferrite, garnet-ferrite, γ-Fe_2O_3, Fe_3O_4 and other ferrite can be used.

When (I) is used as a flocculant in a thickener, the moisture content in the cake, exhausted after filtration of the sedimented mud, is lowered remarkably, by generation of biological heat over a long period of time.

In an example, 95g of Fe_3O_4 of 30 mesh and 30 gaus/g and 5g of facultative anaerobic bacteria was added to 20 l of waste water contg. 10 wt.% of solids and the cake recovered after sedimentation and filtration contained 40 wt.% of moisture. The cake recovered by the same procedures without the addition of (I) contained 80 wt.% moisture. 8.6.77 as 067628 (3pp42)

KOBM ★ D15 13062B/07 ★ J5 4002-979

Cleaning a membrane used in tubular reverse osmosis separator - ultrafiltration etc., using cleaning balls which are operated with collectors in feed and drain lines

KOBE STEEL KK 10.06.77-JA-069017
J01 (10.01.79) B01d-13 B01d-31

Two cleaning ball collectors are disposed in a feed and drain lines of the membrane separator. Each ball collector has an inlet and outlet, both provided with switching cocks; the first cock for connecting a feed line to one collector and drain line to the other collector, and second cock for connecting another feed line to the one collector and another drain line to the other collector. Both cocks are switched to reverse the direction of the soln. flow, only, to the collectors.

The membrane is cleaned by simple valve operation, with reduced pressured loss. 10.6.77 as 069017 (4pp26)

KOMI/ ★ D15 13203B/07 ★ J5 4003-358

Removing chlorine from domestic waste water - by adding L-ascorbic acid or L-cysteine or their salts

KOMINATO J 08.06.77-JA-068203
E16 (E13) (11.01.79) C02b-01/23

Chlorine is instantaneously and simply removed from town water by adding L-ascorbic acid, L-cysteine, one of their salts or glutethione opt. in the form of an aq. soln.

In an example, 20 g L-ascorbic acid is dissolved in 1 l. town water, after which 1-3 drops of the soln. obtd. is added to 120 ml. of town water so that free Cl_2 is removed. In a modification, 1 mg. of L-ascorbic acid may be directly added to the water as a solid. The function of this is that Cl_2 is converted by reduction to ionic form having no toxicity and intimate odour, using the cpds. described above. 8.6.77 as 068203 (2pp34)

SHIE ★ D15 13204B/07 ★ J5 4003-362

Mercury recovery from waste water - by adding oxidising agent e.g. hypochlorite and treating with ion exchange resin

SHINETSU CHEM IND KK 08.06.77-JA-066704
J01 M25 (11.01.79) C02c-05/08

Mercury recovered from waste water by (a) adding an oxidising agent, e.g. NaClO etc. to convert a very small amt. of metal Hg or organic Hg into inorganic Hg ion; and passing through an ion exchange resin having selective Hg adsorbability, e.g. having thiol radical as active radical to absorb therein.

The Hg-adsorbed ion exchange resin is treated with an eluting agent, e.g. conc. HCl soln, and alkali metal sulphide etc. to elute Hg; opt. pH adjustment of the Hg ion-contg. eluate is carried out. t is then subjected to electrolysing treatment or by adding a Hg-insolubilising agent (e.g. metal Al powder for amalgam formation) to recover the Hg ion in form of metal Hg or insol. Hg cpd.

pH adjustment is necessary in the recovery of Hg as a large amt. of $HgCl_4^{2-}$ and excess of HCl are contained in the eluate. 8.6.77 as 066704 (7pp34)

AGEN ★ D15 13205B/07 ★ J5 4003-363

Purificn. of emulsified effluent e.g. contg. cutting oil - by adding anion exchange resin and agitating to bring oil to surface for removal

AGENCY OF IND SCI TECH 08.06.77-JA-067605
A91 H07 J01 (11.01.79) C02c-05/02

An emulsified effluent, e.g. water-soluble cutting oil-contg. effluent etc. is purified easily and economically by adding an anion exchange resin, e.g. Diaion (RTH), Dowex (RTH) and Amberlite (RTH) etc. followed by agitation to destroy the emulsion and bring the oil components to the surface of the effluent for removal.

It becomes not necessary to carry-out dewatering of sludge; and the anion exchange resin (used as the treating material) is easily sepd. from the treated effluent. The regeneration or incineration of the adsorbing material is carried-out at lower cost etc.

In an example, 1 g. of a strongly basic II-type anion exchange resin (Diaion PA412) is added to 100 cc. of emulsified effluent contg. 0.01% of nonionic surfactant, polyoxyethylene nonylphenolether and 0.1% heavy oil (pH : 6.65), and agitated for 1 day at 25°C. The turnidity decrease was 96.0%. 8.6.77 as 067605 (3pp34)

JAGA ★ D15 13206B/07 ★ J5 4003-36

Sepn. of water from effluent contg. low boiling organic cpds. resulting from solidification of water-contg. radioactive io exchange resin discharged from nuclear power plant

JGC CORP 08.06.77-JA-068179
J01 K06 (11.01.79) C02c-05

Removal of lower boiling organic matters, e.g. amine cpds. (trimethylamine, dimethylamine etc.) and MeOH etc. from radioactive effluent resulting from the solidification of water-contg. radioactive ion exchange resin discharged from atomic power plant with asphalt, is claimed. Process comprises, (1) supplying aq. 5-30 wt.% H_2O_2 soln. in an amt. of 1-6 mols. per mol of organic matters at 10-60°C (for 0.5-2 hours) to convert the amine cpds. into higher boiling O-contg. N cpd., e.g. trimethylamineoxide and dimethylhydroxylamine etc. and to decompose MeOH into CO_2 and H_2O; and then (2) supplying th treated effluent to a distn. appts from which is obtd. fractionated water having high purity, i.e. distilled water containing none of the organic matters, which is suitable for reuse, e.g. in the atomic power station or for discharge into rivers without any pollution. 8.6.77 as 068179 (4pp34)

HITF ★ D15 13207B/07 ★ J5 4003-36

Biological treatment of night soil - by aerobic bacterial oxidn. nitrogen cpds., bacterial denitrification and recycling liquor oxidn. step

HITACHI SHIPBLD ENGG KK 09.06.77-JA-068445
(11.01.79) C02c-01/02

The night soil is treated by oxidising and transferring the oxidised night soil to a nitrification vessel where nitroge cpds. contained therein are oxidised to NO_2 and NO_3 with bacteria under aerobic state. The material is transferr to a denitrification vessel where NO_2 and NO_3 are reduce to N_2 with bacteria under anaerobic state. The improvement comprises recycling the nitrificated liquor to oxidising step, so that the amt. of NaOH (used as the neutralising agent) and the amt. of MeOH (used as the hydrogen donor) are reduced.

The amt. of diluting water is saved as crude night soi is diluted by circulation of the nitrificated liquor. This process is also applicable for the purification of nitroge contg. organic polluted waters. 9.6.77 is 068445 (3pp34

MITO ★ D15 13227B/07 ★ J5 4003-8

Treating organic waste liq. esp. contg. viscous polymeric materia by methane fermentation in presence of inorganic flocculant

MITSUBISHI HEAVY IND KK (AOHA-) 13.06.77-JA-068936
(D16) (12.01.79) C02c-01/14 C02c-03 C12d-03/10

Methane fermentation comprises adding inorganic flocculant to waste liq. at wt. ratio of 1/10^4 to 1/5x10^5, and fe mentation while maintaining a sludge concn. inside the methane fermentation vessel of 2000-8000 ppm and a rat of inorganic substance/organic substance in the sludge being flocculated at 0.01-0.5. The process improves methane-bacteria sludges as well as controls the concn of the sludges.

In an example methane fermentation was effected wit the use of waste soln. from canned prod. contg. 7000 ppm BOD and organic substance of 15000 ppm being add with 300 ppm $FeCl_3$ while changing the concn. of sludge the vessel from 1000 to 12000 ppm. 13.6.77 is 068936 (7pp43)

EBAI ★ D15 13287B/07 ★J5 4003-893

Refining of aq. soln. contg. high molecular material - using dialysis membrane, utilising difference in concn. and pressure to separate low molecular substances

EBARA INFILCO KK 11.06.77-JA-069324
A88 J01 (12.01.79) B01d-12 B01d-13 C08f-06/06 C08g-05

The method comprises (1) mixing the refined soln. obtd. in step (3) with the aq. soln. contg. high molecular and low molecular substances, (2) treating the mixed soln. with dialysing membrane under pressure so that the soln. contg. low molecular substances is passed through the membrane, (3) refining the filtrate by removing low molecular substances, and (4) applying the refined soln. for step (1) repeatedly.

Not only the difference in concn., but also the difference in pressure can be utilised as the driving force for separating low molecular substances. Thus the sepn. of low molecular substances can be effected without requiring large amt. of water. The dialysing-ultrafiltration membrane is composed of organic substance such as polyester, acetylcellulose, etc. or inorganic substance such as graphite. 11.6.77 as 069324 (3pp5)

EBAI ★ D15 13362B/07 ★J5 4004-277

Treatment of liq. e.g.waste water, contg. (in organic substances - by filtration through ultrafilter or microporous membrane followed by purificn. and concn.

EBARA INFILCO KK 11.06.77-JA-069323
A88 J01 (12.01.79) B01d-17 C02c-05

Method comprises passing the liq. through an ultrafilter or microporous membrane to separate it into conc. liq. and membrane permeation liq., sepg. and purifying the membrane permeation liq., and concn. further the resulting sepd. purified liq.

The sepn. and purificn. is by e.g. sedimentation, flotation, filtration, centrifugal sepn., adsorption, etc., and the concn. is by e.g. freezing, evapn., membrane permeation, etc. The ultrafilter or microporous membrane is an organic membrane of e.g. polysulphone, polyamide, polyester, etc. or an inorganic membrane of e.g. graphite system cpd. Reverse permeation membrane used as a concn. means is e.g. acetylcellulose membrane, acetylbutylcellulose membrane, polyacrylonitrile membrane, etc.

The liq. (e.g. waste water from fermentation factory, sugar making factory, protein and amino acid factory, food factory, etc.) can be effectively purified and conc. 11.6.77 as 069323 (4pp50)

MITR ★ D15 13368B/07 ★J5 4004-283

Semipermeable sepn. membrane prodn. - by laminating two polymer films on carrier

MITSUBISHI RAYON KK 10.06.77-JA-069150
A88 J01 (D16) (12.01.79) B01d-13 B01d-31 B01d-53/22

Method comprises (1) impregnating or flowing a polymer soln. (A) on a carrier (e.g. porous sintered materials, textile, knitted material, non-woven cloth, paper, etc.), coagulating and drying to form a polymer-precoated carrier and (2) flowing a polymer soln. (B) on the precoated carrier to form a sepn. membrane by lamination.

Pref. the solubility parameter (S_1) of the polymer in polymer soln. (A) and that (S_2) of the polymer in polymer soln. (B) are such that S_1-S_2 is <4 and the polymer concn. of polymer soln. (A) is smaller than that of polymer soln. (B). The polymer is e.g. cellulose acetate, polyacrylonitrile, PVC, polyamide, aromatic polyamide, PMMA, polyester or polysulphone.

The resulting membrane is free from pinholes, cracks etc, has excellent water permeability and large mechanical strength. The membrane is useful for waste water treatment, in water prodn., pharmaceutical industry, food industry, and in the sepn. of bacteria, yeast, etc. 10.6.77 as 069150 (6pp50)

YOKO- ★ D15 13401B/07 ★J5 4004-457

Removal of e.g. arsenic and hydrogen sulphide from spring water - by adding ferrous ions and alkali to ppte. ferrous hydroxide and impurities and adding magnetic iron oxide dispersion and acid

YOKO YAKKA KOGYOSHO (NIES) 14.06.77-JA-070890
(13.01.79) C02b-01/23 C02c-05/02

Process comprises adding ferrous ion and alkali to form iron hydroxide with which As, H_2S and silicic acid, etc. are co-pptd., separately preparing a dispersion of black-magnetic iron oxide by subjecting a ferrous salt soln. to a magnetic oxide treatment; adding the dispersion obtd. to the iron hydroxide ppte. contg. water to adsorb the iron hydroxide (co-pptd. with As, H_2S and silicic acid etc.) on the magnetic iron oxide followed by settling and recovering; treating the recovered pptd. sludge with a mineral acid, e.g. HCl to carry-out the sepn. and the recovery of As, H_2S and silicic acid; and carrying-out the sepn. of the prodn. of ferrous chloride and magnetic iron oxide which are recycled to the treating steps, resp. so as to form closed system.

Harmful matters, e.g. As, H_2S etc. are easily removed in closed system from water, e.g. hot spring water (resulted in generation of electric power by geothermal heat) etc. without any generation of secondary pollution. 14.6.77 as 070890 (5pp34)

KUBI ★ D15 13402B/07 ★J5 4004-459

Bacterial treatment of polluted water - by nitrification of one portion under aeration and simultaneous denitrification of the rest and mixing together to control pH

KUBOTA KK 11.06.77-JA-069109
(13.01.79) C02c-01/02

Polluted water is subjected to economical nitrification and denitrification treatment without any use of pH-adjusting agent or organic carbon source, by introducing the polluted water to an adjusting vessel where it is diluted with H_2O and mixed with activated sludge containing BOD oxidising species, recycled from a final settling vessel.

The diluted water is admitted into a nitrification and denitrification vessel where it is sepd. into two streams, one of which passes under aeration through several nitrification zones, and the remainder passes through several denitrification zones; overflowing. A portion of liquor from the nitrification zones is overflowed into the denitrification zones over weirs provided on partition walls between the nitrification and denitrification zones to supply nitrite and nitrate necessitated in the denitrification zone and to neutralise the increased alkalinity of the denitrification liquor with the decreased alkalinity (lowered pH value) of the nitrification liquor.

The streams are mixed and sent to another identical vessel, and the liquor discharged therefrom is introduced into the settling vessel to separate it into a supernatant liquor (which is discharged) and a sludge, which is recycled. 11.6.77 as 069109 (3pp34)

KUBI ★ D15 13403B/07 ★J5 4004-460

Nitrification and denitrification of waste water - effected simultaneously using blower immersed in water in closed treatment vessel

KUBOTA KK 11.06.77-JA-069110
(13.01.79) C02c-01/02

Nitrification and denitrification of waste water are carried out simultaneously in single closed-type treating vessel equipped with blower immersed in water without any use of alkali and MeOH etc.

Process comprises (a) introducing the waste water into the treating vessel; (b) rotating a hollow axis while closing circulating gas-inlet valve (I) and opening outlet and inlet valves (II, III) to draw air into a partitioning tube, the upper part of which is fixed to the top of the vessel and closed, and the under part of which is open in water, the inhaled air being diffused in the air via inhaling holes in the hollow axis so as to make the water aerophilic, thus effecting the nitrification of NH_4-N and the oxidn. of BOD components;

Process further comprises (c) rotating the hollow axis while opening (I) and closing (II) and (III) to recirculate only the gas in the vessel via the valve without any new

supply of O_2, thereby effecting an aerobic denitirification; and (d) and repeating alternately the above procedures to effect nitrification and the denitrification alternately.
11.6.77 as 069110 (3pp34)

KUBI ★ D15 13404B/07 ★J5 4004-461
Nitrification and denitrification of polluted water in single vessel - by introducing into closed vessel contg. gas scattering pipes, aeration to oxidise nitrogen components etc.
KUBOTA KK 11.06.77-JA-069112
(13.01.79) C02c-01/02

Method comprises introducing polluted water to be treated (night soil etc.) into a completely closed treating vessel provided with of gas-scattering pipes at the inner underpart; a circulating gas-inhaling valve at the upperside wall; a pipe with which the valve and the inhaling side of a blower are connected together; a gas-passing pipe with which the exhaling side of the blower and each of the gas-scattering pipes are connected together; an exhausting valve and a pressure-adjusting valve at the upper part; an air-inhaling valve provided on the pipe. Aeration is carried out from the gas-scattering pipes by the blower on closing the circulating gas-inhaling valve and opening the air-inhaling valve and the exhausting valve in the case of the nitrification.

NH_4 -N in the water is converted by nitrification into NO_2-N and NO_3-N and BOD components are oxidised under aerobic state, and only the gas of the inside of the vessel is circulated via the valve, the blower and the gas-scattering pipes without any new supply of O_2 from the ouside on opening inlet valve and closing exhaust valves, so that NO_2-N and NO_3-N are converted by denitrification into N_2 under anaerobic state. The above cycle is repeated.
11.6.77 as 069112 (2pp34)

ISHI ★ D15 13405B/07 ★J5 4004-462
Biological denitrification of organic nitrogen contg. waste water - includes first stage of introduction, as carbon source, with sludge into vessel
ISHIKAWAJIMA-HARIMA HEAV 14.06.77-JA-069433
(13.01.79) C02c-01/02

Organic N-cong. waste water (I) is subjected to a biological nitrification and denitrification treatment without any addition of external organic carbon source and with relatively low alkali consumption while maintaining the flow-out of ammoniacal N and BOD components under low state (Sic).

(I) is first introduced into a BOD-adsorbing vessel together with a sludge under starvation, recovered from a settling vessel in the final step, where organic matter in (I) is taken by the sludge as the organic source, followed by sepg. into sludge and supernatent liquor in a settling vessel. The supernatent liquor in introduced into a BOD-oxidising nitrification vessel to which is also passed a sludge-contg. liquor from subsequent denitrification vessel, so that ammoniacal N is oxidised to NO_2-N or NO_3-N.

The BOD-adsorbed sludge sepd. in the 1st step is added to a sludge-contg. liquor from the nitrification vessel in the 2nd step, followed by introduction into a denitrification vessel where NO_2-N or NO_3-N is converted into N_2. Sludge-contg. liquor discharged from the denitrification vessel is recycled to the nitrification vessel to effect the oxidn. of NH_3-N and BOD components and to supply alkali components. Finally the remaining portion of the sludge-contg. liquor is introduced into the settling vessel where it is separated into a supernatent treated water and the sludge which is sepd. and recycled to the 1st step.
14.6.77 as 069433 (4pp34)

HIRO- ★ D15 13406B/07 ★J5 4004-464
Phase sepn. of oil-in-water dispersion - by adding sulphate and chloride of group/II elements, e.g. to waste water contg. cutting oil
HIRONO KAGAKU KOGYO 14.06.77-JA-070810
H07 J01 (13.01.79) C02c-05/02

An oil in water dispersion is rapidly and effectively sepd. into oil phase and aq. phase by adding sulphate and chloride of elements of Gp. II, e.g. combinations of $MgSO_4$-$CaCl_2$, $MgSO_4$-$BaCl_2$ or $ZnSO_4$-$CaCl_2$, etc., the wt. ratio between the sulphate and the chloride being 10/90-90/10. The amt. of the sulphate and the chloride is 2-7 wt. % w.r.t. the dispersion to be treated. An emulsion-breaking agent, a settling-accelerating agent or a coagulant, etc. is opt. used in combination with the sulphate and chloride, but its amt. should be <10 wt. % based on the sulphate and chloride.

In an example, 1 kg of $CaCl_2$ was added to 100 kg of emulsified cutting oil-contg. waste water followed by agitation, after which 4 kg of $MgSO_4$ was slowly added, followed by agitating for 5 min. and allowing to stand for about 50 min., so that the water is sepd. into an upper oily layer, an intermediate clarified transparent aq. laye and a lower turbid ppte layer. 14.6.77 as 070810 (2pp34)

KUBI ★ D15 13407B/07 ★J5 4004-465
Biological de-nitrogenation of organic waste water - by nitrifying with e.g. Nitrosomonas nitrobacter, reducing with e.g. Pseudomonas denitrificans, etc.
KUBOTA KK 13.06.77-JA-071510
(13.01.79) C02c-01/02

Organic waste water, e.g. municipal sewage, etc. is treated stably even with variation of ammoniacal N concn. without recirculation of sludge.

The process comprises introducing it into a contact nitrification vessel packed with filler onto the surfaces of which is adhered bacteria, e.g. Nitrosommonas nitrobacter, etc., so that ammoniacal N is oxidised to NO_2 and NO_3 under aerobic circulation to form an acid, so that its pH becomes 5-6; introducing the NO_2 and NO_3-contg. water into a redn. vessel packed with filler, onto the surface of which is adhered denitrification bacteria, e.g. Psendomomas denitrificans, etc., so that NO_3 and NO_2 are reduced anaerobically to N_2 and released to the atmos.; recycling part of the treated water to the redn. vessel; introducing the remaining part of the water into an oxidising vessel where the remaining BOD components (due to surplus organic carbon) is removed; and feeding the water to a mixing vessel where it is flocculated, where it is sepd. by settling into solids and supernatent liquor which is discharged into rivers. 13.6.77 as 071510 (3pp34)

KUBI ★ D15 13408B/07 ★J5 4004-469
Pretreating night soil-bearing organic waste water - includes introducing waste into nitrification and denitrification chambers to reduce BOD value
KUBOTA KK 11.06.77-JA-069111
(13.01.79) C02c-01/06

A night soil-bearing organic waste water is subjected to advanced treatment with high savings of carbon source, e.g. MeOH, etc. and neutralising agent, e.g. NaOH, etc. Process comprises introducing the water to be treated into a long time aeration vessel together with activated sludge from a nitrification bacteria-activating vessel to 4 vol. times of diluting water, wherein 70-90% of the tota nitrogen components is removed by nitrification and denitrification reactions.

Process further comprises introducing the treated water thus obtd. into a nitrification and denitrification vessel which is partitioned into denitrification and nitrification chambers, arranged alternately, carbon source, e.g. MeOH, crude night soil and acetic acid, etc. being added as hydrogen donor to the denitrification chambers, so that NO_2-N and NO_3-N are reduced to N_2 and its pH becomes alkali, and further its BOD is lowered by denitrification bacteria, the activated sludge from the vessel be ng intermittently added to the nitrification chambers wherein BOD is lowered by the activated sludge and NH_4 -N is oxidised to NO_2-N and NO_3-N, and its pH becomes acidic; sending the treated water discharged from the vessel to a settling tank where it is sepd. into a superna ant liquor and sludge, a portion of which is recycled to t vessel. 11.6.77 as 069111 (4pp34)

KUBI ★ D15 13409B/07 ★J5 4004-4
Accelerating nitrification of organic waste water - includes addn. granules e.g. of activated charcoal
KUBOTA KK 14.06.77-JA-070607
(13.01.79) C02c-01/06

A night soil-bearing organic waste water is subjected to biological treatment to effect BOD removal and simulta sludge resulted in a single- or two step aeration or in nitrification, denitrification and reaeration, in a settling vessel;

The settled conc. sludge is introduced into a reaeration vessel where the sludge is aerated for > 6 hrs. while maintaining DO under at least greater than 0.5 ppm. alkali, e.g. NaOH etc. A Ca salt e.g. lime or soda ash etc. is added when its pH becomes <6 while opt. maintaining the water temp. at > 15°C. Granules, e.g. of activated charcoal are added to accelerate increase of nitrification bacteria. The reactivated sludge is recycled to an adjusting vessel, a prim. or sec. aeration vessel, a denitrification vessel or to a nitrification vessel. 14.6.77 as 070607 (3pp34)

KUBI ★ D15 13410B/07 ★J5 4004-471

Treating night soil-bearing organic waste water - by aerobic activated sludge treatment to remove BOD, suspended solids and nitrogen components

KUBOTA KK 13.06.77-JA-071509
(13.01.79) C02c-01/02

A night soil-bearing organic waste water is subjected to aerobic activated sludge treatment to effective remove BOD components, suspended solids and nitrogen components. Process comprises introducing activated sludges resulted in initial and secondary aeration vessels into initial and secondary settling vessels resp., where the sludges are concn. by settling and recycled to the initial and secondary aeration vessels.

Process further comprises recycling as seed sludge a surplus amt. of the sludge resulted in the secondary settling vessel on a sludge resulted in a coagulation settling vessel positioned subsequent to the secondary settling vessel, to an adjusting vessel positioned prior to the initial aeration vessel, so as to be mixed with the night soil-bearing organic waste water flowed and diluting water, so that the sludge is made uniform and quality of water to be flowed in the initial aeration vessel is made mean; introducing the mixt. into the initial aeration vessel where it is aerated for long period in such condition that dissolved oxygen content becomes < 2 ppm to decrease the BOD components, suspended solids and the nitrogen components; and sending the mixt. thus treated to the initial or secondary settling vessel to separate a surplus amt. of sludge (or coagulation pptd. sludge) which is then taken-off from the initial or secondary settling vessel. 13.6.77 as 071509 (4pp34)

NIOC ★ D15 13454B/07 ★J5 4004-813

Recovering copper from aq. soln., partic. from mining operation - by adding oxidising agent if cyan salt is present, and contacting with cellulose fibres which are carbonised or treated with mineral acid

NIPPON OIL KK 15.06.77-JA-070027
M25 (13.01.79) C02c-05/02 C22b-07 C22b-15

Recovery of Cu dissolved in aq. soln. partic. effluent from mines etc. is claimed. The soln. contg. the dissolved Cu and alkali of 0.05-4N NaOH or KOH, if it further contains a cyan salt, is first admixed with Cl_2, hypochlorite or H_2O_2 to decompose.

The soln. is then contacted with a cellulose fibre including substance, which is then treated either (a) by washing with HCl of concn. < 25%, H_2SO_4 of concn. < 50% or HNO_3 of concn. < 65%, at 0-40°C, to obtain an aq. soln. of a Cu salt, or (b) by burning to collect the burnt residue and soot. Cu is thus recovered as conc. Cu salt aq. soln. or high purity Cu oxide respectively. 15.6.77 as 070027 (9pp53)

NIOC ★ D15 13457B/07 ★J5 4004-816

Mercury recovery from aq. soln. - by contacting the aq. soln. also contg. potassium or sodium hydroxide with cellulose fibre and washing fibre with acid or burning

NIPPON OIL KK 15.06.77-JA-070028
M25 (13.01.79) C02c-05/02 C22b-43

The aq. soln. containing the dissolved mercury and of NaOH or KOH hydroxide in a concn. of >0.05N is contacted with a cellulose fibre including substance. The cellulose fibre including substance is treated either by washing with an acidic aq. soln. to obtain the Hg salt aq. soln. or by burning to collect and cool soot and metal mercury in the exhaust gas.

The cellulose including substance is pref. an absorbent cotton or filter paper known as almost pure cellulose. 15.6.77 as 070028 (8pp53)

NIPC ★ D15 13487B/07 ★J5 4004-872

Deodorisation of malodorous gas - by water washing, treating with aq. acidic potassium permanganate, and biochemically treating water from first step

NIPPON CHEM IND KK (SEND-) 15.06.77-JA-069955
J01 (13.01.79) B01d-53/34

Process comprises (1) washing with water, (2) contacting with aq. soln. of acidic alkali permanganate (pH <5) and (3) biochemically treating waste soln. from the first process.

The amt. of alkali permanganate used may be reduced and the reaction rate with ill-smelling substance may be increased, and by-prod. manganese dioxide and its water content is reduced.

Typically gas is washed with H_2SO_4 or water in first adsorbing tower. Gas discharged from this is introduced into a second adsorbing tower, and is treated with aq. acidic $KMnO_4$ carried from recycling tank. By-prod. MnO_2 is sepd. by centrifugal separator and deodorised gas is discharged into atmos. The waste soln. discharged from the adsorbing tower is adjusted to around neutral pH and bacteria are added as desired and then biochemically treated. 15.6.77 as 069955 (7pp96)

ASAG ★ D15 13489B/07 ★J5 4004-874

Treating waste soln. contg. fluoride and arsenic cpds. - by pptn. with calcium cpd. and aluminium cpd. to give complete pptn. of arsenic

ASAHI GLASS KK 14.06.77-JA-069476
E33 (13.01.79) C02c-05/02

Waste soln. contg. fluorine and arsenic, is treated by contacting waste soln. contg. fluorine and arsenic with Ca cpd. and Al cpd. to form ppte of CaF and coppte. of Al hydroxide-arsenic, and sepg. the resulting prod. into ppte, and soln. The soln. is discharged and Al hydroxide contg. ppte is dissolved into acid or alkali. After sepg. into the soln. and residual ppte, the soln. is recycled.

Use of Al cpd. as precipitant makes possible to form a complete ppt. of arsenic. Al cpd. may be recovered by dissolving with acid or alkali. 14.6.77 as 069476 (3pp96)

CHLO- ★ D15 13495B/07 ★J5 4004-880

Treating waste soln. from countercurrent washing of ion exchange resin - using chlorine di:oxide and then active carbon

CHLORINE ENGINEERS (HODO) 15.06.77-JA-069938
J01 (13.01.79) B01j-01/09 C02c-05/02

The process comprises treating the waste soln. from counter-current washing of ion exchange resin, with active carbon after it has been treated with chlorine dioxide.

Since the oxidising reaction is accelerated by the catalytic action of active carbon, the COD value may be reduced. The operational costs are reduced. 15.6.77 as 069938 (5pp96)

ISHI ★ D15 13505B/07 ★J5 4004-893

Appts. for continuously adding ozone to carrier gas - used in e.g. oxidisers for nitric oxide in exhausts, columns for cracking cyanic cpds. and water treating plants

ISHIKAWAJIMA-HARIMA HEAV 14.06.77-JA-070338
E36 J01 (D14) (13.01.79) B01d-53/06 C01b-13/10

Appts. comprises a rotary column with a gas permeable side wall is packed with an adsorbent. Pipes for feeding a gas contg. ozone and a carrier gas are disposed across the column. As the column is rotated, the ozone is adsorbed on the adsorbant, while being continuously added to the carrier gas, which carries the ozone to the point of utilisation. 14.6.77 as 070338 (7pp26)

YOKO- ★ D15 13508B/07 ★J5 4004-898

Pure silicic acid recovery from iron-contaminated soln. - by reducing ferric ions to ferrous ions by adding reductant and coprecipitating silicic acid by adjusting pH

YOKO YAKKA KOGYO-SH 14.06.77-JA-070889
E36 (E31) (13.01.79) C01b-33/12 C02b-05/02

Silicic acid is recovered by reducing ferric ion into ferrous by adding reducing agents to an aq. mixt. of iron ion contaminated with ferric ion and silicic acid, and after removal of acid reducing agent, precipitating silicic acid by adjusting pH of the soln. in the range of acid.

The silicic acid obtd. is useful as industrial material and this process may be applied for the treatment of ground water, etc. The method makes it possible to readily isolate pure silicic acid. 14.6.77 as 070889 (5pp96)

MEHO D15 26253A/14 =J7 9000-942

Treating water-contg. industrial waste - by cast moulding the waste mixed with foaming agent, water-soluble resin, vinyl acetate resin etc. and foaming

MEIKO KASEI KK (MEIK-) 06.08.76-JA-094361

*A97 (18.01.79) *J53019-377 C08j-09/04*

New method for treating water-contg. (water content $\geqslant$ 10% generally 20-70%) industrial wastes (e.g. stone powder discharged from quarries, sludge from plating factories, Al sludge from alumite treatment, sludge from paper factories etc.) comprises formulating the waste into a compsn. contg. 100 pts. wt. of the waste, 0.2-1 pt. wt. foaming agent, 5-10 pts. wt. water soluble resin and 10-25 pts. wt (solid material) of a resin emulsion, pref. a mixt. of a vinyl acetate type resin emulsion and a styrene type resin emulsion, and having water content $\leqslant$ 50 wt.% and then cast-moulding the compsn. under heating simultaneously with foaming.

A preliminary drying step can be omitted. The foaming effect of the foaming agent alleviates changes in shrinkage percentage of the moulded prod. which are ascribed to changes in water content of the waste. The water soluble resin includes PVA, CMC, powdery vinyl and acetate etc. 6.8.76 as 094361 C08j-9/04 (18.1.79) MEIKO KASEI KK (4pp)(J53019377)

NAGA- D15 25402X/14 =J7 9001-095

Waste liq treatment from oil extn from softwood - by exposing to air, neutralising adding nutrient salt, activating sludge and coagulating

NAGANO PREFECTURE 09.08.74-JA-091704

*J01 (20.01.79) *J51020-471 C02c-05*

Waste liquid exhausted during oil removal from softwood is exposed to the air and neutralised, and nutrient salt is added, then the sludge is activated and finally it is decoloured and coagulated by use of an inorganic coagulant and a cationic organic high molecular coagulant together, to lower BOD and pigment content. Process provides an almost transparent liquid satisfying the waste water quality standards provided by water pollution control laws. The nutur nutrient salt is obtd. by adding nitrogen and phosphorous cpds. at a ratio of BOD:N:P of 100-500:5:1. Activation of the sludge is at pH 7.5-8.5 with liquid temps. of 10-30°C with a BOD load of 0.5-3kgOm^3. Air is blown in at 100-200 1/min per each m^3 of the volume of the air-exposed vessel. 9.8.74 as 091704 C02c-5/00 (20.1.79) NAGANO PREFECTURE (5pp)(J51020471)

ASAG D15 02600Y/02 =J7 9001-096

Metal and acid recovery from waste liquor - e.g. sulphuric acid and iron sulphate recovery after iron pickling

ASAHI GLASS KK 19.05.75-JA-058676

*J01 M12 (J03 M28) (20.01.79) *J51135-173 C02c-05/12 +C23g-01/36*

Metals and acids are recovered from waste liquor, e.g. waste liquor contg. H_2SO_4 and iron sulphate, discharged by the pickling of iron or a mixed soln. contg. H_2SO_4 and nickel sulphate, discharged from smelting of Cu.

The waste liquor is dialysed against water in a diffusion dialysing vessel equipped with an anion-exchange membrane. This recovers a portion of the acid. The waste liquor is then fed into a cathode chamber of a diaphragm electrolysing vessel, partitioned into a cathode and anode chambers with an anion-exchange membrane.

During electrolysis liquor is discharged from the cathode cahmber to the anode chamber, partitioned with a cation-exchange membrane. Hence metals are deposited onto the cathode of the diaphragm electrolysing vessel. Acid soln. is recovered from the anode chamber. The metals [illegible] almost completely recovered with high efficiency. 19.5.75 as 058676 C23g-1/36;C02c-5/12 (20.1.79) ASAHI GLASS KK (5pp)(J51135173)

KURK D15 48051Y/27 =J7 9001-0

Waste water electrolytic treatment - for reducing COD componen in e.g. scrubbing soln. from coal combustion gas treatment

KURITA WATER IND KK 25.11.75-JA-140271

*J03 (20.01.79) *J52064-152 C02c-05/08 +B01d-53/34*

Waste water from the carborisation of coal or petroleum or from treating the gas obtd. in the combustion of coal or heavy oil in a boiler is electrolysed after concn. at a pH of 8-11 under an electric voltage of 3-100 volts, and an electric current density of 1-10A/dm^2 for 0.5-10 hrs. to remove the COD components.

It is pref. to remove from the waste water suspended (or floated) matters and polluting matters by conventional coagulation, filtration or biological treatment prior to electrolysis. 25.11.75 as 140271 C02c-5/08, B01d-53/34 (20.1.79) KURITA WATER IND LT (4pp)(J52064152)

HASH/ D15 57577V/32 =J7 9001-0

Chromium-containing waste waters treatment - by treatment wi coal at pH below 6

HASHIMOTO S 17.02.72-JA-016697

*(20.01.79) *J49025-765 +C02b-01/14 C02c-05/02*

Effluent discharged from dyeing industry, pigment indust ry, metal surface treating industry and organic synthetic industry etc. is adjusted to pH 3-5 with an acid, e.g., HCl, H_2SO_4 and acetic acid etc. or an alkali, e.g. NaOH, $Ca(OH)_2$, triethylamine etc., the pH adjustment being carried out continuously and automatically. The effluent is then contacted with coal-filled layer(s) (pref. coal having large Fe^{2+} content to maintain high Cr removal over a long period). The Cr^{6+} contained is reduced to Cr^{3+}, and the greater part adsorbed on the coal. Unadsorbed portion of the Cr^{3+} is converted into $Cr(OH)_3$ and deposited on the coal layers when the pH is $>$ 4. 17.2.72 as 16696/77,Div ex 16697/72 C02b 1/14(20.1.7 HASHIMOTO S (3pp)(J53067260)

IDEK D15 16105X/09 =J7 9001-0

Treating waste water using activated sludge process - after addn. sea water

IDEMITSU INDUSTRIES 05.07.74-JA-076481

*(20.01.79) *J51006-356 C02c-05/10*

Prior to treating waste water using an activated sludge process, a prescribed amt. of sea water is added to was water (salinity after addn.; 0.3-0.5 wt.%). The coagula tion-pptn. rate of activated sludge is increased and BOD and COD are decreased.

Provides stable operation and management of appts. such as aeration tank, pptn. tank, etc. 5.7.74 as 07648 C02c-5/10 (20.1.79) IDEMITSU INDUSTRIES KK (4pp) (J51006356)

RICC/ D15 39753W/24 =J7 9001-

Polyectrolyte powder for sewage coagulation is wetted - by wa sprayed into atomised stream of powder

RICCIARDI R J 04.12.73-US-421668

*A35 (23.01.79) *DT2457-360 B01f-01 C02c-05/02*

A method of metering and wetting a polyectrolyte compr es the following stages: metering and conditioning of a pulverulent polyectrolyte; atomising of this with a contr -ed quantity of compressed air; conveying of the atomis polyectrolyte into a mixing and wetting chamber; thorou ghly wetting all the particles of polyectrolyte with a reg ulated quantity of water; conducting of the particles int mixing vessel for ageing, and conversion of the wetted polyectrolyte into a solution.

Used esp. in the prepn. of polyectrolyte coagulating agent for sewage treatment. The atomising and wettin processes ensure that all particles are thoroughly hum ified and clumping is prevented. 28.11.76 as 135971 (clg4.12.73-US-421668) B01f-1/00; C02c-5/02 (23.1.7 RICCIARDI R J (10pp)(J50087153)

SATO/ D15 62118V/35 =J7 9001-276

Cation exchange zeolite prepn. - from natural zeolite by heating, treatment with hydro- chloric and sulphuric acid and with sodium chloride followed by final drying

SATO Y 24.08.72-JA-084056

*(23.01.79) *J49047-298 +C01b-33/28*

Natural zeolite 5-10 mesh is heated at 450-500°. treated with dil. HCl or H_2SO_4 for 10-20 hr., washed, dried, treated with 5-10% NaCl for 10-20 hr., and dried at 150-300° In an example, zeolite contg. SiO_2 66.7. Al_2O_3 11.3, K_2O 4.3, MgO 1.1, CaO 1.9 and Fe_2O_3 0.9% 5 mesh heated at 450° 500 kg. was stirred at intervals with 5% HCl for 15 hr. filtered, washed, neutralized with aq. Na_2CO_3 and dried at 400°. The prod. 300 kg. was soaked in 600 kg. 2% NaCl for 20 hr., dried at 200° and crushed to 10 to 25 mesh. The prod. was more effective than synthetic zeolite for water treatment. 24.8.72 as 084056 C01b-33/28 (23.1.79) SATO Y (4pp)(J49047298)

KAGA- D15 18767Y/11 =J7 9001-322

Purifying petroleum sludges, esp. discharges from ships - by treating with high temp. steam or gradually increasing temp.

KAGAKU GIJUTSU SHIN 21.07.75-JA-088353

*H03 J01 (23.01.79) *J52012-757 +B01d-43*

Sludge is treated with steam at 100-350°C under agitation to keep the temp. < 350°C, Water is evaporated off with a portion of the light oil, at 90-130°C. The greater part of the light oil and the heavy oil are then evapd. off until the sludge is 350°C, giving a residue.

Oil component separated is used as ordinary temp. and therefore is easily removed without sticking to the inner wall of the separator. 21.7.75 as 088353 B01d-43/00 (23.1.79) KAGAKU GIJUTSU SHIN (3pp)(J52012757)

URAL= ★ D15 13604B/07 ★SU -599-185

Automatic liquid sampler - with offtake tubes closed by rocker arm seals, during lifting on carriage to delivery point

URALS BR THERM TECH 08.04.76-SU-347060

J04 R16 (02.03.78) G01n-01/10

A sampler, e.g. for industrial effluent, includes offtake tubes connected to reciprocating and rotating drives, guides with stops, and sample receivers. In order to obtain more representative samples, a push rod is mounted under a rocker secured to the drive.

Velkov, S.I., Vlasik, V.F., Kazakov, V.I. et al. Bul. 11/25.3.78. 8.4.76 as 347060 (2pp1358)

RUSS= ★ D15 13666B/07 ★SU -599-852

Centrifugal separator for dewatering of manure - has revolving disc partitions to slow down motion of sediment along filtering conical rotor

RUSSIAN AGRIC MECHA 03.12.76-SU-426431

J01 P41 (04.04.78) B04b-03 B04b-11/02

Simplified construction of centrifugal separator for dewatering of manure on stock breeding farms, is ensured by novel design. The device for slowing down the motion of the sediment along filtering conical rotor consists of disc-shaped partitions consecutively mounted on the hollow shaft, which serves as inlet channel and revolves with velocity smaller than that of the conical rotor. Each disc contains on its periphery a rectangular window which is angularly shifted in respect of the window in the preceding disc.

Kuchmasov, N.I. Bul. 12/30.3.78. 3.12.76 as 426431 (2pp135)

LECI= ★ D15 13751B/07 ★SU -600-093

Organic impurities removal from liq. waste - by electrolysing under specific conditions, used after lead-zinc ore flotation process

LENGD CIVIL ENG 27.08.75-SU-168382

J01 M25 (03.04.78) C02c-05/12

Org. impurities are removed from aq. waste streams, esp. water used in Pb-Zn ore flotation processes, by treating in an electrolyser with alternating sol. and non-sol. electrodes. The liquid flow-rate is 0.2-150 m/hr.; field strength is 1.5-5 V/cm. and anode potential is 0.2-1.2V. A high degree of purifcn. is obtd.

Current density is pref. 0.002-0.05 A/sq. cm. and current vol. is pref. 1-100 A/l.

Salov, V.M., Leonov, S.B., Rukobratskii, N.I. et al. Bul. 12/30.3.78. 27.8.75 as 168382 (2pp314)

AGRO= ★ D15 13797B/07 ★SU -600-146

Synthesis of lightweight ion exchange resin - by surface sulphonation of expanded polystyrene granules with conc. sulphuric acid

AGROPHYSICAL RES 05.05.76-SU-357048

A91 (A13 A35) (30.03.78) C08f-08/36 C08j-05/20 C08j-09/22

Surface sulphonation of the expanded polystyrene granules (I) with conc. H_2SO_4 (II) taken in the vol. ratio of (II):(I) = 1:10-20, for 10-20 min., yields lightweight ion exchange resin which finds use as a filtering agent in purification of water and industrial waste. The process is carried out at 60-80°C. in the presence of a catalyst. The time limits and vol. ratios of the process should not be exceeded or reduced.

Bezborodko, G.L. Revut, B.I., Usyarov, O.G. Bul. 12/30.3.78. 5.5.76 as 357048 (2pp124)

RING/ ★ D15 B/07 ★SW 7707-768

Treatment of floating oil slick - by using compressed air to spray absorbent or dispersant against underside of slick

RING L M 05.07.77-SW-007768

H03 (29.01.79) C02b-09/02

The method is for treating a floating oil slick with a material that absorbs or disperses oil. A stream of compressed air is used to spray the material below the water surface and against the underside of the slick. 5.7.77 as 007768 (-pp958)

COSA/ D15 78507A/44 =US 4137-756

High pressure membrane cell - having upper and lower sections flanged together with conical distributor

COSACK C (SCHL-) 18.04.77-DT-717047

*J01 +R16 (06.02.79) *DT2717-047 +B01d-25/04 G01n-13/04*

A high pressure membrane test cell includes an upper cell part with a central axial hole through which internal screw threads communicate with an internal pressure chamber, a tangentially aligned medium supply passage opening up beneath the axial hole, a distributor in the pressure chamber having a cylindrical neck engaged in the axial hole, an internal axial passage in communication with the neck and an annular shoulder engaged against an annular shoulder of the upper part to provide axial alignment of the distributor, an externally threaded conduit in the axial hole against the end of the distributor in the hole, and a lower cell part detachably secured to the upper part and providing a support for a filter between the pressure chamber and the distributor.

An annular flange on the lower part abuts the annular flange of the upper part to provide a precise distance between the distributor and the filter. 14.9.77 as 833089 (6pp1376)

ZIEH/ D15 25018A/13 =US 4138-293

Desalination by solar heating of aluminium balls - then spraying with brine and condensing resulting water vapour

ZIEHM K F JR 03.11.75-US-627964 (27.01.78-US-872815)

*(06.02.79) *US4077-849 B01d-01 B01d-03*

Solar desalination appts. has a heating chamber having light permeable glass in its upper side, a device for conveying a solar heatable, endless metal belt through the chamber beneath the glass such that it is heated by solar radiation, a vaporising chamber adjacent the heating chamber, a device for applying saline water onto the belt in the vaporising chamber to vaporise the water, and a condenser to condense the salt-free vapours.

Pref. the belt is passed to a rinse tank after the vaporising chamber. The saline water is pref. pre-heated in the condenser. Pref. the belt is Al, anodised in a dark, heat absorbing colour.

Parent patent disclosed a desalination process in which black Al balls are passed through a heating chamber through which suns rays are focussed, the balls then being sprayed with brine. 27.1.78 as 872815 Div. ex. 4077849 (6pp1376)

SCHN/ D15 70779Y/40 =US 4138-328

Activated sludge system for waste water purificn. - which employs high efficiency aeration unit to prevent excess sludge prodn.

SCHNITZLER E 05.06.76-DT-625415

*(06.02.79) *BE-855-341 C02c-01/08 +B01d-21/10 C02c-05/10*

Appts. for treating waste water by an activated sludge process comprises a buffer vessel, at least one oxidation trough contg. an aerator and a fine distributor, a clarifier for sepg. active sludge from effluent and a recycling device for the sludge.

An aerator is provided in the buffer vessel for reducing the oxygen demand; a high capacity compartment following the buffer vessel supplies a suspension to the oxidation trough and also contains an aerator, sludge from the clarifier being recycled to this compartment; and further fine distributors are provided in the compartment and recycling device.

Appts. is used to treat water in a waste water or sewage treatment plant, and operates without the formation of excess sludge. 3.6.77 as 803313 (6pp1379)

BRTO D15 77836Y/44 =US 4138-330

Dissolving gases in liquid - in turbulent contact zone with underlying calm zone and variable flow rate to suit demand (NL 18.10.77)

BOC LTD 14.04.76-GB-015422

*J02 (06.02.79) *DT2716-130 B01f-03/04 +C02b-01/34*

Gas is added to liq., and dissolved by passage through a contactor device. The contactor is in generally vertical form and contains > 2 discrete sections, each having a different cross-sectional-area.

The first section contains a turbulent gas/liq. zone and the second section a coalescent zone. The average downward flow of liq. is less than the rise velocity of gas bubbles entering the second zone. Small bubbles may pass from the first to the second zone. The sections pref. are cylindrical, having different diameters.

High gas transfer rates are achieved for a variety of different incoming flow rates of liq. to be treated, which is e.g sewage. 21.3.77 as 779747 (6pp1379)

FAIQ D15 68944A/39 =US 4138-333

Digester to dispose of organic rubbish, sewage sludge etc. - has tilted agitator screws to obviate pockets of undigested waste

FAIRFIELD ENG CO 16.05.77-US-797568

*+Q35 (D16) (06.02.79) *BE-867-099 C02c-01/08*

A waste material digester has a carriage, extending above the material being digested, which carries a number of agitating screws extending into and movable through the material. The screws are in generally vertical alignment with the bottom of each screw being located horizontally ahead of the upper end in the direction towards the digester inlet.

Each screw is pref. angularly adjustable relative to the carriage, e.g. by ball and socket joints. The wall of the digester on the exit side is pref. parallel to the adjacent screw.

The appts. is used for treating sewage, garbage or sludge, and lessens the possibility of material passing through without being digested, or of material remaining for prolonged periods. 16.5.77 as 797568 (6pp1379)

MECA- D15 41660Y/24 =US 4138-334

Aq. effluent purification by microbial fermentation - feeding biomass to protozoa to form biomass as protein source

MECAFINA SA 11.12.75-CH-016113

*+Q42 (D13 D16) (06.02.79) *BE-849-143 B01d-35/16*

A trashrack installation for liq.-borne trash comprises trash collecting rack rods and a rack cleaner mechanism for cleaning the rods and which includes a toothed comb mounted on a tilting mechanism and pivotable between cleaning and free positions.

The tilting mechanism is mounted on a carrier movable by means of a conveyor along a guide, tilting being actuated by movement of the conveyor. The carrier also includes a brake insufficient to prevent movement between cleaning and free positions, but sufficient to prevent movement of the carrier under gravity.

The installation avoids the problem of the carrier running over accumulated trash on the rackrods during its return motion. 8.12.76 as 748456 (7pp1379)

ATAR- D15 85290X/46 =US 4138-335

Mixing gases into liquids - using impingement plate on end of pipe to break up gas bubbles

ATARA CORP 21.04.75-CA-225103

*J02 (06.02.79) *DT2616-395 B01f-03/04 C02c-01/12*

A sewage aerating structure comprises a flue for conducting gas-entrained sewage vertically towards the top of a pond, and an impact plate fixed over the exit of the flue. The flue has a number of spaced circumferential indented rings, and the plate has a concave surface aligned with the flue exit, at a max. distance of twice the dia. of the flue exit, and at a min. of one inch. The flue is in the form of a funnel with its narrow end directed towards the plate.

Sewage flowing up the flue collides with the plate and scatters entrained gas bubbles. The shattering of the bubbles increases the surface area of gas/sewage contact, and therefore improves aerating efficiency. 5.7.77 as 812654 (+12.4.76-US-675783)(7pp1379)

BALG D15 75876Y/43 =US 4138-342

Gravity settler with many narrow channels - formed by a stack of sloping parallel plates

BALLAST-NEDAM GRP NV (SKIM-) 23.04.76-NL-004390

*Q42 (06.02.79) *BE-853-747 B01d-17/02*

Insoluble substances are sepd. from water in a device comprising a number of flat separation channels vertically stacked and communicating with a supply chamber and a discharge chamber.

The channels are provided with flow distributors causing liq. flowing through the device to be unequally distributed within the channels, and restricts the flow of liq. in the segregation direction. The distributors are pref. constituted by a number of teeth divided over the width of the channels, the width of the teeth increasing in the segregation direction.

The distributors allow for more complete segregation of the insolubles into heavy substances in the upper channels and light substances in the lower channels. 19.4.77 as 788998 (8pp1379)

BOLO/ ★ D15 14068B/07 ★US 4138-343

Appts. for removing debris from rolling sewage - including tined scoop which carries debris to removal conveyor

BOLOGNA A 22.12.75-US-643379

(06.02.79) B01d-33/14

Sewage is treated in an appts. which includes a holding tank having an open top. Liq. sewage within the tank moves in a continuous roll-over current flow to promote aeration. A predetermined surface level is maintained in the tank.

A debris collecting device includes a conveyor and a rigid scoop which is positioned in the liq. sewage near its surface. The scoop has a pan portion and a tine portion. Sewage is continuously received in the pan which directs the flow to the tines. Debris in the sewage collects on the tines and is urged to progress along them by the force of the flow. The tines extend straight from the pan and then curve arcuately upwards. The debris is delivered from the arcuate ends of the tines to the conveyor which carries it to a station outside the tank.

Appts. is used to screen sewage to remove nonbiodegradable matter such as plastics and rags. The debris removing device is relatively simple and removes matter which otherwise might tend to clog pipes, etc. 22.12.75 as 643379 (6pp295)

CRDC D15 89666A/50 =US 4138-460

Moulding resin baffles at intervals along filamentary bundles - for mfr. of fluid exchanger cores for dialysis etc.

CORDIS DOW CORP 10.06.77-US-805602

*A32 J01 +P34 Q31 (A88) (06.02.79) *BE-868-006 +B29c-06/04 B29f-01/10*

A tube sheet is formed encapsulating fibres in linearly arranged continuous tow form. A tow of fibres is placed in a mould, a polymeric compsn. is flowed into the mould and between the fibres in a direction approx. perpendicular to the axis of the fibres until the mould and interstices are filled. The polymeric compsn. is caused to solidify at the axial ends of the mould while the compsn. continues to flow across the fibres. Solidifying polymeric material encapsulates the fibres to form the tubesheet which is then removed from the mould. The fibres may be hollow.

Process overcomes problems associated with impregnating pre-cut fibre bundles in alternative processes. The tubesheets may be used in reverse osmosis, ultrafiltration, dialysis, etc. 10. 6. 77 as 805602 (9pp1379)

TOKE D15 72758Y/41 =US 4138-724

Computerised control of ozone generating plant - e.g. for treatment of fresh or waste water, waste gases, etc.

TOKYO SHIBAURA DENK 05.03.76-JA-023794

*E36 R26 +R27 (06.02.79) *DT2709-294 C01b-13/10 +G06f-15/46*

Ozoniser system comprising a number of ozoniser modules each having one or more ozone generators is provided with a computer for determining the amt. of ozone to be generated.

The computer is responsive to the amt. of ozone demanded by an ozone utilisation device, and controls the power applied to the ozoniser modules. The utilisation device may be for treating waste water or denitrification of waste gases. By means of the computer, only that amt. of ozone required by the utilisation device is actually produced by the ozone modules, thus improving the operating efficiency, particularly with regard to power consumption and the problem of unreacted ozone exiting from the utilisation device. 1. 3. 77 as 773217 (14pp1379)

See Also

D22 DT 2735550

D16 : FERMENTATION INDUSTRY

ICIL ★ D16 11897B/07 ★BE -869-589

Industrial aerobic fermentation - for mfr. of unicellular protein, in liq. gas contactor operating at gauge pressure above 2 bars

IMPERIAL CHEM INDS LTD 09.08.77-GB-033339 (09.08.77-GB-033338)

(D13) (07.02.79) B01j C12b

The contacting vessel is of the type which has a riser passage and a downflow passage with their upper ends joined into a common header chamber. Gas is injected continuously into liq. circulating continuously in the system. Gas is taken off continuously from the liq. and passes through the header chamber to exhaust. Gas above liq. in the chamber is held at ≮2 bars gauge pressure, pref. 3-10 bars.

Gas is pref. injected at the lower end of the vessel and the riser passage extends vertically for 40-80 metres. Exhaust gas from the chamber is pref. heated, e. g. to 100-1200°C, and used to power an expansion engine, e. g. a turbine. The engine is pref. used to drive a compressor which raises the pressure of feed gas to 3-10 bars gauge pressure.

Process is used for industrial prodn. of unicellular protein by aerobic fermentation of a culture of bacteria, esp. methylophilus methylotrophos in culture media contg. methanol as a source of carbon for growth. At pressures >2 bars the contacting efficiency is extremely high so that output from a given size of plant is much higher than at lower pressures. It is possible to produce a cellular mass of increased solids content, i. e. less liq. to be separated. Energy recuperation is achieved using exhaust gas to drive compressor. 7. 8. 78 as 869589 (20pp448)

YAMA/ ★ D16 11904B/07 ★BE -869-610

Antitumour and adjuvant solid microbial cell wall skeleton compsn. - comprises a suspension agent and dispersant with cell material from Nocardia, Mycobacterium, Corynebacterium, Arthrobacter etc.

YAMAMURA Y 09.08.78-JA-095871

A96 B04 (08.02.79) A61k

Solidified pharmaceutical composition contains microbial cell wall skeleton (CWS) having antitumour and adjuvant properties, an oil used as the pharmaceutical vehicle, a suspension agent and a dispersant. Used as imminotherapeutic for human tumours.

A solid composition which is stable for prolonged periods is provided. The solid compositions are resuspended in water and administered by intrapleural, intradermal, sub-cutaneous, intramuscular, intraperitoned and intralesion routes in unit doses of 10-2000 µg, pref. 100-300 µg of CWS. Detailed activity tests are described.

The CWS is specifically derived from organisms such as Nocardia (e. g. N. rubra, N. paraffinica, N. asteroides) Mycobacterium (e. g. M. bovis) corynebacterium (e. g. C diphtheriae) or Arthrobacter (e. g. A paraffineus.)

The pref. suspension agents are polyalcohol esters such such as for polyoxyethylene. 8. 8. 78 as 869610 (24pp395)

KANF ★ D16 11920B/07 ★BE -869-684

Yeast fermentation appts. - with partial sepn. of liquor and recycling of sepd. yeast

KANEGAFUCHI KAGAKU 11.08.77-JA-096835

(12.02.79) C12b

The culture process at high concn. comprises removing the broth continuously or intermittently from the fermentor, then sepng. the yeast cells using a cell separator, or washing them additionally with water. The sepd. yeast cells are then fed back to the fermentor. The yeast is cultivated at a cell concn. of 6-20% on a dry basis, this concn. being the final concn. in the case of a discontinuous culture and the cell concn. in the case of a continuous culture.

Process is conducted in an appts. comprising a fermentor with perforated plates with multiple stages. The interior is subdivided by 1-10 perforated plates. It is connected at the top with a forced drawing off tube. Means are provided for recycling the culture broth, sepg. the yeast cells, aeration and for feeding carbon source and nutrients.

The sepn. removes yeast metabolites, salts etc. which prevents their accumulation resulting in growth inhibition. The multiplication of foreign microorganisms is suppressed resulting in improved growth as a very high quality product. 11. 8. 78 as 869684 (38pp597)

BOHM/ ★ D16 12044B/07 ★DL -133-248

Autotrophic and mixotrophic culture - using submerged waterproof fluorescent lamps in vegetable suspension

BOHM H 23.12.75-DL-190393

(20.12.78) C12b-01/22

The autotrophic and mixotrophic culture of suspended vegetable organisms in a mineral nutrient soln. is promoted by photosynthesis. Waterproof sources of light are installed inside the tanks for a submerged illumination of the culture organism.

Large volumes of suspended organisms can thus be illuminated within a minimum of space. There is no limit to the layer thickness and opaque materials can be used to seperate the cultures from the environment. 23. 12. 75 as 190393 (6pp39)

BOHM/ ★ D16 12046B/07 ★DL -133-250

Alternate light and dark treatment of algae - with one fermenter and two dark containers for continuous prodn.

BOHM H 23.12.75-DL-190396

(20.12.78) C12b-01/22

In a process for the synchronous mass and laboratory-scale culture of algae by exposure to artificial light alternating with darkness a light fermenter is coupled to two dark containers. At the end of the exposure, cell suspension with parent cells is transferred from the fermenter in one of the containers for maturing and sporulation. The fermenter, which has been flushed with nutrient soln. and filled afresh, then receives from the second container the

autospores which have been released from the parent cells.
The light/dark alternation which is needed for the synchronous culture of single-celled algae can thus be realised and at the same time the fermenter can produce continuously biogenic mass by illumination. 23.12.75 as 190396 (7pp39)

BOHM/ ★ D16 12047B/07 ★DL-133-251
Adaptors permitting insertion of fluorescent lamps in liquids - formed by funnels sealed with self-hardening silicone rubber
BOHM H 23.12.75-DL-190398
A97 (20.12.78) C12b-01/22

The disadvantages of low tension, flourescent lamps when encapsulated for use in the illumination of liquids, that they occupy a much larger vol. in the liquid than the lamps themselves, that due to the distance between lamp and liq. light losses are considerable, and that an intensive illumination of fluids with encapsulated lamps is not possible. are eliminated.

Low tension fluorescent lamps of all types can be used in liquid media if their electrical contacts are enclosed in funnel-shaped caps of unbreakable glass or other suitable material and the joint between funnel and lamp and funnel and conductors is sealed by self-hardening silicone rubber or other suitable material for keeping out the liquid medium. 23.12.75 as 190398 (5pp1045)

BOHM/ ★ D16 12048B/07 ★DL-133-252
Uniform illumination for photosynthesis - using roundabout with lamps revolving around fixed circle of objects
BOHM H 23.12.75-DL-190399
(20.12.78) C12b-01/22

Articles which are to be treated by irradiation are arranged in fixed position along a circle in a light roundabout. Sources of light, also arranged in concentric circles are kept in rotary motion around the vertical axis. A thermostatically controlled water bath for the heat treatment revolves together with the lamps.

It is ensured that every article receives quantitatively and qualitatively the same radiation. The revolving water vessel guarantees that differences in its glass walls and in the layer thickness of its medium are evened out. 23.12.75 as 190399 (9pp39)

BOHM/ ★ D16 12049B/07 ★DL-133-253
Rapid photosynthesis efficiency test - with lamp immersed in culture medium and with growth analyser
BOHM H 23.12.75-DL-190400
(20.12.78) C12b-01/22

For a rapid test of the process efficiency, synchronous or desynchronous liquid culture of single-called green algae or photosynthetically active suspended organism are faced by the light sources under test. The cell growth, multiplication rate and development are measured to assess the biological action of these lamps.

This test can be completed very rapidly. The use of synchronous cultures permits the separate assessment of the biological action. The test results can be quantified and are reproducible. 23.12.75 as 190400 (8pp39)

IMMN D16 33048F/00 =DS 1617-538
Anti toxin production from milk
IMMUNE MILK CO AMER LTD 24.10.65-US-505023
*B04 (08.02.79) *FR1523-166 +A61k-39/28 C12k-05*

Prepn. of tetanus antitoxin comprises isolation of the antitoxin protein from the milk of female horses, cattle, dogs pigs, goats or camels. The animals are hyperimmunised with a commercial toxoid and their milk is collected. It is diluted with sterile distd. water, and after removal of casein, is filtered; protein is pptd. and centrifuged out;the protein is transferred to a sterile container and emulsified with water; the emulsion is dialysed against water until free from salts; the protein is then recovered by freeze drying.

The prods. are used in oral antitetanus prepns. 24.10.66 as 617538 (4pp047)

NOVO D16 37454F/00 =DS 1807-185
Proteolytic enzyme preparations
NOVO TERAPEUT LAB A/S 10.11.67-GB-051307
*B04 (08.02.79) *NL6815-944 +C12d-13/10*

Prepn. of new proteolytic enzyme system comprises propagation of Bacillus alcalophilus strains in the presence of the usual nutrients at pH 7.5-11 under aerobic submersed conditions. The extra cellular proteolytic enzyme is extd. during propagation. The prods. are used as washing and rinsing aids. 6.11.68 as 807185 (5pp047)

BTEB- D16 58466V/33 =DS 2407-519
Brewery wort copper or mash tub - heated by tube boiler
BTE BRAUEREI TECH (BRAU-) 16.02.74-DT-407519 (00.00.73-DT-313932)
*(08.02.79) *BE-812-608 C12l-07/04*

A brewery boiler for use as a wort boiler with vapourisation or as a mash boiler without vapourising, has a heater positioned at definite distances from the vessel walls and bottom. In addn. the heater is positioned inside a sleeve or gulley with a passage all round for the liquor, the cross-section of which is smaller than that of the boiler itself.

The design greatly facilitates the washing of the heater all over, and moreover makes it possible to fit the sleeve or gulley into existing vessels without loss of capacity and at low cost.

The sleeve or gulley is placed above the boiler bottom and has in its bottom a number of passages which can be closed by a shutter, so that only a relatively small quantity of the expensive washing fluid is necessary to clean the heater. 16.2.74 as 407519 Add to 2313932 (5pp1045)

REMY/ D16 65223X/35 =DS 2559-925
Optical instrument for laser bombardment of microbiological test zones - which is completely independent of parallel displacements and tiltings of beam
REMY E 12.02.75-DT-505774 (12.02.75-DT-559925)
*P31 R21 R49 (08.02.79) *DT2505-774 H01s-03/10 +G02b-21*

A simple means by which the accuracy of the parallel and central alignment of a laser beam, manipulated by deflectors, to the optical axis of a microscope objective can be verified and continuously monitored, includes a mirror on which a figure indicating the central point is formed by lines refracting the laser light.

The mirror can be exchanged for the microscope objec-tive, and is positioned at right angles to the axis of the objective. In the path of the light reflected from the mirror and in a definite position relatively to the beam directed towards the mirror, is a screen on which the refracted pattern produced can be observed. 12.2.75 as 559925 Div ex 2505774 (4pp1045)

AMCA= ★ D16 12268B/07 ★DT 2831-782
Forming visible images by ultrasonic irradiation of ferment plate - and using developer contg. hydrogen peroxide and aromatic amine
AM USSR CARDIOLOGY 20.07.77-SU-502752 (20.07.77-SU-502751)
G06 R24 (08.02.79) G03x

A method of producing a visible image of an object by illumination of a ferment plate, production of a latent image and development of the image, is as follows.

The ferment plate is illuminated by ultrasonics, then the latent image is developed by a solution comprising hydrogen peroxide and a chromogenic, water-soluble aromatic amine.

The ferment plate is pref. of laminated construction, comprising outer layers of a hygroscopic substance; one of the outer layers contains a ferment solution, while an intermediate layer consists of a cell-like substance with cells of size 0.05-5 mm, contg. the developing material.

Used for industrial or medicinal use, for obtaining qualitative information about the interior of a structure and internal organs. 19.7.78 as 831782 (16pp236)

DAMO- D16 36210Y/21 #GB 1540-461
Microencapsulation of labile biological material - using a diamine and a diacid halide in a two stage process
DAMON CORP 20.08.75-US-606166
*A97 B04 J04 +P33 (A23) (14.02.79) *BE-848-427 B01j-13/02*

Two-stage polymerisation

biological material inside a semipermeable membrane, comprises (1) prepg. an aq. phase of pH 5-9 contg. the biological material and a diamino monomer or a monomeric mixt. contg. a diamino monomer; (2) emulsifying the aq. phase in a hydrophobic solvent in which the monomer is slightly soluble to produce an aq. discontinuous phase.

Process further comprises (3) adding a dibasic organic acid halide to the emulsion to cause a 1st polymerisation reaction at the interface between the continuous hydrophobic solvent phase and the discontinuous emulsified phase droplets to form macroporous polymeric membranes which encapsulate the discontinuous phase droplets; (4) sepg. the macroporous capsules from the hydrophobic solvent to terminate the polymerisation; (5) resuspending the capsules in a liq. which has a lower solubility for the diamino monomer than the hydrophobic solvent; (6) adding the Znl portion of a dibasic organic acid halide to the suspn. to cause a 2nd polymerisation at the capsule membranes to strengthen the membranes and render them microporous yet impermeable to the biological material; and (7) quenching the reaction in suspension in the liq.

The materials such as enzymes or hemoglobin are encapsulated in bulk without direct competition with impurities for available binding sites. Thus highly active capsules can be made from relatively poorly purified materials. Also, the active materials are protected from attack by microorganisms often responsible for the inactivation, or inhibition of such reactor components. 24. 9. 76 as 039727 (12pp910)

MEIJ D16 33117Y/19 =GB 1540-466
Antibacterial and antifungal antibiotic SF-1771 - and its antibacterial and antitumour deriv. SF 1771-B produced by removal of copper from SF-1771
MEIJI SEIKA KK 04.05.76-JA-049892 (29.10.75-JA-129306)
*B04 C03 (14.02.79) *DT2649-604 C07g-11 +A61k-37 C07g-07*

Novel antibiotic polypeptide , SF-1771 is a blue amorphous powder which is basic, water-soluble and has an antibacterial activity.

The hydrochloride (i) discolours at 185°C, (ii) decomposes at 208°C with foaming, (iii) is sol. in water and methanol, (iv) is slightly sol. in ethanol and n-butanol, (v) shows a positive reaction with ninhydrin, Ehrlich reagent $KMnO_4$ and Greig-Leiback reagent (vi) shows a negative reaction with Sakaguchi reagent, (vii) has a mol. wt. of 1600 (Barger method), (viii) is C 38.70%, H 5.42%, N 13.03%, O 29.62%, S 3.62%, Cl 6.07%, and Cu 3.53% and (ix) has defined UV and IR spectra.

Also new is SF 1771-B obtd. by removal of copper component from SF 1771 molecule.22. 10. 66 as044017 (22pp974)

KIRI ✓ D16 47091A/26 =GB 1540-552
Brewers wort prepn. - by treating gelatinised barley with Streptomyces amylase, obviating need for malting
KIRIN BEER KK (MEIJ MEIJ) 31.08.77-JA-104524 (11.12.76-JA-148981)
*(14.02.79) *NL7713-669 C12c-07*

Brewer's wort is produced by enzymatic treatment of starchy material by providing starchy material contg. predominant quantity of barley subjected to gelatinisation treatment; causing an amylase to act on starchy material to saccharify it, amylase being prod. of aerobic culture of Streptomyces species, and when starch is used having enzymatic activities at optimum of pH 4.5-5.0, so that limit in starch hydrolysis > 75% of theoretical maltose, and ratio of glucose to maltose produced is ≯ 0.06:1 by wt.

Pref. gelatinised starchy material is produced by cooking barley and 0-80 wt.% additional starchy material, pref. in the presence of liquefying enzyme.

Brewer's wort is produced without the need for malt comparable to malt wort w. r. t. carbohydrate and nitrogenous cpds. without the need for gelatinisation treatment of barley starch, and suitable for brewing beer. 9. 12. 77 as 051249 (12pp931)

SEAR D16 09338Y/06 =GB 1540-579
Cultivating lymphoblasts on a pig serum contg. medium - in presence of e.g. methyl cellulose to prevent protein pptn.
SEARLE G D & CO 01.08.75-GB-032237
*A07 B04 (14.02.79) *BE-844-763 C12k-09*

A culture medium for lymphoblast cells, comprises an aq. nutrient medium contg. swine serum and a surfactant in an amt. sufficient to inhibit the pptn. of serum protein.

Pref., the amt. of swine serum is 0.5-20, specifically 5-20, vol%; the surfactant is present in an amt. of 0.05-5, specifically 0.1 vol% and comprises a polyoxyethylenepolyoxypropylene block polymer or methyl cellulose.

Swine serum not only supports the growth of lymphoid cells, but gives yields superior to those obtd. using the considerably more expensive foetal calf serum. Lymphoid cells are e.g. useful in the prodn. of interferon (-like materials), enzymes or other cell prods., including antigens. 1. 10. 76 (4pp910)

STEI D16 36329Y/21 =GB 1540-692
Clarifying tank for brewery - for sepg. wort from draft using intermediate base to unify flow
STEINECKER A MASCH GMBH 25.02.76-DT-607562
*(14.02.79) *BE-850-676 C12c-07/16 +B01d-23/02*

Refining vat for separating wort from spent grain comprises a sieve plate bottom which is impermeable in its central region. Beneath the sieve plate is a funne-shaped collector whith a central drain hole; between the sieve plate and the collector is a second plate joined to the central impermeable region of the sieve and sloping radially outwards.

Pref. the diameter of the intermediate plate is 0.7 times the vat dia. Wort thus cannot reach the drain hole directly. Uniform leaching of the whole layer of spent grain above the sieve plate is achieved. 17. 1. 77 as 001723 (3pp1364)

ASAH D16 85369X/46 =GB 1540-711
Porous, polar copolymers having ion exchange capacity - comprising polar and non-polar mono- and multi ethylenic monomer units (BE031176)
ASAHI KASEI KOGYO K 09.06.75-JA-069362 (01.05.75-JA-052911)
*A14 B04 (A91) (14.02.79) *DT2618-481 C08f-02*

Prodn. of a polar, porous polymer comprises polymerising a monomer mixt. comprising (a) 2-98 wt.% of ≥1 crosslinking monomer having $CH_2=C<$ gps. and (b) 98-2 wt.% of ≥ 1 monomer selected from (i) polymeisable monoethylenically unsatd. monomers and (ii) conjugated diene monomers. From 15-100 wt.% of (a) and (b) are polar monomers.

The reaction is carried out in the presence of an organic medium which does not react with (a) and (b) and consists of ≥ 1 liq. which dissolves all of the homopolymers of monomers (a) and (b) and ≥ 1 liq. which does not dissolve the homopolymers. The organic medium is used in an amt. D wt % represented by the formula $34\sqrt{X} \leqslant D \leqslant 150\sqrt{X}$ where X is wt.% of (a) based on (a) and (b).

The polymers are used as highly efficient ion exchange resins, adsorbents, stationary phases for chromatography carriers for catalysts and immobilised enzymes, etc. The polymer has polar gps., an average pore dia. of ≥ 40 Å, a high pore vol. and high mechanical strength. 30. 4. 76 as 25045/78 Div. ex. 1540108 (+10. 5. 75; 9. 6. 75-JA-055238; 069361) (8pp982)

TAKE ★ D16 12493B/07 ★GB 2001-954
Antibiotic C-14482 A1, antibacterial and antitumour agent - useful as disinfectant and germicide etc., prepd. from Nocardia sp, ATCC 31309
TAKEDA YAKUHIN KOGY 04.08.77-JA-093875
B04 (D22) (14.02.79) C12d-09/14

Antibiotic C-14482 A_1 (I) is new. (I) is prepd. by the culture of Nocardia sp. No. C-14482 (ATCC 31309), and is isolated as dark red to reddish-brown crystals of m.pt ≮ 300°. (I) (C, 58.02 %, 59.18%, H 5.84%, 5.7%; N 16.32%, 17.14%) has $[\alpha]_D^{245}$ + 150 ± 30 (c=0.05, EtOH), λ_{max}^{MeOH} 214±2, 281±2, or 498±2 nm ($E_{1cm}^{1\%}$ 503± 50, 209±10, 46±5), ν_{max} 3430, 3175, 2940, 2890, 2850, 1680, 1650, 1625, 1600, 1455, 1390, 1345, 1250, 1170, 1140, 1110, 1075, 1025, 995, 935, 910 and 825 cm^{-1}, and mol.wt. 4.6×10^2 (vapour pressure osmometry in EtOAc). (I) is weakly basic, gives -ve Sakaguchi and Barton reactions, and decolourises $KMnO_4$. Finally, (I) is soluble in

MeOH, and $CHCl_3$, sparingly soluble in EtOH, BuOH, EtOAc, or H_2O, and almost insol. in hexane or petroleum ether.

(I) has potent activity against Gram +ve, Gram -ve, and acid-fast bacteria, and is useful as a germicide and disinfectant for wounds contaminated with Staph. aureus, hands, or instruments, etc. In addn., (I) eliminates R plasmids, is a potent inhibitor of nucleic acid synth., and is useful as an antitumour agent (e.g. against leukaemia P388 in mice).

In an example, a broth contg. 50 µg/ml of (I) was obtd. by culture (shaking) of Nocardia sp. C-14482 for 90 hr. at 28° on a broth contg. dextrin (5 %), soybean flour (3 %), peptone (0.1%), and $CaCO_3$ (0.5 %). 31.7.78 as 031740 (14pp478).

PHIG ★ D16 12524B/07 ★GB 2002-127

Appts. for component concn. determn. in biological fluid - has two oxygen measuring cells sepd. by immobilised enzyme

PHILIPS GLOEILAMPEN NV 03.08.77-NL-008564

B04 J04 R16 (14.02.79) G01n-27/46

A device for the enzymatic determination of the concentration of a component in a biological fluid includes a quantity of immobilized enzyme which catalyses the oxidation of the component to be analysed. The device also includes two measuring cells for determining the oxygen concentration in the fluid. The first cell contacts the fluid on which the enzyme has not acted, whereas the second cell contacts the fluid on which the enzyme has acted.

The measuring cells are electrically connected in a circuit which measures the differece between their output currents. The immobilised enzyme is held in a reactor which is located between the two measuring cells so that the fluid flows from the first cell, through the reactor and then through the second cell.

The device is used to determine the concn. of a particular component, e.g. glucose, in a biological fluid, e.g. blood serum or urine, opt. mixed with a suitable buffer fluid. The device gives a reliable measurement. The reactor can be readily replaced so that the measurement of the concn. of different substances in rapid succession is possible. 31.7.78 as 031754 (4pp295)

MGAF ★ D16 B/07 ★HU T015-990

Extreme pressure grease compsn. - partic. for lubricating grape presses

MAGYAR ASVANYOLAJ FOLDG 20.12.76-HU-MA2842

A97 H07 (27.01.79) C10m-07/14

AJIN ★ D16 12812B/07 ★J5 4001-693

Determination of peroxidase activity - effecting enzymatic reaction under acid conditions using pH buffer

AJINOMOTO KK 06.06.77-JA-066518

B04 J04 R16 (08.01.79) G01n-31/14 G01n-33/04

Method comprises effecting enzymatic reaction under acid conditions (e.g. in buffer made using hydroxycarboxylic acid), by fluorometric analysis.

Activity of peroxidase and various trace components in living body can be determined with high sensitivity in short time without requiring special high quality and high sensitivity fluorescent analyser. Method is useful in clinical examination. By effecting enzymatic reaction at pH 3.5-5.5, the degree of detection of enzymatic activity can be raised by 10-fold to 50-fold. Buffer is e.g. citric acid, tartaric acid, lactic acid, etc. Peroxidase is e.g. lactoperoxidase, cytochrome C peroxidase, verdoperoxidase, etc. 6.6.77 as 066518 (4pp50)

SAPB ★ D16 12948B/07 ★J5 4002-393

Fungus body contg. germanium and selenium prodn. - by culturing microbe in culture medium contg. germanium and selenium cpds.

SAPPORO BREWERIES 09.06.77-JA-067309

B04 P13 (D13) (09.01.79) A01g-01/04 A23l-01/34 A61k-35/66 C12b-01 C12b-03/02 C12c-11/08

Specific microbe fungus body contg. germanium and selenium is made by culturing a microbe that may be accumulate germanium and selenium in fungus body, in culure medium contg. germanium cpd. and selenium cpd.

Microbe pref. is yeast, imperfect fungi, mould, bacteria, Basidiomycetes, or Actinomycetes. The germanium cpd. and selenium cpd. may be GeO_2, K_2GeF_6, SeO_2, H_2SeO_4, H_2SeO_3, etc., and pref. high purity GeO_2 and SeO_2.

Prods. may be used as pharmaceuticals, health foods and industrial raw materials. 9.6.77 as 067309 (6pp69)

SEKI ★ D16 12949B/07 ★J5 4002-394

Fungal body prodn. e.g. for animal feedstuff - by culturing Pseudomonas methanolicola in medium contg. methanol as main carbon source

SEKISUI CHEMI IND KK 03.06.77-JA-066163

B04 C03 (D13) (09.01.79) A23k-01 A23l-01/34 C12k-03

Process comprises culturing bacteria of Pseudomonas methanolicola in culture medium contg. methanol as main carbon source and removing the fungal body from the culture.

Pref. the microorganism is Pseudomonas methanolicola DS-1. Prod. is useful as animal feed, or e.g. for mfg. pharmaceuticals. Culture is pref. at 5-44 (esp. 25-42)°C, and at pH 5-9 esp. (6-8). Amt. of methanol in culture medium is pref. < 50g/L. 3.6.77 as 066163 (7pp69)

SUMO ★ D16 12950B/07 ★J5 4002-395

Urokinase purificn. from human urine - by contacting with strongly acidic cationic exchange resin, and eluting with alkaline soln. and/or highly conc. salt soln.

SUMITOMO CHEMICAL KK 03.06.77-JA-065974

B04 (09.01.79) C07g-07/02

The process comprises contacting crude urokinase-contg. soln. with strong acidic cationic exchange resin having sulphonic acid gp. adjusted to NH_4^+ form to adsorb urokinase, and eluting the urokinase by means of an alkaline soln. and /or highly conc. salt soln.

Crude urokinase resulting from human urine in soln., may be purified in high yield and at high purity. Urokinase is an enzyme that yields plasmine from plasminogen, fibrinolytic enzyme, and the substance is effective for remedying various thrombus and raise the effect of carcinostatic drugs. 3.6.77 as 065974 (3pp69)

TANI/ ★ D16 12951B/07 ★J5 4002-397

L-Serine prodn. - by culturing Arthrobacter microorganism in medium contg. methanol and glycine, pref. using glucose carbon source

TANI Y 02.06.77-JA-063946

B05 E16 (09.01.79) C12d-13/06

L-serine is produced by culturing microorganism Arthrobacter that may assimilate methanol to give L-serine from glycine into culture medium contg. glycine and > 1.5 g/dl of methanol. Pref. >1.5 g/dl glucose is further contained as carbon source. L-serine may be used for pharmaceuticals.

As example of Arthrobacter genus of microorganism may be cited e.g. Arthrobacter globiformis SK200 (FERM-P 4073). Addn. of glucose to culture medium greatly improves yield of L-serine. Addn. of >250 mg/dl of folic acid as organic micro-nutrients further improves yield. Culture may be carried out on normal condition e.g. on aerophilic condition at pH 4-8 and 25-37°C. 2.6.77 as 063946 (2pp69)

QPPP ★ D16 12953B/07 ★J5 4002-400

Prodn. of vinegar having high acidity - from seed vinegar, nutrients for acetic acid bacteria, alcohol etc. by submerged fermentation

Q.P. CORP (QPJO- TOSH- HEIN-) 09.06.77-JA-067322

(09.01.79) C12d-01/02 C12j-01/04

The method to prepare edible vinegar through semi-continuous submerged fermenting method by aerating in the 'moromi' contg. alcohol, nutrients for acetic acid bacteria and seed vinegar, is characterised by controlling the total concn. (the sum of acidity and alcohol content) of the 'moromi' at the start of each fermenting cycle so that it is not higher than that of the preceding cycle by above 0.4 pref. by above 0.3 and in the case that the total concn. at the start of a cycle is higher than that of the preceding cycle by above 0.1 so that the total concn. in > 3 pref. 5 successive cycles is not higher than that of each preceding cycle by above 0.1 and thus taming the acetic acid bacteria to high acidity gradually.

Edible vinegar of high acidity partic. > 13% acidity can be prepd. stably. 9.6.77 as 067322 (7pp5)

MITN ★ D16 13114B/07 ★J5 4003-100
RNA extraction from bacterium suspensions - using metal cations of valency at least two
MITSUBISHI GAS CHEM IND 10.06.77-JA-068469
B04 (11.01.79) C07g-17

Ribonucleic acid (RNA) is extracted selectively from bacterium suspension by heating in the presence of $>$2-valent metal cations in slight acid or slight alkaline conditions. The bacterium concns. of the bacterium suspensions are pref. $<$20 (5-15)%. Pref. metal cations (which improve the selective extraction of RNA) include, e.g. magnesium, calcium, cobalt, zinc, tin, barium ions, etc., esp. magnesium sulphate, magnesium chloride, calcium chloride, zinc sulphate.

RNA is extracted selectively at high extraction rates. After extraction of RNA, the residual bacteria are removed easily. 10.6.77 as 068469 (6pp136)

SHOW- ★ D16 13116B/07 ★J5 4003-104
Lowering the pour and cloud points of naphthenic lubricating oil - by removing high melting material by culturing an organism which feeds on it
SHOWA SEKIYU KK 08.06.77-JA-066778
H07 (11.01.79) C10m-01

Naphthenic base lubricating oil oontg. high m.pt. matters is added to aq. culture soln. and special aerobic organism (e.g. candida, debaryomyces, torulopsis, saccaromyces, hansenula, endomycopsis, trichosporon, pichia) is cultivated utilising the high m.pt. matters as the carbonaceous cultivation source. Pour and cloud pts. of the naphthenic base lubricating oil are lowered to $<$ 0°C.

An example of aq. culture soln. is NH_4Cl 3.5g, $Na_2HPO_4 \cdot 12H_2O$ 1.5g, KH_2PO_4 3.5g, $MgSO_4 \cdot 7H_2O$ 0.5g, yeast extract 0.2g, water 1 litre, pref. at pH 4.5-7 and 25-35°C for 50-165 hrs. 8.6.77 as 066778 (4pp170)

TAKE ★ D16 13436B/07 ★J5 4004-704
Rearing bed for paddy rice seedlings - in which polysaccharide gel contg. beta-1,3 glucoside linkages in floated on water
TAKEDA CHEMICAL IND KK (KUBI) 06.06.77-JA-066104
A97 C03 P13 (D17) (13.01.79) A01g-09/10 C05f-11

Rearing bed for paddy rice seedlings is claimed in which a gel of polysaccharide extracted from red algae and/or heat coagulative polysaccharide contg. as major component β-1,3-glucoside linkages, is floated on water

Paddy rice seedlings free from soil are obtd. enabling simplified transplanting.

As heat-coagulative polysaccharide there can be used those obtd. by culturing microorganism belonging to the genus of Alcaligenes and Agrobacterium (FERM-P 1167, FERM-P 1166, FERM-P 1168). Gelation of the heat-coagulative polysaccharide is conducted by heating a suspension of the polysaccharide at $>$60°C; by heating the suspension of polysaccharide at 50-80°C and cooling at $<$40°C by dissolving the polysaccharide in an aq. soln. of NaOH, KOH or $Ba(OH)_2$ and then neutralising with acid.

Gelation of the polysaccharide derived from red algae is conducted by heating a mixt. of water and the polysaccharide at 60-90°C and then cooling to room temp. Rearing is conducted by sowing un-hulled rice on a gel, and after sprouting, floating the gel on water. 6.6.77 as 066104 (5pp108)

TAKE ★ D16 13437B/07 ★J5 4004-706
Rearing bed for paddy rice seedlings - includes gel of polysaccharide contg. beta-1,3 glucoside linkages
TAKEDA CHEMICAL IND KK (KUBI) 14.06.77-JA-070821
A97 C03 P13 (D17) (13.01.79) A01g-09/10 C05f-11

Rearing bed for paddy rice seedlings comprises a gel of heat coagulative polysaccharide contg. as major component β-1,3-glucoside linkages and/or polysaccharide extracted from marine algae and aid material.

Paddy rice seedlings free from soil, are obtd. enabling simplified transplanting.

As the heat-coagulative polysaccharide there can be used those obtd. by culturing microorganism belonging to the genus of Alcaligenes and Agrobacterium (FERM-P 1167, 1166, 1168). Gelation of the heat-coagulative polysaccharide is conducted by heating a suspension of polysaccharide [illegible] suspension of polysaccharide at 50-80°C and cooling to $<$40°C. Gelation of the polysaccharide derived from marine algae is conducted by heating a mixt. of water and the polysaccharide at 60-90°C and then cooling to room temp.

As aid materials, there are used those having suitable strength and having a plate-like form. The gel is formed on the aid material, the unhulled rice is sown thereon after sprouting, the resulting gel is floated on water. 14.6.77 as 070821 (5pp108)

HITB D16 04745Y/03 =J7 9000-997
Glutathione prepd. by culturing a Candida or Pichia yeast - in a medium contg. L-cystine
HITACHI CHEMICAL KK 26.05.75-JA-062741
*B05 E16 (18.01.79) *J51139-685 C12d-13/06*

A yeast belonging to genera Candida or Pichia is cultivated in a nutrient medium contg. L-cystine and glutathione is recovered from the cultured cells. The nutrient medium may contains carbon sources (e.g. glucose, fructose, sucrose, maltose, starch hydrolysate, glycerin, ethanol, acetic acid, citric acid, molasses, etc.) nitrogen sources (e.g. ammonium sulphate, ammonium chloride, ammonium phosphate, urea) and inorganic salts (e.g. potassium phosphate, magnesium sulphate, manganese sulphate, etc)

Corn steep liquor, yeast extract, meant extract, soybean meal and peptone may also be used. L-cystine is added to enhance glutathione level in the yeast cells. The cultivation is carried out at 20-40°C under aerobic conditions. The initial pH of the nutrient medium should be adjusted to 3-8. 26.5.75 as 062741 C12d-13/06 (18.1.79) HITACHI CHEMICAL KK (4pp)(J51139685)

NIKM D16 76954T/48 =J7 9000-998
Antibiotic espinomycin a prodn - by culturing a streptomyces microorganism
NIKKEN KAGAKU KK (NIKK) 24.03.71-JA-017453
*B04 (18.01.79) *J47025-384 +A61k-31/71 C07h-17/08 C12d-09/14 C12d-13*

Method for producing novel antibiotic complex of espinomycin A_1, espinomycin A_2 and espinomycin A_3 comprises culturing an espinomycin A-producing microorganism of genus Streptomyces under aerobic conditions and recovering from the culture medium espinomycin A.

The microorganism used is Streptomyces fungicidicum var. espinomyceticus, FERM-P No. 351. Cultivation is at 24-30°C for 2-4 days. 24.3.71 as 017453 C12d-13/00, 9/14; C07h-17/08; A61k-31/71 (18.1.79) NIKKEN CHEMICALS, CO., LTD. (11pp)(J47025384)

HITB D16 18520Y/11 =J7 9000-999
Antitumour protein substance VI-7501 - obtd. from Streptomyces and Actinomyces cultures by gel filtration
HITACHI CHEMICAL KK 03.09.75-JA-106613
*A97 B04 (18.01.79) *DT2639-410 A61k-37/02 C07g-11 C12d-09/14*

New biologically active substance (VI-7501) is obtd. by cultivating a culture of a Streptomyces or Actinomyces species in a nutrient medium for 24-60 hrs. at 28-29°C. and recovering the fraction of mol. wt. 1.5×10^4 to 3.5×10^4 from the fermentation liq. the cell walls and the cell bodies by gel filtration.

VI-7501 is soluble in water and insoluble in (m)ethanol acetone, ethyl acetate, benzene and chloroform. It gives a positive reaction with ninhydrin or fluorescamine and a negative reaction with anthrone.

VI-7501 has succinic acid dehydrogenase inhibiting activity but displays practically no antimicrobial activity. It has antitumour activity, and can be used for the treatment of tumours and luekaemias in humans, for which purpose it is usually administered parenterally, pref. subctaneously or intravenously. In an example, VI-7501 is isolated from a culture of Streptomyces griseous IMF-1125 (ATCC 3326). 3.9.75 as 106613 C12d-9/14; A61k-37/02; C07g-11/00 (18.1.79) HITACHI CHEMICAL KK (15pp)(J52031891)

BUTT= D16 90971X/49 =SU-599-790
Spirits prodn. from milk - by fermenting milk freed of proteins, removing the ethanol produced, adding it to the starting material (and diluting)
BUTTER CHEESE IND 16.05.75-SU-136314
*(30.03.78) *DT2621-527 C12g-03/06 +A23c-21*

Strong alcoholic drink is prepd. from whey by removing all proteins from whey, e.g. by coagulation, adding 15-20 wt.% microbial fermentation culture, contg. Torulopsis sphaerica and/or Candida pseudotropialis var. lactosa 85 strains, and fermenting mixt. The alcohol is then removed and fractionally distilled. To improve the biological activity and the nutrien value of the drink, it is treated with 5-10 wt.% of fat-free milk and diluted with a purified whey (1:1-1:2 wt. ratio). The mixt. after addn. of milk is held for 20-60 mins. at 30°C.

Antonov, S.F., Krasheninin, P.F., Bakdanov, V.M. et al
Bul. 12/30.3.78. 16.5.75 as 136314 (2pp938)

UMEA= ★ D16 13639B/07 ★SU-599-793
Dietary meat paste - contg. beef and milk prods., sunflower oil, cornflour, onion and common salt
UKR MEAT DAIRY IND 26.01.77-SU-447607
(D13) (30.03.78) A23l-01/31

The meat paste for infants and persons on diet contain (in wt.%) beef subproducts 50-70, butter 2-10, plain milk 20-40, dried skimmed milk 1-5, sunflower oil 0.5-3.0, cornflour 2-4, onions 2-6, and NaCl 0.4-1.0.

This is the optimal nutrient value compsn. for infants and the sick. It contains balanced amino-acid concn. and vitamin B complex.

Starchevoi, A.N., Klepach, L.A., Pshenichnaya, E.P. et al. Bul. 12/30.3.78. 20.1.77 as 447607 (2pp70)

AKMI= ★ D16 13821B/07 ★SU-600-170
Mould fungus, e.g. Aspergillus niger strain, culturing - by forming fungal growth on porous base above nutrient using spray contg. fungal spores and then bathing it with nutrient
AS KAZA MICROBIOL 23.11.76-SU-426026
(28.03.78) C12b-01/04 C12d-13/10

Mould fungus, e.g. Aspergillus niger strain 355, is cultured to obtain enzymatic prepns. To increase the yield of enzymes from culture medium and to accelerate the process a porous plate is placed above the nutrient with the layer of air separating the plate from the nutrient. The nutrient medium contg. fungal spores is sprayed onto the surface of the plate. The process is contained until the mould in the form of the filamentous spongy layer is formed on the surface of the base plate. The plate is then bathed with the nutrient to accumulate enzymes in the latter which are then sepd. by knwon method.

Goncharov, M.D., Goncharova, E.M. Popova, T.K. et al
Bul. 12/30.3.78. 23.11.76 as 426026 (2pp938)

FERM= ★ D16 13822B/07 ★SU-600-171
Yeast prodn. for use in alcoholic fermentation - includes addn. of conc. wort during final stage of fermentation to increase yeast activity
FERMENTATION PROD 23.06.76-SU-378125
(24.04.78) C12b-01/08

Yeast culture, useful in alcoholic fermentation of wort, is obtd. by introducing yeast into the wort, which is pasteurised, cooled and acidified with sulphuric acid, and incubating the mixt. The activity of the yeast is increased and the fermentation process is accelerated if during the final stage of fermentation the nutrient (solid content of 5.6-6.0°Be') is treated with 10 vol.% saccharified and pasteurised wort (17.0-18.0°Be'solids, and the fermentation process continued for a further 2-2.5 hrs.

The process gives yeast biomass used in alcohol prod. as a starter.

Nalivaiko, V.A., Yarovenko, V.L., Khvalov, Yu. K.
Bul. 12/30.3.78. 23.6.76 as 378125 (3pp938)

LEEN= ★ D16 13824B/07 ★SU-600-173
Microbiological prodn. of citric acid - using Aspergillus niger producer strain and aeration of carbohydrate-contg. medium in presence of negative air ions
LENGD ENG CONS INST (VYBO=) 15.12.76-SU-432221
B05 C03 E17 (04.04.78) C12d-01/04

Microbiological prepn. of citric acid is useful in chemical, medical, veterinary and agriculture ind. It includes fermentation of carbohydrate based soln. with acid producing strain of Aspergillus niger in aerobic conditions.

The yield of citric acid is increased and the fermentation process is accelerated if the aeration is conducted with air saturated with negative air ions at 10^4-10^7 cm^3/sec.

Spiridonov, V.V., Zuev, N.I., Mironov, A.M.et al.
Bul. 12/30.3.78. 15.12.76 as 432221 (3pp938)

MOMA= ★ D16 13827B/07 ★SU-600-176
Low cost high quality sherry prodn. - includes sepn. of pasteurised fermented prod. into two streams for further processing to obtain different sherry grades
MOSC MAGARACH (FOOD=) 26.11.76-SU-423978
(28.03.78) C12g-01/02

Sherry is made from a wine base by sepg. part of the base, fermenting it with yeast, and then re-mixing it with the remaining wine base. The mixt. is then sherried and the resulting sherry wine is divided into two portions. Each portion is then independently blended, aged, filtered, and heat-treated and brought to the desired condition. Each prod. is then divided again into two portions, one of which is bottled and the other further aged to produce a higher quality sherry.

The method ensures good quality sherries at reduced cost are obtd. The different types of sherry are made from one sherried wine prod.

Saenko, N.F., Trofimchenko, A.V., Sarishvili, N.G. et al. Bul. 12/30.3.78. 26.11.76 as 423978 (2pp314)

MAGA= ★ D16 13828B/07 ★SU-600-177
Grapes and berries crusher - features two rollers with cycloidal teeth and hypocycloidal spaces
MAGARACH 01.12.76-SU-425339
P41 (20.04.78) B02c-04/08 C12g-01/02

The grape and berry crusher reduces the over-attrition of both the berries and the combs, and thus improves the product. The teeth of the rollers have cycloidal profile, for crushing the berries in the nip of the rollers, and the resulting pulp drops into the collector.

When it is necessary to crush as well as to separate the cluster then the flap is set at an angle for diverting the pulp to the comb separator, followed by discharge to the collector of the mashed berries using the auger.

Zhdanovich, G.A., Emelyanov, V.D., Eremin, P.V. et al
Bul. 12/30.3.78. 1.12.76 as 425339 (3pp89)

UVIN= ★ D16 13829B/07 ★SU-600-178
Wine maturing unit - has two tanks for heat treatment and cold holding connected to oxygen source and heat exchanger
UKR VINE GROWING 14.12.76-SU-429620
(20.04.78) C12g-01/02

The unit for maturing wine accelerates the process, and thus improves the product. It features a vertical tank for heat treatment and a tank for holding in cooled state, while its bottom is connected to the lower end of the heat treatment tank. The tops of the tanks are linked to oxygen feeder and to a heat exchanger.

The opening of the valves ensures that the tanks are filled with the wine material up to the lower level of the oxygen feeder. After closing the bottom valve, the heat exchanger is turned on for raising the temp. of the tank. As a result of heating, the expansion causes an overflow to the cool tank with the warm wine material passing the top heat exchanger as well as being saturated with oxygen before entering the top of the cool tank. Different types of wine material demand various periods for holding in heated and cooled states, the requirement met by mounting tanks with a ratio of volumes 1:1 to 1:5.

Nilov, V.V., Molodchenko, A.F., Manzienko, Yu. F.
Bul. 12/30.3.78. 14.12.76 as 429620 (3pp89)

DAIR= ★ D16 13830B/07 ★SU-600-179
Streptococcus lactis 220 strain - used as test-culture for determination of lysis inducing lactic flora streptococci
DAIRY IND RES INST 19.11.76-SU-421973
(28.03.78) A23c-09/12 C12k-01/02

Streptococcus lactis 220 strain is used as a test-culture for the determn. of virulent and normal bacteriophages of mesophylic lactic flora streptococci. The above strain is described as new. It can be used to determine wide spectrum lysis producing microorganisms as nearly all phages can produce lysis of the strain.

The strain was sepd. from soured cream and cultured on fat-free sterile milk hydrolysate for 5-6 hrs.

ctivity.
annikova, L.A., Mytnik, L.G., Zadoyana, S.B. Bul. 12/
0.3.78. 19.11.76 as 421973 (3pp938)

JALC= ★ D16 13831B/07 ★SU -600-180

richosporon cutaneum yeast strain determn. - includes culturing nixed yeast strain sample in aq. medium contg. lactose, urea, agar, mineral salts and vitamin(s)

UKR ALCOHOL LIQUER 08.04.76-SU-345082

(05.04.78) C12k-01/06

Nutrient for quantitative determination of Trichosporon cutaneum yeast strains in a mixed yeast culture contains lactose, agar, urea, mineral salts and vitamins in water for more sensitive and accurate evaluation.

The culture medium comprises (in g/l): lactose 3.0-20.0, urea, 0.2-0.5; disodium phosphate 0.36-1.8; monopotassium phosphate 0.64-3.2; magnesium sulphate 0.2-0.6; sodium chloride 0.1-0.6; vitamin B, 0.0001-0.003; agar 20.0-40.0; and tap water.

Ilina, L.D., Evniskaya, G.S., Sitnik, N.G. Bul. 12/30.3.78. 8.4.76 as 345082 (3pp938)

LVEP= ★ D16 13832B/07 ★SU -600-181

Nutrient medium for culturing haemophilic bacteria - is prepd. using blood which is previously haemolysed with glycerine

LVOV EPIDEMIOLOGY 22.11.76-SU-421536

(28.03.78) C12k-01/06

The nutrient medium is obtd. by melting a nutrient agar, sterilising, cooling and adding blood. The blood is initially haemolysed with 10-20 vol.% glycerine. The method is simple and improves the growth props. of the medium.

Sheep or human sterile or non-sterile defilrinated
blood is used. If sterile blood is used, the amt. of glycer-
in is pref. 10 vol.%; if non-sterile blood is used the amt.
is pref. 20 vol.% with ageing at 40°C. for 5-10 days be-
fore use. The treated blood may opt. be stored for 2-3
months at 4°C. before use.

Kolotilova, L.V., Zargaryan, O.P. Bul. 12/30.3.78. 22.11.76 as 421536 (2pp314)

HEAT= ★ D16 13892B/07 ★SU -600-360

Dehydrator for highly thermo:labile fluids and pastes - has chamber on elastic supports, with lower part in form of neck with siren in it

HEAT MASS EXCHANGE 29.10.74-SU-071698

J08 Q76 (06.04.78) F26b-05

The dehydrator comprises a chamber with capillary-por-
ous filler inside it e.g. in form of fabric wicks, and with
vibration generator outside. It may be used for micro-
biological materials.

To intensify the process, the chamber is fitted on elast-
ic supports and its lower part is in the form of a neck,
along the axis of which is fitted a sonic siren. The filler
is about the perimeter of the neck, corming a central cav-
ity, dia. of which is less than that of the siren.

Kuts, P.S., Kabaldin, G.S., Samsonyuk, V.K. et al. Bul. 12/30.3.78. 29.10.74 as 071698 (4pp18)

HEDE/ ★ D16 B/07 ★SW 7707-720

Disposable device for routine microbiological analysis - has two superimposed modules of different heights, with enclosed cavity divided by parallel walls into series of analysis chambers

HEDEN C G 04.07.77-SW-007720

J04 (29.01.79) C12k-01/04

The device inoludes two superimposed thin-walled elongat-
ed modules, each having a horizontal upper surface supp-
orted by roughly vertical side walls. One module is taller
than the other so that a space is formed between their upp-
er surfaces. Adhesive tape closes the modules at the bott-
om.

The underside of the horizontal upper surface of the upp
-er module has vertical transverse walls which are accom
-modated in grooves in the upper surface of the lower mod
-ule. The walls define a series of mutually isolated spaces
in which a series of analyses can be performed. 4.7.77 as
007720 (-pp958)

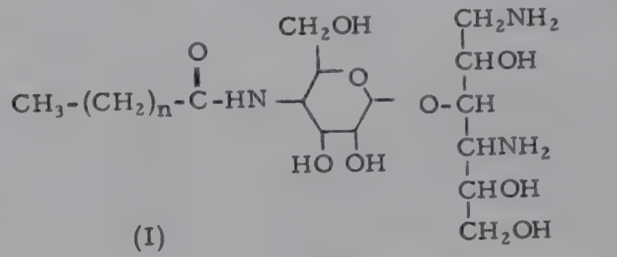
AMCY D16 82848X/44 =US RE29-903

Antibiotics from Streptoverticullium netropsis - useful for controlling bacterial infections in mammals

AMERICAN CYANAMID CO 19.03.75-US-559998 (23.01.74-US-436008)

*B03 (06.02.79) *US3987-029 C07h-15/12*

The antibiotic free bases of formula (I) (where n is 6 or 10) and their pharmaceutically acceptable acid addn. salts are claimed. Cpds. (I) can be prepd. by alkanoylating a cpd. (II) of formula (I. where $-NH_2$ replaces $-NH-C(O)-(CH_2)_n-CH_3$).



(I)

Cpd. (II) is itself an antibiotic, designated AM31a, obtd. by culturing Streptoverticillium netropsis NRLL 5774. Cpds. (I) and (II) exhibit broad spectrum antibacterial activity. 22.2.77 as 770481 Reissue of 3987029 (+19.3.75-US-559998)(12pp927)

KABI D16 48855Y/28 =US 4138-287

Isolation of heptatitis B virus for vaccine prepn. - by adsorption on a sulphated carbohydrate, such as dextran sulphate

KABI AB 18.03.76-SW-003386

*A96 B04 (A11) (06.02.79) *BE-852-416 A61k-39/12 C12k-07*

Hepatitis B virus (detectable as its surface antigen
HB_sAg) is sepd. from crude biological starting material
by adsorbing it onto a water-insol. cross-link sulphated
polysaccharide agarose conjugate, porous gel. An aq.
soln. which is inert towards the virus and adsorbent is
then used to desorb the virus.

Pref. starting material is blood, blood plasma, blood
plasma fractions, blood serum, urine or faeces. Pref.
elutant is an aq. buffer contg. 0.5-2 moles/l NaCl. The
adsorbent is e.g. agarose dextran sulphate, agarose
heparin. The isolated virus is obtd. in a purified state
and can be used to prepare a vaccine. 15.3.77 as 777670
(4pp945)

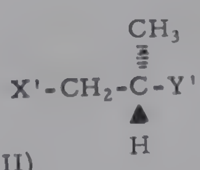
HOFF D16 85072Y/48 =US 4138-289

Optically active vitamin E and vitamin K1 intermediates prodn. - by microbiological stereospecific reduction of olefins (NL 14.11.77)

HOFFMANN-LA ROCHE INC 18.02.77-CH-002064 (10.05.76-OE-003407)

*B05 E14 (B03 E13) (06.02.79) *DT2720-775 C12d-13/02*

Prodn. of tert. optically active aliphatic cpd. of formula
(II) comprises fermentatively hydrogenating a cpd. of for-
mula $X-CH-C(CH_3)Y$ (I), with an aero-
bic or facultative microorganism cap-
able of hydrogenating a double bond
situated in an aliphatic chain between
a CH and methylated CH moiety in an
aq. medium to obtain said tertiary
optically active aliphatic cpd. as a
fermentation prod.



$$X'-CH_2-\underset{H}{\overset{CH_3}{C}}-Y'$$

(II)

In the formulae, X' and Y' are dif-
ferent functional gps., one is carboxy, esterified carboxy
and the other is carboxy, hydroxymethyl, esterified car-
boxy or etherified or esterified hydroxymethyl; wherein
the carboxy and hydroxymethyl gps. are lactonised with
one another with the formation of the gp. $-CO-O-CH_2-$ or
$-CH_2-O-CO-$, and wherein when X' is alkyl-etherified hy-
droxymethyl, Y' is also hydroxymethyl or esterified hyd-
roxymethyl. X is carboxy, esterified carboxy, hydroxy-
methyl etherified or esterified hydroxymethyl and Y is
carboxy, formyl, hydroxymethyl, esterified carboxy, ace-
talised formyl or therified or esterified hydroxymethyl; X
and Y are different functional gps.; when X is hydroxyme-
thyl or esterified hydroxymethyl, Y is carboxy, formyl or
acetalised formyl and when Y is hydroxymethyl or ester-
ified hydroxymethyl, X is esterified carboxy or alkyl-
etherified hydroxymethyl. 2.5.77 as 793093.

AGRO- D16 10279A/06 =US 4138-291

Selecting bacterial strains to produce poly:hydroxy-butyric acid - which is used to give mouldings etc. which are biodegradable

AGROFERM AG 06.08.76-CH-010104

*A35 E17 (A23) (06.02.79) *BE-857-493 C12d-01/02*

Selected bacterial strains are obtd. under any growth conditions which can convert an assimilable carbon source of carbohydrate, methanol, ethanol, glycerin, carbon dioxide or the spent lyes from caprolactam synthesis contg. mono- and di-carboxylic acid into poly-(D-3-hydroxybutyric acid). (I).

(I)-producing strains are selected by growth on agar nutrient medium, desired colonies adopting a milky-white appearance having a dome-shaped elevation above agar surface or attaining large dimensions. Strains are bred on constantly increasing concns. of carbon source and subjected at least once to mutagenic action to obtain desired strains. Pref. selection is made from strains having the lowest specific gravity under conditions hindering or not helping product synthesis, or from strains having the strongest colouring after brief flooding with Sudan black B soln.

Prod. is produced on large scale. Can be processed to mfr. structures and moulded bodies such as biodegradable threads, fibres and films. 8.8.77 as 822756 (7pp931)

TANA D16 04663A/03 =US 4138-292

Immobilised catalytically active enzyme or microorganism - enclosed in gel matrix of sulphonated polysaccharide contg. ions, amine or solvent

TANABE PHARMACEUTICAL KK 02.07.76-JA-079346

*A97 B04 (A11) (06.02.79) *DT2728-622 C07g-07/02 +C12b-01*

Immobilised catalytically active substance comprises an enzyme or microorganism or a water-insol., hydrophilic carrier bound enzyme or microorganism entrapped within the gel matrix of a sulphated polysaccharide (sulphate moiety content in the molecule being > 10 w/w %) contg. an ammonium ion, a metal ion of atomic wt. > 24, a water-soluble organic amine or a water-miscible organic solvent.

The compsn. shows a high level of catalytic activity for a long period of time. The gel matrix has sufficient stability to prevent enzyme or microorganism leakage and resists compacting or deformation. The sulphated polysaccharide is pref. carrageenan, furcelleran or a cellulose sulphate contg. 12.62 w/w% sulphate moiety. 16.6.77 as 807259 (19pp945)

CALY ★ D16 14085B/07 ★US 4138-383

Aq. emulsion polymerisation compsn. - for forming small polymeric beads useful for binding to proteins as labels etc.

CALIFORNIA INST OF TECHN 24.11.75-US-634935

A96 B04 (A18) (06.02.79) C08f-02/18 C08f-04/34

Aq. emulsion polymerisation compsn. contains 0.003-0.1 % free-radical catalyst, a surfactant and ⩽ 35% of an ethylenically unsatd. monomer mixt. The mixt. contains 25-50% water-soluble monoethylenically unsatd. monomer substd. by covalently bound COOH, NH_2 or OH; 5-20% polyunsatd. cross-linking agent, and 40-70% ⩾ 1 sparingly water-soluble, ethylenically unsatd., second monomer having hydrophobic characteristics.

Compsn. is used for forming a suspension of discrete polymeric beads of dia. < 3500 Å. The beads are small, round, biocompatible microspheres that can be covalently bound to proteins to label a specific receptor site on a cell membrane. Esp. useful in lectin, antibody and sugar derived forms.

Useful in the isolation of specific membrane fragments, or in biochemical mapping of a membrane to assess surface receptors that can redistribute in the plane of the membrane in response to a matrix contg. rigidly displayed ligands (useful for studying oncogenic transformation of cells). When tagged with fluorescent dye or radioactive molecules, the particles may be markers for assays, etc.

In an example, polymerisation of a mixt. of hydroxyethyl methacrylate, methacrylic acid, ethylene glycol dimethacrylate, Na dodecylsulphate and NH_4 persulphate at 98°C with agitation gave microspheres. 24.11.75 as 634935 (9pp1248)

FARB D16 38239X/21 #US 4138-479

Phenol and water extraction products from yeast cell-wal components - with tumour inhibiting activity

BAYER AG 05.11.74-DT-452303 (07.11.75-US-629927)

*B04 (06.02.79) *DT2452-303 +A61k-31/70 A61k-39*

Water soluble immunopotentiating agents are prepd. from components of yeast cell walls by subjecting yeast cell wall material (I), proteolysed (I) or a carbohydrate (I) to extraction with water and phenol and then isolating the prod.

Pref. low mol. wt. sugars amine acids, peptides, lipids and yeast metabolites are removed from the aq. phase by gel filtration, ultrafiltration or dialysis before the isolation. 12.9.77 as 832300 (9pp974)

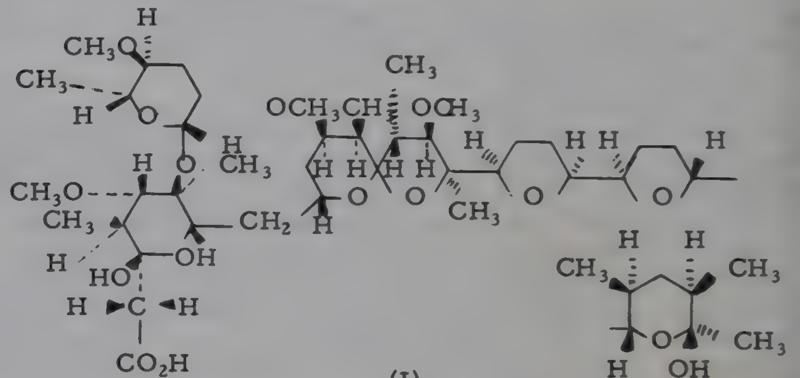
AMCY D16 02059A/02 =US 4138-481

Anticoccidial antibiotic BL 580 delta - prepd. by fermentation o Streptomyces hygroscopicus NRRL 8180

AMERICAN CYANAMID CO 04.01.77-US-756659 (30.06.76-US-701395)

*B03 C02 (06.02.79) *BE-856-314 A61k-31/71 +C07h-07/06*

Antibiotic BL580 Δ is of formula (I)



(I)

(I) is obtd. by cultivation under controlled conditions of a new strain of Streptomyces hygroscopicus. (I) is an anticoccidial agent, used esp. in the treatment of poultry, in an amt. of 125-250 ppm in the poultry diet. 4.1.77 as 756659 (8pp918)

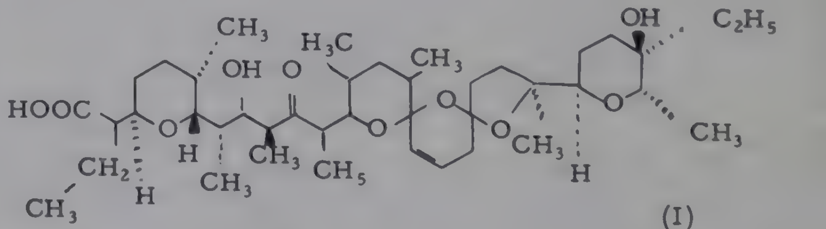
KAKE D16 54396A/30 #US 4138-496

Anticoccidiosis compsn. contg. antibiotic SY/1 - prepd. by cultivating Streptomyces albus FERM-P 419

KAKEN CHEM KK 02.12.76-JA-144025 (21.06.77-US-808611)

*B03 C02 (06.02.79) *J53069-834 A61k-31/35 +C07d-309/06*

Novel substance SY-1 is of formula (I) or its pharmaceutically acceptable esters or salts.



(I)

Pref. cpds. are the lower alkyl ester or alkali(ne earth metal salt of (I). Anticoccidal compsns. comprise a poutry feed contg. 0.003-0.06 wt. %. (I). Compsns. for impro ing feed utilisation in ruminants comprise the feedstuff with 0.05-5.0 mg/kg/day per animal of (I). 21.6.77 as 808611 (4pp974)

PABS ★ D16 14121B/07 ★US 4138-499

Low carbohydrate beer prodn. - without the use of enzymes

PABST BREWING CO 14.07.77-US-816670 (10.11.76-US-740437)

(06.02.79) C12c-11/04

Low dextrin and low carbohydrate beer of reduced calorie content is prepd. by fermenting an all grain wort, or a wort obtd. from a mixt. contg. ⩽ 30 wt. % non-melt grain, with brewers yeast, until most of the fermentable sugars have been consumed, then adding a soln. of readil fermented sugars having the same Plato value as the initial wort. The vol. ratio of wort:sugar soln. is 30-60:70-

40.

The fermentation is continued until a real degree of fermentation of > 80% is obtd. The prod. contains ⩽ 96 cals. per 12 fluid ozs. and ⩽ 3.2 wt. % alcohol.

In an example, a wort was prepd. from barley mash of 7.6-7.7°P. On the 4th day of fermentation, an equal vol. of 17.6-7.7°P dextrose soln. was added. After 4-5 days further fermentation, the prod. contained 3.2 wt. % alcohol. 14.7.77 as 816670 (4pp955)

See Also

D13 DS 2364333
D13 J7 9001000
D13 US 4138498
D15 J5 4004283
D17 SU 600172
D21 US 4138476
D13 GB 1540607
D13 US 599787
D15 J5 4002282
D15 US 413833
D17 US 4138290
D13 J7 8043599
D13 SU 600175
D15 J5 4003802
D15 US 4138334
D21 J7 9000979

D17: SUGAR; STARCH

STAL ★ D17 12381B/07 ★EP -----820
Large granule starch sepn. from native starch - by fractionation of starch slurry through several hydrocyclone separators and recycle of some streams
STALEY A E MFG CO 04.08.77-US-822013
G05 (21.02.79) C08b-31 C13l-01
D/S: BE, DT, FR, GB, LU, NL.

(A) A large granule starch prod. is obtd. from a native starch having a wide range particle size distribution by (i) preparing an aq. slurry of the native starch; (ii) feeding the slurry to a first hydrocyclone separator to separate the granules into a first slurry (I) contg. larger size granules and a second slurry (II) also contg. starch granules; (iii) feeding slurry (I) into a second hydrocyclone separator to separate it further into a large granule stream (Ia) and a recirculation stream (Ib) having a starch particle size distribution the same as the initial aq. feed slurry; (iv) adding stream (Ib) to the initial aq. feed slurry being fed to the first hydrocyclone; (v) supplying slurry (II) to a third hydrocyclone separator to separate it further into a by-prod. stream (IIa) and a recirculation stream (IIb) having a starch particle size distribution the same as the initial aq. feed slurry; (vi) feeding stream (IIb) to the initial aq. feed slurry being fed to the first hydrocyclone; and (vii) collecting the large granule stream (Ia) from the second hydrocyclone.

(B) The same method is claimed for obtaining a granular starch from a parent starch, the granular starch having a more uniform and limited particle size distribution than the parent starch.

The large granular starch is used as a protective material for pressure-sensitive microencapsulated coatings, e.g. in carbonless copy paper.

The yield of usable starch particles recovered from the starch can be improved to > 40%, compared with 15-20% by prior art methods.
28.7.78 as 300210 (25pp914).
ISR: US3901725; US2702630; 1 Journal Reference.

ICIL D17 49711A/28 =GB 1540-556
Sepg. mannose from glucose and mannose contg. soln. - by passing through cation exchange resin then eluting
ICI AMERICAS INC 11.01.77-US-758397
*E13 (14.02.79) *BE-862-717 C13k-01/08 C13k-13*

Mannose is sepd. from an aq. soln. contg. glucose and mannose by contacting soln. with a bed of cation exchange resin in a salt form, and eluting resin with water to obtain mannose-rich eluate fraction.

Pref. cation exchange resin is strongly acid resin, in alkaline earth metal salt form esp. calcium. Solids content of aq. soln. contg. glucose and mannose is 10-70 wt. %. Glucose-rich fraction is recycled to an epimerisation reactor for further reaction to form mannose. Mannose-rich fraction may be further hydrogenated to form mannitol. Mannose is obtd. from ivory nut meal which has been hydrolysed.

Mannitol is used in the prepn. of pharmaceutical tablets in an economical process without associated production of sorbitol. 22.12.77 as 053452 (5pp931)

OKAM/ ★ D17 13327B/07 ★J5 4004-218
Desulphurising agent for molten pig iron or steel - comprising sugar slag from sugar refining and inorganic slag-forming, fluxing or refining cpds.
OKAMURA C 10.06.77-JA-076458
M24 (12.01.79) C21c-07/02

Agent comprises a main component of sugar slag derived from refining process and more than one of Mg, CaC_2, CaO, Na_2CO_3, $BaCO_3$, $CaCl_2$, $BaCl_2$, Na_3AlF_6, Al, Ca-Si, Si-Mn, Fe-Si and slag from their prodn. in amt. of <30 wt. %. Sugar content serves to shape the agent into powder or mass body. Agent is used at 0.5-30 Kg/ton of the molten pig iron or steel.

The sugar slag is a mixt. of lime for refining the sugar and carbon for decolouring and removing organic substances in the sugar, and consists of CaO 50-80%, C 5-30%, in addition to impurities of SiO_2 0-10%, MgO $<1.0\%$, Al_2O_3 + FeO $<1.0\%$, P+S $<0.07\%$ and K+Na $<1.0\%$. The sugar slag has a strong organic viscosity without using expensive caking agent. 10.6.77 as 076458 (4pp53)

KYUS- ★ D17 13521B/07 ★J7 9000-981
Treating waste salt water from ion-exchange resin regeneration - using charcoal which itself is regenerated by water or alkali
KYUSHU SEITO KK 08.08.66-JA-052045
(18.01.79) C13d-03

Method comprises treating the waste salt water with powdery or granular charcoal, recycling the treated salt water for the regeneration of anion-exchange resin, re-activating the charcoal by water or aq. soln. of alkali and re-using the charcoal for the treatment of waste salt water. The powdery or granular charcoal used can be low grade, e.g. spent carbone, etc.

Coloured substances adsorbed by the anion-exchange resin and desorbed into salt water is very effectively adsorbed by inexpensive charcoal, and most (3/4 to 4/5) of the salt water can be recovered as clear, re-usable soln. Resin is e.g. used for purificn. sugar syrup. 8.8.66 as 052045 C13d-3/00 (18.1.79) KYUSHU SEITO KK (7pp83)

SUGA= ★ D17 13649B/07 ★SU -599-824
Gas-liquid separator for sugar - with vortexing, decelerating and rotating conical shells in vacuum housing
SUGAR IND RES INST 08.07.74-SU-044406
(05.07.78) B01d-45/06

The separator comprises a housing with a conical shell in its upper part with an elliptical cover, a rotatable conical shell with blades coaxial within the housing, tangential inlets and exhaust lines.

To improve output there are two truncated cones with smaller ends facing each other, one having its larger end secured to the housing and the other with its larger end secured to the rotatable shell. There are vortex generators in the smaller ends of the cones, and rectangular windows in their larger ends.
Karaulov, N.E. Bul. 12/30.3.78. 8.7.74 as 044406 (4pp1358)

LEFO= ★ D17 13823B/07 ★SU -600-172
Prepn. of molasses for fermentation into citric acid - including addn. of methyl para-hydroxybenzoate to prevent infection of medium with fungal spores
LENGD FOOD IND INST 27.02.76-SU-331720
(D16) (05.04.78) C12d-01/04

Molasses are prepd. for fermenting into citric acid by: diluting with water, adjusting the pH, sterilising the soln. treating it with K ferrocyanide, adding methyl p-hydroxybenzoate (I), diluting with sterilised water to the desired concn. of sugar, cooling and adding nutrient salts.

Addn. of (I) improves the subsequent citric acid yield and suppresses Penicillium-type infection during the acid biosynthesis. Amt. of (I) added is pref. 20-80 mg. per l. of soln. An Asp. niger fungus is used to produce the citric acid.

Gorbataya, E.I., Fishkova, E.S., Goma, I.G. et al.
Bul. 12/30.3.78. 27.2.76 as 331720 (4pp314)

ZEPE/ ★ D17 14046B/07 ★US 4138-272

Fructose prodn. from xerophyte plants - without need for cooking step

ZEPEDA-CASTILLO E 15.11.77-US-851657
E13 (06.02.79) C13c-01 C13d-03/02 C13k-11

Fructose and fructose-rich syrups are obtd. from xerophyte plants by washing mixed leaf and core material, chopping into small pieces, extracting with an aq. extractant at 95-92°C to produce an enriched soln., and expressing the remaining extractant from the solid plant material. The extracted juices are mixed and allowed to settle and clarify.

The liq. phase of the mixed juice is acidulated to pH 3-4, allowed to stand 2-3 hrs. at 85°C to its b.pt. then neutralised, filtered and clarified, then heated to 100°C, and finally conc. by evapn. and pasteurised to give a syrup from which at least part of the fructose is crystallised.

The process produces a juice from which the sugar can be crystallised and which is usable for a variety of purposes. The solid material left can be used for cellulose prodn. 15.11.77 as 851657 (7pp955)

NOVO D17 63094Y/36 =US 4138-290

Isomerising glucose to fructose on a bed of glucose isomerase - immobilised and in particle form with specified bed expansion

NOVO LABORATORIES 22.04.76-US-679445
*E13 (D16) (06.02.79) *BE-853-760 +C12d-13/02*

Expanded bed isomerisation is utilised to convert glucose syrup to a glucose-fructose mixt. contg. ≯ 40 wt. % fructose w.r.t. mixt. by passing a 30-55 wt. % glucose-syrup at isomerising temp. and pH up through > 1 bed of a ce mass particulate form glucose isomerase prepn.

Glucose isomerase prpn. has uniform particle size of 150-2,500 microns at superficial linear velocity for syru of 0.5-15 m/h. Velocity and particle size are inversely related to create a bed expansion of 5-100% and plug flow by the syrup through the bed. Bed depth is sufficient to achieve desired fructose end-product. Pref. life of bed is extended by intermittently or continuously adding fresh enzyme having activity > 100 IGIC units/g.

High fructose syrups are sweeter than glucose syrups and act as sucrose substitutes. Disadvantage of low density of cell mass particles is overcome to yield optimum enzyme activity. 22.4.76 as 679445 (5pp934)

MOOC D17 77838Y/44 =US 4138-31

Wash liquor flow control in continuous washing of suspension - es of cellulose pulp to give required washing loss

MO OCH DOMSJO AB 14.04.76-SW-004431
*F09 J01 (06.02.79) *DT2716-139 D21c-09/02*

Dissolved impurities in aq. suspending liquors of washed fibrous suspensions are removed by exchanging impurity free liquor for the suspending liquor. Fibrous material the suspension is washed in suspending liquor, forming a washed suspension, the impurity-contg. liquor being with drawn.

The washed suspension is diluted by adding further liquor. The amt. of dissolved impurities in the washed sus pension is continuously determined by measuring the volumetric flow rate of the washed suspension, the liq. con tent of the washed suspension and the content of dissolve impurities in the liquor of the washed suspension. The amt. of wash liq. added is controlled to compensate for washing losses.

The process is applicable to fibrous cellulose pulp sus pensions, e.g. sulphate pulps, sulphite pulps and lignocellulosic pulps. 7.4.77 as 785399 (12pp1379)

See Also

D13 J5 400235 D15 DS 2757859 D16 J5 4004704
D16 J5 400706

D18: SKINS; HIDES; LEATHER; TOBACCO

BUNA ★ D18 11992B/07 ★DL-133-099

Aq. copolymer dispersion for treating leather - comprises a copolymer of mono- or di:carboxylic acid ester, vinyl monomers, unsatd. acids and unsatd. epoxy cpd.

CHEM WERK BUNA VEB 05.08.77-DL-200456
A97 (A13 A14) (06.12.78) C14c-11

Leather (-like) materials are treated with an aq. copolymer (I) dispersion contg. conventional adjuvanate the pH of the dispersion being adjusted to 7.5-10.5 pref. 7.5-8.5 prior to application. (I) contains reactive gps. in the side chain and comprises 35-96 pt. wt. esters of ethylenically unsatd. mono- or dicarboxylic acids with ≯ 12C alcohols pref. acrylates of 2-8C alcohols, 5-60 pt. wt. vinyl monomers e.g. (α-methyl)styrene, vinyl esters of satd. carboxylic acids and vinyl(idene) chloride, 1-15 pt. wt. 1-15 pt. wt. ethylenically unsatd. mono- or dicarboxylic acids e.g. (meth)acrylic acid, maleic acid or its hemi-ester and 0.3-15 pref. 1-5 pt. wt. epoxy contg. ethylenically unsatd. cpd. pref. glycidyl (meth)acrylate or alkyl glycidyl ether (I) contains epoxy and carboxy gps. in a ratio of 0.3-3 and has a characteristic K value of 90-120.

The copolymer crosslinks under mild conditions and has a good pot life. The leather has improved flex resistance with sufficient hardness. (I) may be used as a leather colour coating. 5.8.77 as 200456 (10pp952)

TURN- D18 57845S/36 =DS 2036-63

Leather softening apparatus

MASCHINENFABRIK TUR (TUR -) 23.07.70-DT-036636 (20.08.6
DT-942416)
*(08.02.79) *FR2059-021 C14b-01/40*

An addn. is made to patent 1942416 covering an installati intended mainly for the softening of leather in sheet form between two press platens facing each other. The skin is passed between these; one platen being fixed whilst the other is driven by means which periodically increase and reduce the gap between them. The starting height of the driven platen is controlled by hydraulic means operating so that when a predetermined pressure is reached, the platen is retracted.

The addn. makes it possible to vary the starting of the driven platen during working. The non-driven plate hangs on a piston in the pressure chamber of a cylinder and works against a repositioning, compression spring, and a control chamber with a hydraulic feed is connected to the pressure chamber of the non-driven platen. 23.7. as 036636 Add to 1942416 (4pp1045)

WING/ ★ D18 12089B/07 ★DS 2058-4

Filter insert for tobacco pipes and cigar and cigarette tips - cellulose etc., wound to give lengthways extending channels

WINGENDER B 27.11.70-DT-058438
E36 P15 (08.02.79) A24f-01/20

The Parent Patent describes filter and/or absorber inse for tobacco pipes and cigars and cigarette tips, contg. a absorbent binder from a silicic acid colloid. Novelty is that the filter insert is provided with lengthways running channels.

The improved filter has less resistance to suction. The speed of the smoke is thus reduced and its impact on the tongue and throat reduced. The insert is wound on its long axis and has improved absorbent capacity whilst the smoke has more opportunity for cooling. 27.11.70 as 058438 Add to 1782592 (2pp1045)

BOHT D18 18780Y/11 =DS 2606-420
Leather and animal skin processing into furs(SW140277)
BOHME DR T KG 18.02.76-DT-606420
*(08.02.79) *J52012-901 C14c-01 C14c-03 +C14c-13*

An effluent-free and low-pollution process for pickling and tanning pelts is described in which the pickling/tanning is effected with wet pelts in water-insol. organic solvents and the requisite chemicals added as aqs. solns. with the proviso that the total water content in the process is 4:1 w/w (based on dry pelt wt.) .

Using aqs. solns. of the chemicals, an appreciable shortening of the overall process time (compared, e.g., to DT 2532391) is achieved. 18.2.76 as 606420 (3pp922)

BOHT D18 90369Y/51 =DS 2625-436
Fur pickling and tanning - in inorganic solvents insoluble in water followed by neutralisation, centrifuging and conventional stuffing
BOHME DR T KG 05.06.76-DT-625436 (00.00.75-DT-532391)
*(08.02.79) *DT2625-436 +C14c-03 C14c-13*

The parent patent described the pickling, tanning and stuffing of pelts having a hide moisture content of 30-80 wt.% in water-insol. organic solvent (I).

In the present invention, the pickling and tanning (and, opt., neutralisation) is carried out in (I) but the stuffing only effected after (I) has been evapd. off or opt. after an intermediate drying stage.

This shortens treatment time, makes the appts. more efficiently used and neither yields effluents nor causes environmental pollution. 5.6.76 as 625436 Add to 2532391 (4pp922)

FARH ★ D18 12365B/07 ★EP -----776
Water vapour absorbent and permeable adhesive compsn. - contg. dispersed particles of swellable modified polymer, useful in prodn. of shoe uppers etc.
HOECHST AG (KALL) 11.08.77-DT-736147
A81 F06 G03 (21.02.79) C08l-101 C09j-03 D06m-17

D/S: BE, CH, DT, FR, GB, NL, SW.

Adhesive, which absorbs and is permeable to water vapour contains organic, water-insol. binder(s), opt. organic solvent and/or water and a hydrophilic polymeric additive, which is a finely-divided, swellable modified polymer, which pref. is min. 50 wt.% insol. in water. Particles of modified carbohydrate deriv(s)., esp. modified starch or cellulose ethers, are pref.

The adhesive, which can be of the wet, contact, heat-activated or solvent-activated type, is useful in the prodn. of coated textiles and natural and synthetic leathers, e.g. for outer clothing and shoe uppers, linings and insoles. 3.8.78 as 100588 (33pp016).

ISR: DT 1298876; DT1072767; NL7712778; FR1350900; DT969446; DT1196161.

NICN ★ D18 12672B/07 ★J5 4001-172
Tobacco filter contg. fibrous activated carbon - prepd. by heating polyacrylonitrile, pitch or lignin type fibre in air and carbonising or treating with active gas
NIPPON CARBON KK 06.06.77-JA-065706
A88 J01 P15 (A35 A97) (06.01.79) A24b-15/02 A24f-13/06

Polyacrylonitrile fibre, pitch fibre, lignin-poval fibre, etc. are treated at 100-300°C in air to obtain high polymer precursor and carbonised in inert gas, or the high polymer precursor is treated for a short time at ~ 800°C in active atmos. e.g. HCl, Cl_2, SO_2, SO_3, etc. and then activated at 850-950°C and atmosphere of steam or carbonic acid gas. The fibrous activated carbon is used in a combination with acetate fibre bundle, plastics, foamed sheet, etc.

As fibrous activated carbon is 10-20 times larger in surface area per unit weight than fine powdery activated carbon, the rates of removing tar and nicotine are much larger and the fluctuation of the characteristics of the filter is little. Gas permeation resistance of the filter can be controlled to 1/2 to 1/6 time that of common acetate filter. 6.6.77 as 065706 (4pp50)

See Also

D23 US 4133413

D2: DISINFECTANTS; DETERGENTS

D21 : DENTAL; TOILET PREPARATIONS

BEEC ★ D21 11912B/07 ★BE -869-644

Skin treating compsn. based on oil-in-water emulsion - contg. retinol acetate and nonionic surfactant

BEECHAM GROUP LTD 09.08.78-BE-869644

A96 E15 (09.02.79) A61k

The emulsion base comprises 20-40% oil, > 1% of a non-ionic emulsifier and retinal acetate in an amt. of 1,000-15,000 (3,000-6,900) international units/gm,

Compared with previous compsns. the particular formulation increases the effectiveness of the retinal acetate (Vit. A acetate) in increasing the thickness or body of the skin. 9. 8. 78 as 869644 (6pp597)

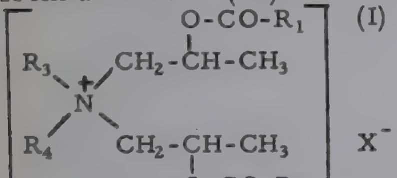
REWO D21 15062X/09 =DS 2430-140

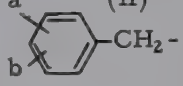
Cation-active, quaternary ammonium finishing agents - having improved low-temp stability

REWO CHEM FAB 24.06.74-DT-430140

*E16 F06 (E14) (08.02.79) *DT2430-140 C07c-93/18 D06m-13/46 D21h-03/12*

Bis-(2-acyloxypropyl)-ammonium salts of formula (I) (where R_1 and R_2 are each 15-21C alkyl(ene) gps. derived from a mixt. of (un)satd. fatty acids, R_3 is 1-4C alkyl or or a benzyl gp. of formula (II) (where a and b are each H or halogen). R_4 may be H, $-CH_2CH_2OH$, $-CH_2CH(OH)CH_3$ or R_3 and X is an anion) are claimed as finishing agents for textiles, paper and hair (opt. diluted).


(I)


(II)

They have outstanding cold resistance, have a lower vis-cosity than known products, are biodegradable and have a superior softening effect on textiles. 24.6.74 as 430140 (5pp922)

KAOS D21 21308W/13 =DS 2442-825

Toothpaste contg. anionic surfactants and sec. phosphates - to prevent formation of dextran deposits on teeth

KAO SOAP KK 14.09.73-JA-104192

*(08.02.79) *DT2442-825 A61k-07/24*

A toothpaste contains a combination of an anionic surfactant and a water-sol. sec. phosphate in which the former is an 8-22C carboxylic or sulph(on)ate having ⩾1 double bond in its hydrophobic gp.

Suitable surfactants include decenone acid, ricinolic acid, cis-9-hexadecenyl sulphate monoester salts (esp. Na/K) and suitable phosphates include Na_2HPO_4, K_2HPO_4.

This combination effectively removes dental plaque even where a toothpaste doesn't directly brush it away and helps to prevent its re-formation. 6. 9. 74 as 442825 (5pp922)

WIEL- ★ D21 12101B/07 ★DS 2828-304

Dental alloy of low gold content - also contains a small amount of titanium and opt. iridium and ruthenium

FA WIELAND T 28.06.78-DT-828304

M26 (08.02.79) C22c-05/02

Dental alloy has the compsn. 20-55% Au, 20-50% Pd, 15-30% Ag, 0-2% Pt, 0-2% Cu, 0-2% Fe, 0-5% Sn, 0-4% In and contains in addn. 0.05-0.5% Ti and pref. 0.05-0.5% Ir and Ru singly or together. For tooth-base which will be coated with porcelain.

The alloy is less costly due to a low Au content and exhibits a stable colour(discolouration of the porcelain layer is avoided). 28. 6. 78 as 828304 (2pp095)

BEEC D21 31930A/17 =GB 1540-384

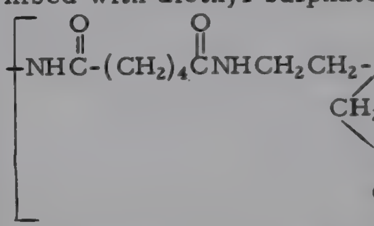
Conditioning shampoo compsn. - comprising amphoteric detergent as sole ionic detergent and cationic resin

BEECHAM INC 12.06.75-GB-025136

*A96 (A23) (14.02.79) *US4080-310 C11d-01/88 +C11d-03/37 C11d-10/02*

Aq. shampoo compsn. comprises (a) 5-50% w/w of amphoteric detergent (I) as sole ionic detergent; and (b) 0.5-30% w/w of cationic polymer (II) and has overal pH 3-9 (4-7).

Pref. (I) is N-alkyl-beta-amino(or imino)-propionate, an alkyl- amido- or sulpho-betain, an N-acyl sarcosinate or substd. imidazoline. (II) is pref. of formula (Ia) (where x is 40-60), or a copolymer of 40-90 mol% vinylpyrrolidone and 5-40 mol% dimethylaminoethylmethacrylate quaternised with diethyl sulphate.


(Ia)

Compsn. overcomes problem of shampoos which successfully wash hair, but fail to leave it in good condition. 8. 6. 76 (4pp931)

PROC D21 77552X/42 =GB 1540-648

Compositions for retarding teeth staining - contg metal chelating agents of specified stability constants

PROCTER & GAMBLE CO 01.04.75-US-563995

*E19 (14.02.79) *BE-840-306 A61k-07/22 +A61k-05*

Oral compsn. for retarding dental stain comprises a suitable base and an antistain agent (I) selected from Ca chelates of metal chelators which have a stability constant K_1 for Ca^{2+} of > 7.5 and a stability constant K_1 for Fe^{3+} which is greater than the stability constant K_1 for Ca.

Compsn. is in the form of a dentifrice, chewing gum or lozenge contg. ⩾ 0.25 wt.% of (I), or in the form of a mouthwash contg. ⩾ 0.04 wt.% of (I). (I) is e.g. calcium hydrogen nitrilotriacetate or calcium trihydrogen diethylene triamine-N, N-N', N'', N''-pentacetate. 31. 3. 76 as 013077 (5pp927)

SPEC- D21 73794X/39 =GB 1540-763

Alloy powder mixt for dental amalgam prepn - contg non amalgamatable component with controlled tin content to improve shelf life

SPECIAL METALS CORP 16.07.75-US-596399

*M26 +P53 (14.02.79) *US3980-472 +C22c-05/06*

Mechanical mixt. used in prodn. of dental amalgam, comprises (A) 55-90 pref. 65-75% Ag-base amalgamatable alloy powder and (B) 45-10 pref. 35-25% non-amalgamatable Ag-contg. alloy powder. (A) comprises ⩾65% Ag, ⩽6% Cu, ⩽ 2% Zn and ⩾25% Sn. (B) comprises Ag as the major alloying constituent, 1-20% Sn and 5-50% Cd, Zn Al, or Cu, the Cu opt. contg. ⩽ 30% In and being in an amt. to provide a Ag to Cu ratio of 2.6:1. The average size of both powders is ≯100 µm and all percentages are by wt.

Upon trituration of the mixt. with 40-60% Hg a high strength amalgam is produced in which (B) particles are uniformly dispersed through a continuous matrix and are chemically bonded therein forming an integral high strength mass of excellent mechanical properties. 12. 7. 76 as 028883 (6pp984)

FARH D21 67152X/36 =GB 1540-862

Hair setting agents - contg linear polyesters of dicarboxylic acids with sulphonic acid gps (BE160876)

HOECHST AG 15.02.75-DT-506461

*A96 (A23) (14.02.79) *DT2506-461 A61k-07/06 +C08l-67*

Compsn. for treatment of hair comprises (i) ≥1 linear polyester (I) having an apparent mol. wt. of 800-2500 and in which a minority of the dicarboxylic acid units contain sulpho and/or sulphonate salt gps. and (ii) ≥1 suitable carrier. Disclaimed are compsns. (described in GB 1237671) which comprise an aq. soln. of a linear water-dissipatable polyester having an inherent viscosity of ≥ 0.3 and derived from (A) ≥1 dicarboxylic acid free from sulphonic acid or metal sulphonate gps., (B) ≥1 diol, 20 mole% of which is a poly(ethylene glycol) of formula $H\!-\!(OCH_2\text{-}CH_2)_n\!-\!OH$ (where n is an integer of 2-10) and (C) a difunctional monomer contg. an $-SO_3M$ gp. attached to an aromatic nucleus (where M is H or a metal ion), which aq. soln. opt. contains talc, TiO_2, dyes, other pigments and/or stabilisers.

Pref. (I) has an apparent mol. wt. of 1200-1700 and 5-30 (esp. 10-20) mole% of the dicarboxylic acid units contained sulpho and/or sulphonate salt gps. Compsn. is useful as a hair setting agent. It is resistant to humidity, non-sticky and practically odourless. 13.2.76 as 005759 (16pp927)

FUJI- ★ D21 12934B/07 ★J5 4002-333
Soluble bathing pharmaceutical capsule prepn. - by forming soln. of active components, adjusting viscosity of soft capsule material, and charging soln. into soft material
FUJI CAPSULE KK 07.06.77-JA-066946
A96 B05 (A25) (09.01.79) A61k-07/50

The process comprises (i) forming soln. contg. 2-20 wt.% of squalane, 30-65 wt.% of fluidised paraffin, 10-30 wt.% of isopropyl myristate and 10-16 wt.% polyoxyethylene sorbitan dioleate and suitable amts. of dyestuff, perfume and main drug, (ii) adjusting viscosity of soft capsule material contg. 30-45% of glycerine to 100 parts of gelatin of jelly strength 150-250 blooms to ca. 20000 cps. at 60° C, and (iii) charging the soln. into soft capsule obtd. from the capsule material.

Pref. the drug is analgesics and hematogenous accelerating drug. Typical compns. squalane 20 pts., liq. paraffin 46.5 pts., isopropyl mirystate 30.0 pts., polyoxyethylene sorbitan dioleate 10.0 pts., (degree of polymerisation = 13), dyestuff 0.5 pts., perfume 10.0 pts., and main drug 1.0 pts. Soln. for charging of the compsn. was produced and soluble bathing drug prepn. was produced. 7.6.77 as 066946 (4pp69)

SUNZ ★ D21 12936B/07 ★J5 4002-344
Medicinal cosmetic prepd. from natural prods. - contains extract of bofu, hamabofu and/or mushroom, and provides excellent whitening effect
SUN STAR HAMIGAKI K 06.06.77-JA-066828
B04 (09.01.79) A61k-07

Cosmetic contains the extract of crude drug selected from 'bofu' (Siler divaricatum), 'hamabofu' (Glehnia littoralis Fr. Schm) and mushroom and opt. the extract of 'toki' (Angelica acutiloba Kitagawa).

The extracts of crude drugs are highly safe natural substances and show excellent beutifying and whitening effect on skin. Siler divaricatum extract has strongest inhibiting activity on tyrosinase. Usually the extracts are combined 0.01-20 w/w% pref. 1-10 w/w% in the cosmetics such as face lotion, milky lotion, cream, soap, pack, etc. 6.6.77 as 066828 (5pp5)

LIOC ★ D21 12937B/07 ★J5 4002-345
Hair-conditioning compsn. - comprising water-oil emulsion of high molecular oil, cationic and nonionic surfactants and liq. ester oil
LION DENTIFRICE KK 02.06.77-JA-065150
A96 (09.01.79) A61k-07/06

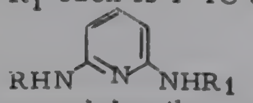
Compsn. comprises a W/O type emulsion composed of (a) synthetic liq. high molecular oil of mol. wt. > 1500, (b) cationic surfactant, (c) nonionic surfactant, (d) the liq. ester oil which is well miscible with the cationic surfactant and (e) water.

Compsn. is stable and excellent in texture, glossiness, touch and emulsified state. It can be readily extended and is not sticky. Thus it can supply oil to hair and head skin properly and can give excellent emollient effect, rinsing effect and durable hair-dressing effect. 2.6.77 as 065150 (6pp5)

KOEI ★ D21 13130B/07 ★J5 4003-123
Oxidn.-colouring dyeing compsns. for keratin fibres - contain pyridine derivs. which are intermediates for oxidn. dyes for black leather
KOEI CHEM IND KK 07.06.77-JA-067625
E13 (11.01.79) C07d-213/16 C09b-59 D06p-01 D06p-03/02

Oxidisation-colouring dyeing agents for keratin fibre contain pyridine derivs. of formula (I) or salts of (I) (where R and R_1 each is 1-4C alkyl).

(I)



(I) are useful as intermediates for the prodn. of the oxidation dyes for black leather use. The dyes comprising the present pyridine derivs. as the decorative intermediate and orthophenylenediamine, 4-nitrophenylenediamine, 2-chloro-para-phenylenediamine, 2-nitro-para-phenylenediamine, etc. as the colouring intermediate can dye leather to various colours other than black. 7.6.77 as 067625 (7pp136)

LIOY ★ D21 13230B/07 ★J5 4003-808
Shampoo compsn. contg. anionic sulphur-contg. surfactant - and cationic polymer, e.g. quat. nitrogen substd. cellulose ether deriv., and bactericide
LION FAT & OIL KK 10.06.77-JA-068621
A96 E12 (A25) (12.01.79) A61k-07/06 C11d-10/02

The compsn. is composed of 1-50 wt.% of >1 anionic surface active agent of formula (I) $R\text{-}(R'O)_n OSO_3M_{1/2}$; (II) $R\text{-}SO_3M_{1/2}$; or (III) $OS\text{-}M_{1\ 2}$; 0.1-5 wt.% of cationic polymer and 0.01-5 wt.% of bactericide. In the formulae, R=8-18C alkyl or alkyl phenyl substd. by 6-15C alkyl; R' =2-3C alkylene; n= 0-6 on average; OS=acid radical of anionic surfactant obtd. by sulphonating olefins; M=magnesium or calcium ions.

The cationic polymer is e.g. quat. nitrogen substd. cellulose ether deriv., quat.-nitrogen substd. poly(trialky-laminoethyl methacrylate) deriv. or tetraethylene pentamine-epichlorohydrin based polymer. The bactericide is e.g. hexachlorophene, Irgasan DP-300 or Irgasan CF2.

The compsn. has improved scurf prevention, reduced irratation to the eyes, does not cause inflammation of the eyes, and has improved foaming property, while forming a humidity-keeping film on hair. 10.6.77 as 068621 (7pp)

CRAF- ★ D21 13413B/07 ★J5 4004-496
Mouldable compsn. for dental use - comprises hydrogenated wood rosin, white petrolactum, talc and aluminium powder
CRAFT DENTAL LAB 10.06.77-JA-068735
A96 P32 (13.01.79) A61c-09

A mouldable compsn. for dental use comprises 65.5-91.0 wt.% of hydrogenated wood resin, 4.0-9.5 wt.% of white petrolactum, 0-20 wt.% of talc and 5-25 wt.% of aluminium powder, where the sum of talc and aluminium powders is controlled to 5-25 wt.%.

The compsn. is used for a temporary mould producing an artificial tooth in oral cavity. 10.6.77 as 068735 (6pp)

BRIM D21 22301R/14 =J7 9000-895
Nitro-p-phenylenediamine type cpds for use in hair - dyes
BRISTOL MYERS CO 13.05.68-US-728786
*E16 E24 (18.01.79) *FR2008-431*

KAWA- D21 67578X/36 =J7 9000-910
Aluminium 2-pyrrolidone-5-carboxylate - has moisture retaining properties and antiacid and astringent activity
KAWAKEN FINE CHEM 16.01.75-JA-006458
*B03 E13 F06 (18.01.79) *J51082-259 C07d-207/28*

Aluminium 2-pyrrolidone-5-carboxylate is prepd. by reaction of 2-pyrrolidone-5-carboxylic acid with an alcoholate to give the desired prod.

The prod. shows antacid and astringenet activities as well as moisture-retaining props. It is useful as gastric antacid, ointment base, fibre-treatment agent etc. in the fields of pharamceuticals, cosmetics, etc. 16.1.75 as 006458 C07d-207/28 (18.1.79) KAWAKEN FINE CHEM (3pp)(J51082259)

MINN D21 11621X/07 =J7 9000-973

Chromophores-substd. long chain hydrocarbon sun cream UV-absorbers - which adhere strongly to the skin in fresh or salty water but are easily removable with soapy water

MINNESOTA MINING CO 26.07.74-US-492180

*A25 E19 (18.01.79) *DT2533-467 A61k-07/42 +C09k-03*

Sun-protecting cosmetic compsn. contains ≥ 1 UV absorber of formula $(XE)_n$-$(RDZ)_r$-R-$(AY)_{n'}$ (I) (where R is 8-108C (un)satd. (cyclo)aliph., A, D and E are each -CO-O- -CO-NH-, -NH-CO-O-, -NH-CO-NH-, -CO-S-, -NH-CO-S-, -O-PO(OH)-O- or $-SO_3$-gps. X, Y and Z are org. gps. absorbing light of wavelength 280-360 um and, when n+n' ≥ 2, Y is H or 1-6C alkyl, n and n' each being 1-9, and (XE) and (AY) being the same or different and n+n' being 2-10 and r is 0-25) and the usual carriers and/or diluents and/or fillers and/or auxiliaries.

The cpds. (I) adhere strongly to the skin in the presence of fresh/salt water yet are easily removable by soapy water. 25.7.75 as 091508 (clg.26.7.74-US-492180) A61k-7/42;C09k-3/00 (18.1.79) MINNESOTA MINING CO (16pp)(J51125762)

SUNZ D21 58393Y/33 =J7 9000-974

Synergistic skin whitening compsn. for cosmetics - comprises ascorbic acid and extract e.g. from Chinese bellflower or Japanese belladonna

SUN STAR DENTIFRICE 24.12.75-JA-155312

*(18.01.79) *J52079-032 A61k-07*

The compsn. contains ascorbic acid or its derivs., combined with the extract of crude drugs selected from 'toki' (Angelica acutiloba Kitavama), 'kikyo' (chinese bellflower) 'xokuzuishi', 'toshihi', 'yakan' (Gemmingia chinensis O. Kuntze), 'mao' (Ephedra) and 'rohto-kon' (Japanese belladonna).

Oxidn. of ascorbic acid beautifying and whitening agent for skin, can be prevented and the effect can be increased by the synergic effect between ascorbic acid and the crude drug extract. The crude drug extract does not cause skin diseases.

The beautifying and whitening effect on skin can be tested the obstructing effect on tyrosinase activity, which form black-brown pigment from tyrosine. The extract of the crude drugs has high obstructing effect on tyrosinase actvity and has beautifying and whitening effect on skin. 24.12.75 as 155312 A61k-7/00 (18.1.79) SUN STAR DENTIFRICE (5pp)(J52079032)

PROC D21 10391T/07 =J7 9000-975

Anti-perspiration aerosols - contg aluminium and zirconium salts and neutral aminoacids

PROCTER & GAMBLE CO 30.07.70-US-059693

*E33 (18.01.79) *NL7110-511 +A61k-07/34*

Anti-perspiration complexes are prepd. by dissolving (a) 1 pt. $Al_2(OH)_{6-m}X_m$, where X is Cl, Br or I, and m is 0.8-1.2, of particle size pref. 10-25 u; (b) 0.16-1.2 pts. (pref. 0.6 pts.) ZrY where Y is O(OH)Cl or OCl_2; (c) 0.06-0.53 pts. (pref. 0.26 pts.) neutral aminoacid chosen from Gly, Try, Phe, Val, Met and Ala. The powders are suitable for aerosol compns. contg. also suspending agents carriers, propellants and (opt.) bactericides and perfumes. 30.7.71 as 057453 (clg.30.7.70-US-059693) A61k-7/34 (18.1.79) PROCTER & GAMBLE CO. (10pp)(J47003848)

LIOY D21 83936W/51 =J7 9000-976

Protective skin lotions - contg. aq. ethanol ext. of Cimigifuga foetida, G. danurica, Sophora japonica and Platycodon grandiflorum mixt.

LION FAT & OIL KK 07.12.73-JA-136145

*(18.01.79) *J50088-238 +A61k-07*

Cosmetics contg. aq. EtOH extract of Cimicifuga foetida or C.danurica, Sophora japonica and Platycodon grandiflor -an example, a lotion contd. borax 1.0 K_2CO_3 1.5, glycerin 15, the extract 1.0, H_2O 60.0, allantoin 0.05, EtOH 20g. and perfume. 7.12.73 as 136145 A61k-7/00 (18.1.79) LION FAT & OIL KK (4pp)(J50088238)

SHIS D21 81680Y/46 =J7 9000-977

Stable aerosol antiperspirant compsn. - contg. aluminium chlorohydrate and sorbitan glycerol penta-(2)-ethyl-hexanoate

SHISEIDO KK 14.02.74-JA-018043

*E17 (18.01.79) *J50129-722 +A61k-07/32*

Perspiration protecting compostie in aerosol is prepd. by mixing powdery anti-perspiration agent. suspending liq., antibacterial agent; perfume jetting agent, and carrier liq., 2-ethylhexylate of sorbitan glycerol condensate.

In an example, aluminium chlorohydrate-powder (8.0%) was added to sorbitan-diglycerol-penta-2-ethyl-hexanoate (3.0%) and a stirred well. Then, ZnO (0.1%) was added to the mixt. and stirred well. Aerosol (0.4%) was added gradually and finally a perfuem (0.2%) was added to the mixt. The mixt. was injected in an aerosol can and a jetting agent. (Freon 12/11=65/35; 88.3%) was filled. The prepn. has improved antiperspirant effect and superior dispersibility and stability. 14.2.74 as 018043 A61k-7/32 (18.1.79) SHISEIDO KK (4pp38)(J50129722)

HAYA/ D21 40728V/22 =J7 9000-978

Cream compsn for protecting and cleaning skin - contains neutral vinyl polymer, cellulose and ethanol mixed with various polymeric org. cpds. and is effective against oil and fat stains

HAYASHI H 24.03.72-JA-029892

*A96 (18.01.79) *J48095-406 +A61k-07 C11d-11/04*

A compsn. of polyethylene glycol (I), cetyl alc. (II) propylene glycol (III), and stearic acid (IV) is mixed at 60-90°C with polyethylene glycol alkylphenyl ether (V), polyethylene glycol sorbitan fatty acid ester (VI), and iso-Pr palmitate (VII) followed by 70% sorbitol (VIII) and water at 6-95%, cooled to 35-50°C and mixed slowly with strong stirring with a compsn. of neutral vinyl polymer, Na salt of CM-cellulose (IX) and EtOH to give a cream useful for protecting and cleaning skin.

In an example, pref. amts. were (I) 35-45, (II) 2-3, (III) 5-8, (IV) 5-15, (V) 10-15, (VI) 3-5, (VII) 1.70% (VIII) 3, water 5-30, vinyl resin 20-25, (IX) 5-7, and EtOH 10-15%. 24.3.72 as 029892 A61k-7/00, C11d-11/04 (18.1.79) HAYASHI H (2pp)(J48095406)

KIYO/ ★ D21 13520B/07 ★J7 9000-979

Tooth paste contg. miso paste - with anti-odour and antiinflammatory properties

KIYOHARA K 06.10.72-JA-099786

B04 (D16) (18.01.79) A61k-07/16

"Miso paste" (i.e. a pasty material contg. 11-16 wt.% sodium chloride produced from soyabean or rice-koji by fermentation with Aspergillus species) is mixed with a conventional tooth pasty material containing calcium phosphate, sodium metaphosphate and surfactant.

The prod. destroys oral odours and cures inflammation of gums. 6.10.72 as 099786 A61k-7/16 (18.1.79) KIYOHARA K (2pp15)(J49055854)

SUNZ D21 40062W/24 =J7 9000-980

Stable calcium hydrogen phosphate dentrifice - contg. carboxyvinyl polymer binder and polyphosphate stabiliser

SUNSTAR CHEM IND LTD 02.05.73-JA-049350

*A96 (18.01.79) *J49133-535 +A61k-07/16*

Stable dentifrices with high dispersing properties are prepd. from the main ingredient, $CaHPO_4$ a carboxyvinyl polymer binder and, a polyphosphate stabiliser.

In an example a dentifrice contained $CaHPO_4.2H_2O$ 49, Na pyrophosphate 1, carboxyvinyl polymer 1, Na lauryl sulphate 1.5, glycerol 15, sorbitol 5, H_2O 25.6, flavour 1, Na saccharide 0.2, preservative 0.3 and NaOh 0.4 pts. 2.5.73 as 049350 A61k-7/16 (18.1.79) SUNSTAR CHEM IND DENT (4pp)(J49133535)

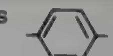
TOKI- ★ D21 13577B/07 ★J7 9001-40

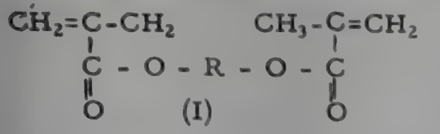
Hard, abrasion resistant polymer having dental applications - prepd. e.g. from bisphenol/A di:methacrylate

TOKYO IKASHIKA 08.03.69-JA-017197

A96 P32 (A12) (24.01.79) A61c-09 C08f-02/02 C08f-20/30

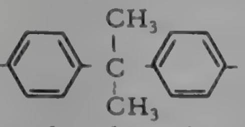
The polymer is polymer of monomer (I) or copolymer of

(I) and other vinyl monomer (II). In (I), R is  or



(I)

$CH_2{=}C(-CH_2)-C(=O)-O-R-O-C(=O)-C(-CH_3){=}CH_2$



(II) includes (m)ethyl methacrylate, butyl methacrylate, (m)ethyl acrylate, (meth)acrylic acid, vinyl acetate, acrylonitrile, etc. Amount of the vinyl monomer is ≤ 90 mole % relative to the total amount of the monomers.

The polymerisation is conducted in the presence of radical catalyst, ionic catalyst, or under irradiation of light at room temp. to 100 °C until monomer is completely polymerised. The resulting polymer shows high resistance to water and solvents, high abrasion resistance, high surface hardness, and high break point.

In an example, 4.0 pts. of bisphenol A-dimethacrylate is place in a polymerisation vessel, air is replaced with nitrogen and then heated at 70 °C for 1 hr. 85 °C for 1 hr. and further 100 °C for 1 hr. followed by curing at 120 °C for 1 hr. When the resulting transparent polymer is immersed in boiling water, cracks and turbidity are not observed even after 5 hrs. 8.3.69 as 017197 A61c-9/00; C08f-20/30, 2/02 (24.1.79) TOKYO IKASHIKA DAIGAKU-CHO (4pp22)

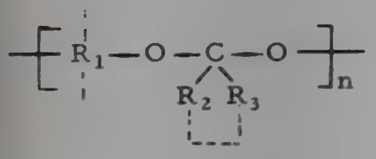
ALZA D21 48032X/26 =US 4138-344

Biodegradable ortho-ester polymers - for enclosing active agents to be liberated therefrom e.g. steroid implants

ALZA CORP 28.01.75-US-544808 (24.08.77-US-827223)

*A96 B07 C03 +P34 (A23) (06.02.79) *BE-837-935 C09k-03*

New orthoester and orthocarbonate polymers are provided comprising a repeating unit (I) of hydrocarbon radicals and a symmetrical dioxycarbon unit with a wide range of organic gps. bonded to it. In the formula R_1 is di, tri or tetravalent hydrocarbon radical; R_2 and R_3 are hydrocarbon radicals or R_1O with R_1 being divalent and at least one of R_2 and R_3 being linked to the dioxycarbon through O, e.g. in alkoxy gp.



(I)

The polymers are prepd. by contacting a polyol monomer with an orthoester or orthocarbonate monomer. They have a controlled degree of hydropholucity and erosion in aq. or similar environment and may be manufactured into devices and coatings for releasing drugs, fertilisers, etc. at a controlled rate. The polymers erode to harmless prods. 24.8.77 as 827223 (21pp1392)

OREA D21 06349A/04 =US 4138-427

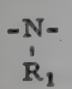
Polyether-poly:ol surfactants with sequenced structure - for cosmetic and pharmaceutical compsns.

L'OREAL SA 16.07.76-LU-075405

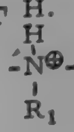
*A25 B04 (A97 B07) (06.02.79) *BE-856-853 A61k-31/14 C07c-87/20 C07c-140*

New polyhydroxylated sequenced oligomer surfactant comprises a cpd. or a mixt. of cpds. of formula (I)

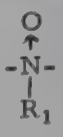
$HO-[C_2H_3(CH_2OH)O]_n-[C_2H_3(CH_2ZR)O]_m-[C_2H_3-(CH_2OH)O]_{n'}H.$



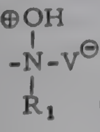
$-\underset{R_1}{N}-$ (i)



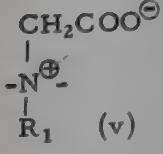
$-\overset{H}{\underset{R_1}{N}}{}^{\oplus}-V^{\ominus}$ (ii)



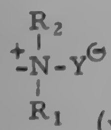
$-\overset{O\uparrow}{\underset{R_1}{N}}-$ (iii)



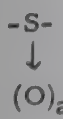
$-\overset{\oplus OH}{\underset{R_1}{N}}-V^{\ominus}$ (iv)



$-\overset{CH_2COO^{\ominus}}{\underset{R_1}{N}}{}^{\oplus}-$ (v)



$\overset{+}{-}\overset{R_2}{\underset{R_1}{N}}-Y^{\ominus}$ (vi)



$-S- \downarrow (O)_a$ (vii)

In (I) R is 4-18C alkyl; Z is a gp. of formula (i) to (vii) R_1 and R_2 are each (m)ethyl or hydroxyethyl; Y is Cl, Br, I, methyl sulphate, methane sulphonate or paratoluene sulphonate; $HR_1N^{\oplus}V^{\ominus}$ and $R_1NO^{\oplus}HV^{\ominus}$ represent mineral or organic salts of an amine or an amine oxide; m is 2-10; n is 2-25; n° is O or 2-25; n + n' is 2-25.

The surfactants are partic. useful in cosmetic compsns. owing to their affinity for water, chemical stability and weak mucous aggressiveness. 14.7.77 as 815848 (11pp910)

USNA ★ D21 14114B/07 ★US 4138-476

Long-acting plaque-dispersing enzymes - prepd. by binding the enzyme to a carrier with ethyl chloroformate, etc. as complexing reagent

US SEC OF NAVY 03.08.77-US-821275

B04 (D16) (06.02.79) A61k-07/28

A technique for degrading plaque on the surfaces of teeth is as follows: (a) a plaque-dispersing enzyme (I) is bonded to a carrier (affinity for tooth surfaces greater than (I) by treatment with a complexing reagent to form a modified enzyme (II) with a greater affinity for tooth surfaces than (I); (b) (II) is introduced into the mouth to contact the teeth.

Suitable (I) include the known dextranase, glucanohydrolases which may be used to degrade α-1,3- and α-1,6- glucosidic links, polysaccharidases for degrading polysaccharides, and proteases (opt. in combination with dextranase). Carrier is suitably a phosphoprotein (phosvitin) or phosphoserine, etc. (I) may be bonded to the carrier using glutaraldehyde, $ClCO_2Et$, or hexamethylene diisocyanate, etc. as the complexing reagent.

(II) has the plaque-dispersing activity of (I), but has considerably enhanced binding affinity for teeth. Thus (I) are highly effective for the control and treatment of dental caries and periodontal diseases, and are also effective for prolonged periods of time. 3.8.77 as 821275 (6pp478)

COLG ★ D21 14115B/07 ★US 4138-477

Zinc-polymer complex in compsn. to control mouth odour - formed from a zinc cpd. and an anionic polymer contg. carboxylic, sulphonic and/or phosphonic gps.

COLGATE PALMOLIVE CO 28.05.76-US-691262

A96 B04 (06.02.79) A61k-07/16 A61k-09/68 A61k-31/31

A non-astringent oral compsn. to control mouth odour contains as the essential agent a zinu-polymer complex of pH 4.5-6. The polymer is selected from (1) a copolymer of moleic anhydride with ethylene or styrene or isobutylene or polymethyl vinyl ether or polyethylvinyl ether, (2) a polyacrylic acid or polyacrylate, (3) a polyitaconic acid or polyitaconate, (4) a polyolefin sulphonate, (5) a polyvinyl phosphonate and (6) a polyvinyl phosphate, and is ionically bound to a zinc salt which is one of 57 listed Zn cpds. including organic and inorganic salts and the oxide.

Pref. the Zn salt is Zn oxide propionate or chloride and the polymer is a copolymer of maleic anhydride and methylvinylether.

The compsn. is also effective in preventing calabus, plaque, caries and periodontal disease. 28.5.76 as 691262 (9pp476)

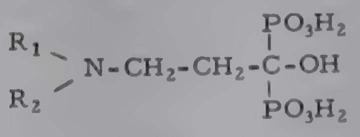
HENK D21 32754Y/19 =US 4138-478

Compsn. contg. (3)-amino-(1)-hydroxy-propane-(1,1 -diphosphonic acid - used to reduce damage to hair by peroxides

HENKEL KG AUF AKTIEN 04.11.75-DT-549294

*E11 (06.02.79) *BE-847-967 A61k-07/06*

Aq. compsns. adapted to change the colour of hair by the action of nascent oxygen has water, oxidising agent, effective amt. of an aminopropane diphosphonic acid of formula (I), where R_1 and R_2 are each H or 1-3C alkyl, and their water-soluble salts as an agent inhibit the effect of nascent oxygen is degrading hair.



(I)

$R_1R_2N-CH_2-CH_2-C(PO_3H_2)_2-OH$

Pref. pH of compsn. is 8-11 R_1 and R_2 are both H. Water-soluble salts are sodium, potassium, ammonium and ethanolamine. (I) is present in 0.01-10 wt.% (esp. 01-2 wt.%) total compsn. Bleaching solns. contg. 3-9 wt.% water-soluble peroxide and 0.01-10 wt.% (I) are also prepd.

Bleaching and dyeing of hair may be effected using prepd. compsn. with adversely affecting hair. Compns. may be used as fluid baths, dry powders, pastes and cream emulsions. 3.11.76 as 738475 (4pp931)

See Also

D13 DS 2364333 D23 DT 2734295 D23 DT 2832137
D23 US 4138416

D22 : BANDAGES; DRESSINGS

WOLK/ ★ D22 12064B/07 ★DL -133-300
Purificn. of air contg. noxious substances - by scrubbing with slightly acid aq. soln. of potassium permanganate
WOLKE M 03.10.77-DL-201298
E31 J01 (27.12.78) B01d-53/14

The contaminated air is fed through an absorption tower in counter- or co-current to an absorption soln. (a). Soln. (a) has an acid pH when it is fed into the tower, and flows over baffles in the tower so it reacts with the alkaline components in the air to produce a soln. (a) with an alkaline pH, thereby bonding the noxious acid components in the initial air. The alkaline soln. thus obtd. is removed from the base of the tower. When the initial air contains ca. 15 mg NH_3/m^3, and ca 0.4 mg H_2S/m^3, the aq. soln. (a) pref. contains less than 0.1 ml conc. H_2SO_4 per litre and ca. 1 g/l $KMnO_4$ as oxidant.

Used for purificn. of waste gas or air from e.g. cowsheds, animal carcass processing plants, glue factories, and other plants emitting air with an unpleasant odour. 3.10.77 as 201298 (7pp1144)

PROC D22 07635Q/00 =DS 1610-547
Fluorinated acrylics as hydrophobic and oleophobic base
PROCTER & GAMBLE CO 20.12.66-US-603299
*A96 +P21 (08.02.79) *NL6717-354 +A41b-13/02*

A nappy construction is described comprising an absorbent cushion having a covering layer (I) of a thin, porous fibrous (II) material provided with an oily coating (III).

In the central portion of (I), the fibres are hydrophobic and oleophobic while, at its outer edges, (III) is provided discontinuously the critical surface tension of (II) being (III). (III) may contain triglycerides of stearic, oleic or palmitic acids or ZnO, Ca, Mg, K or Na salts of 12-22C fatty acids to increase its viscosity. The critical surface tension of (II) is <25 dynes/cm and ca. 5 dynes/cm less than (III), which is applied in amts. of 0.00016-0.0031 g/cm^2.

This construction allows body fluids to be absorbed so as not to cause skin irritation and without having to apply creams/lotions by hand. 19.12.67 as 610547 (10pp922)

HONP D22 45658U/33 =DS 2248-354
Fibrous sheeting prodn. plant - for flexible, soft, highly absorbent paper with long and short fibres in the same layer
HONSHU PAPER MFG KK 29.00.72-JA-001229
*F09 (08.02.79) *DT2248-354 D01g-25 D04h-01/42*

Fleeces of fibres having different characteristics are mfd. in a plant having three fibre feeding arrangements alongside each other. The outer layers of the fleece contain long fibres whilst the inner layers contain short fibres; the fibres of the various layers passing through the others.

In the direction of motion, a feeder for short fibres is provided between two feeders for long fibres and all the feeders open into a common outlet above an endless belt which moves them forward in the form of a web. 29.9.72 as 248354 (5pp1045)

RITP D22 73190V/42 =DS 2403-525
Cylindrical steam sterilizer tank - with roughened inner surface to prevent formation of condensate drops
SYBRON CORP 02.04.73-US-347329
*P34 +Q78 (08.02.79) *DT2403-525 A61l-03*

A steam steriliser of a more simple design prevents the formation of condensn. droplets on the upper inner wall of the vessel and their falling on to the goods being sterilised

The sterilising chamber holds a container colled on its outside by a fan. The inner surface of the single-mantled vessel has a zone extending over the whole of the space in which materials to be sterilised are placed, the surface roughness of which exceeds 1.3/μm. This may be obtd. by sandblasting. 25.1.74 as 403525 (5pp1045)

SCHE/ ★ D22 12217B/07 ★DT 2735-550
Multichamber sterilising photo-reactor - with UV lamps and transverse chambers of adjustable thickness
SCHENCK G 06.08.77-DT-735550
P34 (D15) (08.02.79) A23l-03/28 A61l-01 A61l-03 B01j-01/10 C02b-03/02

In a system the sterilisation and disinfection of fluid media by irradiation with ultra-violet rays of 240-320nm wavelength, the photoreactor is subdivided into several chambers through which the medium flows in turn at right angles to the direction of rays. A specified part of the radiation entering into the chamber directly adjacent to the source of radiation continues into the next chamber.

This results in more homogeneous irradiation and in a better utilisation of the ultra-violet radiation energy. 6.8.77 as 735550 (96pp39)

AMIN- ★ D22 12259B/07 ★DT 2831-360
Heparinisation of charged surfaces - using oppositely charged colloidal solutions of complex of heparin with surfactant
AMINKEMI AB 18.07.77-SW-008296
B07 P34 (08.02.79) A61m-01

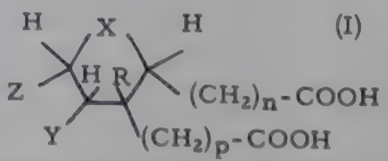
In the heparinising of a charged surface of a medicinal product, the charged surface is treated with a fine-particle colloidal aqueous solution of a complex cpd. of heparin and a cationic surface active substance, the charges bound to the surface of the colloidal particles being of opposite polarity to those bound to the charged surface of the medicinal product.

New agents for carrying out the above procedure consist of a fine-particle colloidal aq. soln. of a complex cpd. of heparin and a cationic surfactant, charges of positive or negative polarity being bound to the surface of the colloidal particles. The colloidal soln. contains 1-100 IU heparin per ml, the amount of surfactant being such that the light transmission of the soln. (at 400 nm with an optical path of 1 cm) is $>$ ca 40% of that of pure water when the heparin concn. is 50 IU/ml an $>$ ca 90% of that of pure water when the heparin concn. is 10 IU/ml.

Used for prevention of platelet adhesion and thrombus formation when blood is in contact with medicinal products such as catheters, blood oxygenators, artificial heart valves, blood bags, etc. The method gives good and reproducible coating of a wide range of surfaces with heparin, without having to use organic solvents. 17.7.78 as 831360 (34pp280)

OREA ★ D22 12309B/07 ★DT 2833-291
Deodorant agents for personal hygiene, animal litter etc. - contain zinc or magnesium salts of poly:carboxylic acids
L'OREAL SA 29.07.77-FR-023507
A97 E12 P32 P34 (08.02.79) A61f-13/16 A61k-07/32 A61l-09/ C07c-61/32*

Deodorant agents contain $\geqslant 1$ Zn or Mg salt of a polyacid of formula (I) (in which X is -CH=CH- or -CHOH-CHOH-; Y is H, opt. unsaturated 1-10C aliphatic gp. which opt. carries one or more OH gps., an opt. unsatd. $\leqslant 30$C alicyclic gp. which is opt. substd. with $\geqslant 1$ OH gps., and which may also contain a COOH gp., or Y is a carboxylic acid gp. if $p = 0$; Z is an opt. unsatd. hydrocarbon gp. with $\leqslant 6$C; n is < 10; p is $0 \leqslant n$, and R is H or low alkyl) and/or structural isomers of it.


(I)

The agents are based e.g. on dimer or trimer acids based on linoleic acid or linolenic acid, and which may be hydroxylated; or Diels-Alder addn. prods. of linoleic acid or its esters with acrylic acid or maleic anhydride.

(I) have a good deodorant effect, are non-irritating to the skin and do not destroy the biological equilibrium of the skin. They can be used as personal hygeine agents and deodourising cleaners, in animal litters, etc. 28.7.78 as 833291 (34pp513)

BRUN/ ★ D22 12339B/07 ★EP -----738

Charge absorbing, insulating casing for regenerating type air purifier - which enables generated ozone molecules to become positively charged and recombine with negatively charged molecules

BRUNDBJERG N 04.08.77-DK-003499

P34 (21.02.79) A61l-09

D/S: BE, CH, DT, FR, GB, LU, NL, SW.

A regenerating type air purifier includes a radiating device such as a mercury lamp which is surrounded by a charge absorbing, non-conductive casing. The material of the casing may be a soft, optionally plumbiferous plastic. The air flows through an electric field in an electron-cloud forming member which is capacitor-like. Both the radiating device and the electron-cloud forming member are actuated by a voltage multiplier connected to the mains.

The air purifier is particularly useful for aircraft , automobiles and hospitals. It can also be used industrially (e.g. in slaughterhouses) or in office environments.

The purifier does not require ventilating ducts to the surroundings and is therefore easy to mount. There are no thermal losses and the oxygen content in a room is increased no more than 6-8%. It is inexpensive to produce. The keeping quality of meat is increased in slaughterhouse usage since only viruses and bacteria are killed. 27.7.78 as 100517 (8pp1044)

ISR: FR2240021; FR2227017.

FARH ★ D22 12364B/07 ★EP -----775

Water vapour absorbent and permeable rubber web - contg. dispersed particles of swellable modified polymer, useful for shoe uppers, absorbent articles, e.g. tampons, etc.

HOECHST AG (KALL) 11.08.77-DT-736205

A82 F08 P34 (A83 A84 A96) (21.02.79) A61l-15 C08l-21 D06m-15/28

D/S: BE, CH, DT, FR, GB, NL, SW.

Web of natural or synthetic rubber or rubbery polymer, contains uniformly dispersed particles of swellable, modified polymer(s), which pref. is ≥ 50 wt.% insol. in water. Particles of modified carbohydrate deriv(s), pref. modified starch or cellulose ethers, are esp. suitable.

The webs can be self-supporting or supported and are esp. useful as rubberised textiles, shoe uppers and insoles and carpet backings. In foamed form, they can also be used for absorbent articles, e.g. tampons. 3.8.78 as 100587 (34pp016)

ISR: US3488301; FR1144575; DT2364628; DT2756484; NL7712778; BE-861183; FR2372205.

VALL/ ★ D22 12432B/07 ★FR 2390-529

Machine for knitting fabric tapes with knitted selvedges - which produces medical dressings of width and thickness that can be varied

PRATS VALLDEPERES R 12.05.77-FR-015005

F04 P32 (12.01.79) A61f-13 D04b-23 D04b-27

The machine is fed with yarn from bobbins on spindles at the back of the machine. Rollers feed the yarns to the machine, by simple friction, passing them through a yarn guide and a tension device. The machine comprises a shaft on the upper part of the machine frame, the shaft being rotated with an alternating movement over a slight-angled course. Lead elements which position the guide pins mounted on their outer faces, adopt a convergent position between the corresponding latch needles, which are mounted to rise and fall on the plates. The rise and fall of the needles are synchronised with the alternating movement of the guide pins on the supporting bars which are pushed from one end intermittently by a chain drum.

The tapes are intended as bandages for medical dressings As compared with woven bandages, the prodn. is considerably increased, and the production cost is lower. They may be varied in width according to the knitting programme and in thickness according to the number of needle beds used. 12. 5. 77 as 015005 (5pp1359)

COLG D22 56071X/30 =GB 1540-474

Absorbent pad - with perforated thermoplastic film for heat sealing fibrous cover to front face of pad

COLGATE PALMOLIVE CO 24.02.75-US-552463

*A96 F07 P21 P32 P73 (14.02.79) *BE-838-886 A41b-13/02 A61f-13 +B32b-05/26*

Absorbent article, such as a diaper, comprises an absorbent pad covered by a fluid pervious material. A perforated film of heat-sensitive, fluid impervious material is interposed between the cover sheet and the pad; the perforations are confined to the portion which receives body fluids and the film is fused to the cover sheet and pad along its edges.

The film and fluid pervious material are fed from rolls on to absorbent pads carried on an endless band conveyor. A spiked wheel perforates the film after the two layers come together but before being heat-sealed to each other; heat application also causes the perforations to enlarge.

A simple, low-cost absorbent article in which the cover sheet is thin and does not readily break up is provided. 17. 2. 76 as 006175 (8pp1364)

SCOL D22 91563Y/51 =GB 1540-669

Odour absorbing footwear insole - with absorbent impregnated fibres between bottom foam plastics and porous fabric top sheets

SCHOLL UK LTD 10.09.76-US-722127

*A83 E36 P22 +P73 (14.02.79) *US4062-131 +B32b-05/18 B32b-27/10*

Insole for placing inside shoes comprises a laminate of (1) a bottom open cellular resilient plastic sheet with a relatively closed pore smooth bottom skin, (2) an intermediate porous sheet of randomly disposed fibres impregnated with a moisture- and foot odour absorbing chemical freely exposed on the fibres, and (3) a top porous woven fabric sheet presenting a slippery abrasion resisting top surface. The layers are bonded by air pervious means without closing any pores. The bottom sheet flattens and expands upon application and release of foot pressure to pump air through the intermediate sheet in intimate contact with the chemical.

The chemical is e. g. activated charcoal or silica gel. The bottom layer is pref. of foam plastic. 9. 9. 77 as 037759 (5pp945)

DRAG D22 65224X/35 =GB 1540-752

Filtration unit with UV radiation - esp. for sterile rooms, ensuring absence of bacteria and viruses

DRAGERWERK AG 12.02.75-DT-505785

*Q74 +P32 P34 (14.02.79) *DT2505-785 F24f-03/16*

Appts. for filtering bacteria from ventilation air supplied to sterile rooms comprises high efficiency filters of cylindrical form mounted in a housing; air enters the filters axially and leaves radially to be drawn from the housing into the sterile room through an outlet grid in the base.

UV radiators are situated within the housing so that the downstream filter surface and the inner walls of the housing are subjected to uniform radiation. Pref. the UV radiators are mounted so as to be turnable or to move to- and -for in the housing. The disinfecting operation necessary in conventional bacterial filters is not required. 12. 2. 76 as 005640 Add to 1382820 (3pp1364)

COLG D22 63102Y/36 =GB 1540-794

Absorbant pads with enhanced absorption capacity - contg. a mixt. of absorbant and soluble fillers

COLGATE PALMOLIVE CO 10.05.76-US-684544

*A96 P32 +P21 P34 (A11 A14) (14.02.79) *BE-854-222 A41b-13/02 A61f-13/18 A61l-15*

Absorbent pad suitable for use in contact with the skin comprises (a) a water-pervious facing layer for contacting the skin; (b) a water-impervious backing sheet bonded to (a) around its edge, to form a container; and (c) an absorbent mass (I) within the container.

(I) comprises a solid finely divided mixt. of (i) completely hydrolysed starch-polyacrylonitrile copolymer in acid form contg. 0. 6-2 pts. wt. grafted hydrolysed polyacrylonitrile/pt. wt. starch; and (ii) a non-irritating and non-toxic water-soluble basic material. Relative proportion (i):(ii) is 1:4-1:1 (by wt.).

Mass (I) is e. g. in the form of shredded polyurethane foam particles carrying the dispersed mixt. Prods. are disposable diapers, sanitary towels, wound dressings, etc. 29.4.77 as 018047 (4pp936)

HERC D22 61225Y/35 =GB 1540-818
Crosslinked (co)polyacrylamide absorbents - with increased rate of absorption prepd. by treating the polymer with glyoxal
HERCULES INC 25.03.76-US-670484
*A14 C03 +P21 P32 P34 (14.02.79) *BE-851-907 C08f-08/28*

Water- or saline soln. absorption rate of a water-insoluble crosslinked particulate acrylic polymer (I) is increased by applying to the particle surfaces of (I), 0.2-5 (0.2-2)wt.% glyoxal.

(I) comprises (a) poly(meth)acrylamide or its copolymer with a 2nd vinyl monomer; (b) a polymer of a water-soluble (meth)acrylic acid salt; or (c) a polysaccharide grafted with (a).

Pref. the 2nd vinyl monomer is a water-soluble (meth) acrylic acid salt. Pref. the crosslinked polymer is cellulose to which is grafted a copolymer of 10-50% acrylamide and 50-90% Na acrylate crosslinked with bis-methylene-bis-acrylamide.

Absorbent prods. can be blended with conventional absorbent cellulosics such as crosslinked CMC, chemical cotton, wood pulp or cotton staple, for use e.g. as feminine hygiene prods., dental sponges or as soil conditioners. 24.3.77 as 012445 (9pp936)

UYFL- ★ D22 12531B/07 ★J5 4000-017
Biologically active glass coated alumina ceramic - used as a support in orthopaedic surgery
UNIV FLORIDA 29.01.77-JA-009159
L02 P73 (L01) (05.01.79) B32b-17 C04b-39 C04b-41/06

The alumina moulding is produced of Alumina ceramic powders by compression and it is coated with the glass layer having biological activity which consists of SiO_2 40 to 62 wt.%, Na_2O 10 to 32 wt.%, CaO 10 to 32 wt.%, P_2D_5 3 to 9 wt.%, Fluorspar 0 to 18 wt.% and B_2O_3 0 to 7.5 wt.%. 29.1.77 as 009159 (8pp15)

MITQ ★ D22 12713B/07 ★J5 4001-277
Deodorising system for exhaust gas - using an adsorbent which is continuously circulated between deodorising and regenerating devices
MITSUBISHI ELECTRIC CORP 06.06.77-JA-066869
J01 P34 (08.01.79) A61l-09/ B01d-53/34*

An adsorbing column has an adsorbant feeder and drainer, which are connected to an adsorbant drainer and adsorbant regenerator drainer, respectively, through closed conveyors, thus forming closed system for the adsorbant.

The adsorbant fed into the column through one of the conveyors adsorbs malodourous components of the exhaust gas fed into the column. The adsorbant is then fed into the regenerator, before being returned to the column. 6.6.77 as 066869 (3pp26)

KUBI ★ D22 12840B/07 ★J5 4001-920
Building material for external use - comprising inorganic materials to which a copper ion source has been added, preventing mould growth
KUBOTA KK 07.06.77-JA-067700
C03 E32 L02 Q44 Q45 (09.01.79) E04c-02/28 E04d-01/22

A building material, intended for use in outer walls, roofs, etc. in particular, is mfd. by adding a copper ion-forming agent to an inorganic material, e.g. Portland cement, calcium silicate or gypsum.

Material is treated so as to prevent blackening of the wall surface, etc. due to the growth of Aspergillus niger (black mold) by the addition of a copper ion-forming agent, and has a stable, strong antibacterial performance for a long length of time, thus assuring a long-term unchanging appearance. In particular, in the case of the building material coated with a plastic paint etc., addn. of the copper ion-forming agent results in high adhesion of plastic coat because no bacteria grow between the plastic coat and the building material. 7.6.77 as 067700 (3pp117)

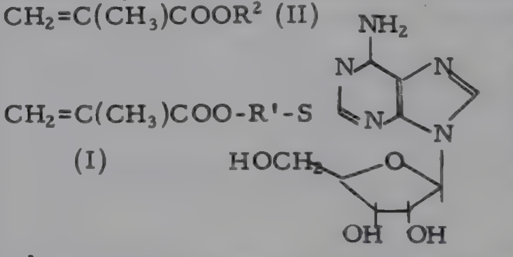
TOKE ★ D22 12886B/07 ★J5 4002-265
Appts. for deodorisation by ozone - includes ozone generator, mixer, oxidn. reactor packed with catalyst and ozone flow rate control device
TOKYO SHIBAURA ELEC LTD 08.06.77-JA-066735
E36 J01 (09.01.79) B01d-53/34 B01j-01/14

The appts. is equipped with (1) ozone generator, (2) a mixer for mixing ozone and the gas to be deodorised, (3) an oxidn. reactor packed with catalyst for oxidn. of odourous cpds. (4) device for control of the amt. of ozone to be fed into the cpds. according to a signal, which is made in proportion to the concn. of odourous cpds. in the gas treated.

The amt. of ozone used can be economised and the lifetime of catalyst can be prolonged. For example, in the treatment of faeces and urine, the concn. of odourous cpd. in the generated gas is the highest at the start of agitation and decreases gradually. The amt. of ozone consumed can be controlled in the proportion to the amt. of cpds. to be treated in the gas. The catalyst is e.g. active carbon. 8.6.77 as 066735 (3pp42)

TERU- ★ D22 13208B/07 ★J5 4003-389
Film-forming anticoagulative medical material - contains a methacrylate copolymer with a ribofuranosyl-purinyl gp.
TERUMO KK 10.06.77-JA-067808
A96 B04 P34 (A14) (11.01.79) A61m-01/03

Material comprises methacrylate copolymer consisting of methacrylate of formula (I) and methacrylate of formula $CH_2=C(CH_3)COOR^2$ (II)



$CH_2=C(CH_3)COO-R'-S$

(I)

In the formulae, R^1 is 1-4C alkylene, opt. substd. by >1 hydroxyl or halogen gp.; and R^2 is 1-4C alkyl opt. substd. by >1 hydroxyl or halogen gp.

As the methacrylate with the alkylene gp R^1, 3-(S-(6-amino-9-β-D-ribofuranosyl purine-2-yl))-mercapto-2-hydroxy-propylmethacrylate may be used. As the methacrylate with the alkyl gp. R^2, 2-hydroxy-methacrylate may be used.

The anticoagulative medical material has an improved film forming ability for resin, metal, glass and rubber materials. 10.6.77 as 067808 (6pp2)

TOKZ ★ D22 13372B/07 ★J5 4004-287
Cleaning compsn. - comprising germicidal quat. ammonium salt and flower perfume
TOKYO ORG CHEM IND KK 13.06.77-JA-068865
E19 P34 (D25) (12.01.79) A61l-09/04

An environmental cleaning compsn. contains a germicidal quat. ammonium salt cpd. and flower fragrant perfume as effective components.

The smell of quat. ammonium salt useful as germicide, antiseptic, steriliser, deodoriser, etc. can be eliminated with the combination of flower fragrant perfume, and flower fragrance can be imparted to the cleaning compsn. 13.6.77 as 068865 (3pp50)

UNIC- ★ D22 13414B/07 ★J5 4004-498
Absorbent sanitary towel - including partially crosslinked starch denatured polymer, denatured CMC, denatured PVA etc. to absorb menstrual liq.
UNI CHARM KK 13.06.77-JA-069703
A96 P32 (13.01.79) A61f-13/18

A menstruation article comprises a crushed pulp layer for introducing menstrual liq. into a following layer by absorbing it in the form of spot, a thin water absorbing paper layer for permeating and spreading the introduced menstrual liq. in the direction of the surface, an absorption retaining layer composed of a water permeable sheet and a powdery material coated on the sheet through a binder, the powdery material being a gelling water insol. material and absorbing and swelling the menstrual liq., and a water absorption paper layer for absorbing the residual menstrual liq. not absorbed by the powdery material. The menstruation article includes also a leakage prevention sheet, a fibre layer, and water permeable sheets.

The powdery material is composed of partially cross-

linked starch modified polymer, modified carboxymethyl cellulose, and/or modified polyvinyl alcohol, etc.
13.6.77 as 069703 (6pp76)

UNIC- ★ D22 13415B/07 ★J5 4004-499
Absorbent sanitary towel - including partially crosslinked starch denatured polymer, denatured CMC or denatured PVA to absorb menstrual liq.
UNI CHARM KK 14.06.77-JA-070702
A96 P32 (13.01.79) A61f-13/18

A menstruation article comprises a crushed pulp layer for introducing menstrual liquid into next layer by absorbing it in the form of spot, a polymer layer formed of a water permeable sheet and a powdery material coated on both surfaces of the sheet, the polymer layer having slits for leading the residual menstrual liq. to next layer therethrough, the powdery material being a gelling water insol. material and absorbing and swelling the menstrual liq., and a water absorbing paper layer for absorbing the residual menstrual liq. supplied from the polymer layer. The menstruation article includes also a leakage prevention sheet, a fibre layer, and water permeable sheets.

Reflux of the menstrual liq. is prevented by the polymer layer. The powdery material is composed of partially crosslinked starch modified polymer, modified carboxymethyl cellulose, and/or modified polyvinyl alcohol.
14.6.77 as 070702 (4pp76)

UNIC- ★ D22 13416B/07 ★J5 4004-500
Absorbent sanitary towel - including partially crosslinked starch denatured polymer, denatured CMC or denatured PVA to absorb menstrual liq.
UNI CHARM KK 14.06.77-JA-070703
A96 P32 (13.01.79) A61f-13/18

A mentruation article comprises a crushed pulp layer for leading menstrual liq. to next layer by absorbing it in the form of spot, a polymer layer formed of a water permeable sheet and a powdery material coated on both surfaces of the sheet, the polymer layer being provided with an aperture at the centre and leading the residual menstrual liq. to next layer therethrough the powdery material being a gelling water insol. material and absorbing and swelling the menstrual liq., and a water absorbing paper layer for absorbing the residual menstrual liq. introduced from the polymer layer. The menstruation article also includes a leakage prevention sheet, a fibre layer, and water permeable sheets.

Reflux of the menstrual liq. is prevented by the polymer layer to provide menstruation articles having good absorption property. The powdery material is composed of partially crosslinked starch modified polymer, modified carboxymethyl cellulose, and/or modified polyvinyl alcohol. 14.6.77 as 070703 (4pp76)

BUCY D22 28811T/18 =J7 9000-935
Insoluble craboxy methyl cellulose salts - by caustic digestion of ce paste and etherification with a carboxylic acid
BUCKEYE CELLULOSE CORP 21.10.70-US-082797
*A11 F01 P34 (A96) (18.01.79) *BE-774-186 +C08l-01/28*

Alkaline salts of carboxymethyl cellulose are produced by (1) formign a cellulose paste with an aqs. soln. of an inert organic diluent (isopropanol) having water/cellulose organic diluent (isopropanol) having water/cellulose wt. ratio of 3 to 7/1 and diluent/water wt. ratio of 4 to 10/1; (2) digesting the paste with a water-soluble alkali metal hydroxide (I) with a molar ratio of (I) to anhydroglucose unit of cellulose of at least 0.5 at 0-30°C for 0.1-1 h.; (3) r acting under acid conditions with an etherifying cpd. (II) (monochloracetic acid) contg. carboxy gps. with a molar ratio of (I) to (II) of 1.1-1.9 and using 0.4-8 moles of (II) per mole of anhydroglucose unit of cellulose for 3-24 hr. at 60-80°C with inverse logarithimic variation of temp. with time to obtain salts of degree of substitution of 0.4-1.2, water solubility of below 35%, water retention index of 1,000-7,000 (%) and salt retention index of 400-2500 (%). The total liquid/cellulose proportion is 15-40/1.

The product is used for absorbent tampons, sanitary napkins and surgical dressings. It is strongly insoluble in water, plae coloured, and shows improved retention.
21.10.71 as 083625 (+21.10.70-US-082797) C081-1/28 (18.1.79) BUCKEYE CELLULOSE CORP. (9pp)(J47008793)

TAKH/ ★ D22 13641B/07 ★SU -599-809
Disinfector for clothing, footwear etc. - has electrically heated chamber with steam generator and formaldehyde evaporator and spongy porous material lining
TAKHISTOV V A 15.09.75-SU-171784
P34 (07.04.78) A61l-03

Electrical disinfector, for use in medical engineering, for taking the infection out of clothing, footwear, etc., consists of a body with a lining made from sheet material, and a steam generator inside the body. The generator is a closed chamber with steam outlet pipes. A formalin evaporator is positioned in the top part of the chamber and consists of an open container, and an electric heater mounted underneath the steam generator.

The destructive effects of high temp. are avoided by bending the steam outlet pipes and fixing them in such a way that their exit ends are located at the bottom of the evaporator. The inner surfaces of the body are fastened to layers of spongy or porous materials, e.g. polystyrene foam.

Takhistov, V.A., Takhistov, Yu. V. Bul. 12/30.3.78.
15.9.75 as 171784 (4pp29)

ETHI D22 04377B/03 =US 4137-921
Crystalline lactide-glycolide copolymer - esp. as absorbable suture filament, by two/stage copolymerisation
ETHICON INC 24.06.77-US-809737
*A23 F01 P34 +P32 (A96) (06.02.79) *DT2827-289 A61l-17 +A61f-01/24*

An absorbable surgical suture comprises drawn and oriented filament(s) of a crystalline copolymer of lactide and glycolide contg. 50-75 glycolide. The suture has a crystallinity of ≥ 15%; and inherent viscosity of ≥ 1.0 (0.1% soln. is HF1P, 25°C); a straight tensile and a knot strengthe of ≥ 40,000 psi and 30,000 psi resp.; straight tensile strength retention in vivo of ≥ 40% after 14 days; and complete absorption in vivo within about 120 days.

Pref. the copolymer is an addition prod. of (a) a random copolymer of lactide and glycolide contg. 60-90% lactide and glycolide contg. 60-90% lactide, and (b) a mixt. of lactide and glycolide monomers contg. 70-90% glycolide.
24.6.77 as 809737 (8pp910)

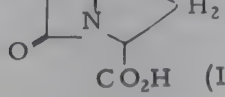
BIOM- ★ D22 14021B/07 ★US 4138-216
Ethylene oxide sterilisation monitor - which is also affected by humidity and temp.
BIO-MEDICAL SCIEN 23.12.77-US-864043
A97 E13 R16 (06.02.79) G01n-31/22

Device for monitoring ethylene oxide sterilisation consists of a wick impregnated with an ethylene oxide sensitive cpd., a pH sensitive dye and a quantifier, mounted on a backing strip and covered with an ethylene oxide impervious film, to form an envelope enclosing the wick but leaving one edge exposed.

The device is sensitive to humidity and temp. as well as ethylene oxide concn., which also affect the sterilisation process. It can be used to diagnose problems in sterilisation e.g. low humidity. 23.12.77 as 864043 (9pp955)

BEEC D22 07566Y/05 =US 4138-403
Aza bicycloheptanes inhibitors of beta:lactamase - useful in antiseptic and disinfectant solns.
BEECHAM GROUP LTD 13.10.75-GB-041888 (29.07.75-GB-031640)
*B02 (06.02.79) *BE-844-533 C07d-498/04*

Azalicycloheptanes (I) are provided which inhibit certain β-lactamase enzymes and have applications in antiseptics, disinfectants and pharmaceutical compsns. In the formula


(I)

R_1 is H, 1-4C alkyl, phenyl, 1-4 C acyl, carboxylic acid gp. or its benzyl ester or 1-4C alkyl substd. by 1-2 halogens.

Specifically claimed cpds. are 3-methyl or 3,3-dimethyl- 7-oxo-4-oxa-1-azabicyclo /3.2.0/ heptane-2-carboxylate and methyl 3-bromomethyl-7-oxo-4-oxa-1-azabicyclo /3.2.0/heptane-2-carboxylate; and 3-

methyl. 26.7.76 as 708343 (18pp1392)

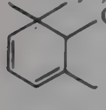
See Also

D15 DS 2307877 D16 GB 2001954

D23: OILS; FATS; WAXES

FIRM D23 13173U/10 =DS 2240-311
Unsatd cycloaliphatic ketones - for use as aroma agents in foodstuffs,drinks,perf mes,pharmaceuticals and tobacco
FIRMENICH SA 17.08.71-CH-012119
*E15 P15 (D13) (08.02.79) *DT2240-311 C07c-69/74*

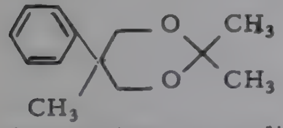
Unsatd. cycloaliphatic esters of formula (I)(where R is 1-4 C alkyl) are produced by treating the corresponding alkyl-α-isopropylidene acetoacetate with a cpd. obtd. by reacting a quaternary phosphonium salt of formula $[CH_2=CH-CH_2-PR_3]^+X^-$ (where R is alkyl or aryl and X is halogen. ClO_4^- or BF_4^-) with a strong base (e.g. CH_3Li or n-C_4H9Li) at -20°C to 20°C. (I) which is a pref. starting material for producing organoleptic ketones (with the acyl replaced by $-CH_2-CH=CH_2$) and an inter in the prodn. of a conj. ketone (wht the acyl replaced by $-CH=CH-CH_3$), are obtd. in improved yields. 16.8.72 as 240311 Div ex 2265462 (3pp922)



(I)

HENK ★ D23 12190B/07 ★DT 2734-295
2,2,5-Tri:methyl-5-phenyl-1,3-dioxan - useful as perfume component giving flowery, fruity note (NL 31.1.79)
HENKEL KG AUF AKTIEN 29.07.77-DT-734295
E13 (D21) (08.02.79) A61k-07/46 C07d-319/06

2,2,5-Trimethyl-5-phenyl-1,3-dioxan of formula (I) is claimed. (I) is made by reacting 2,2-dimethoxypropane with 2-methyl-2-phenyl-propanediol-(1,3) using an acid catalyst (esp. p-toluene sulphonic acid) at room temp. or slightly above.

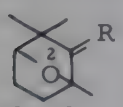


(I)

(I) has an intense lingering flowery, fruity aroma and is esp. useful as a component in perfume compsns, e.g. for use in cosmetics, creams, lotions, toilet water, soap, aerosols, etc. 29.7.77 as 734295 (6pp513)

GIVA ★ D23 12275B/07 ★DT 2832-137
1,4-Epoxy-1,3,3-tri:methyl-2-cyclohexane prepn. - from corresp. 6-cyclohexene-4-ol cpd. using acid NL 29.1.79)
GIVAUDAN L & CIE SA 19.05.78-CH-005464 (25.07.77-LU-077834)
E13 (D13 D21 D25) (08.02.79) A23l-01/22 A23l-02/26 A61k-07/46 C07c-69/16 C07d-307 C07d-493/08

Prepn. of cyclohexane derivs. of formula (I), in which R is a 2-cis- of 2-trans-butene-1-ylidene gp. is by heating 1,3,3-trimethyl-2-(3-hydroxybutylidene)-6-cyclohexene-4-oil (II) in an acid medium. Cpds. (I) are claimed as new.



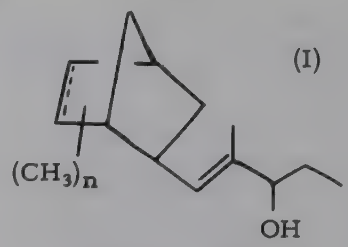
(I)

(I) are useful aroma components with a fresh, green, spicy, natural note reminiscent of cassis buds and exotic fruits such as mango, passion fruit, grapefruit, etc. They are useful in perfumery and as aromatising agents in cosmetics, soaps, powders, toothpaste, shampoos, detergents, foodstuffs and drinks. 21.7.78 as 832137 (26pp513)

TAKS ★ D23 12307B/07 ★DT 2833-283
Substd. norbornene and norbornane cpds. - useful as perfume components to replace natural sandalwood oil (NL 30.1.79)
TAKASAGO PERFUMERY KK 14.11.77-JA-136547 (28.07.77-JA-090846)
E15 (08.02.79) A61k-07/46 C07c-31/13 C07c-33/05

Norbornane- and norbornene cpds. of formula (I) are claimed in which the dotted line is an opt. additional bond and n = 0 or 1.

(I) are relatively easy to synthesise and have an aroma resembling that of natural α, β-santalol. They can be used in perfumes as a replacement for expensive natural sandalwood oil.

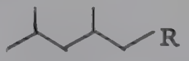


(I)

In the prepn. of (I), in which the additional bond is present, (methyl)cyclopentadiene is subjected to Diels-Alder reaction with acrolein, the Diels Alder adduct is condensed with diethyl ketone in the presence of an alkali, and the resulting ketone cpd. is reduced. In the prepn. of cpds. (I) in which the double bond is absent, the Diels Alder adduct is reduced before reaction with the diethylketone. 28.7.78 as 833283 (24pp513)

GIVA ★ D23 12500B/07 ★GB 2001-984
Tri:methyl-octanol(s) and di:methyl-nonanol(s) odorants - esp. useful in combination with natural odorant compsns.
GIVAUDAN L & CIE SA 15.06.78-CH-006537 (04.08.77-LU-077923)
E17 (14.02.79) A61k-07/46 C07c-29 C07c-31/02 C07c-33/02 C07c-49/06 C11b-09

Alcohols (I) (where R is (a) 1-hydroxy-2-methylpropyl, or (b) 3-hydroxybutyl) are new. Also claimed are the specific cpds. 2,5,7-trimethyl-1,4-octadiene-3-one (II); 2,5,7-trimethyl-3-octanone (III); 6,8-dimethyl-3-nonen-2-one (IV); and 6,8-dimethyl-3-nonen-2-ol (V), which are intermediates for (I), which is prepd. from them by hydrogenation.



(I)

(I) are stable in mixts., and are useful as odourants, esp. in combination with natural odourants, such as galbanum oil, vetiver oil, and cedarwood oil, etc. (Ia) has a fruity, apricot-like nuance, and brings about a velvet-like rounding-off effect much more important than the apricot-like odour. (Ib) has a pleasant flowery, fruity, earthy-green, mushroom-like note which gives an intensification and radiance to compsns. esp. with rose and jasmin notes. 3.8.78 as 032132 (9pp478)

MITU ★ D23 13092B/07 ★J5 4003-040
High yield bis:abolene prodn. - by reacting farnesol or nerolidol, 2-fluoro benzothiazolinium or 2-fluoro-pyridinium salts and tert. amine(s)
MITSUBISHI CHEM IND KK 08.06.77-JA-067472
E19 (11.01.79) C07c-05 C07c-13/19

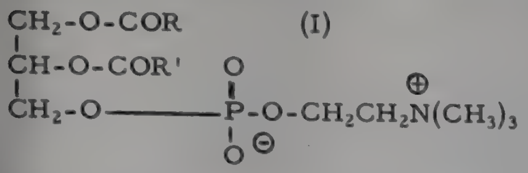
Bisabolene is produced by the reaction of (a) farnesol or nerolidol, (b) 2-fluorobenzothiazolinium salts or 2-fluoropyridinium salts and (c) tert. amines.

Pref. the amt. of (b) used is equimolar to 2 times the molar amt of farnesol and 3-10 time the molar quantity of nerolidol. The amt. of (c) used is 2-4 times the molar quantity of farnesol and 3-10 times the molar quantity of nerolidol. Pref. inert solvents such as methylene chloride, chloroform, benzene, etc. are used in amt. 5 litres per mole (a). The reaction is at -78°C to room temp. for 2-10 hrs. After the reaction, bisabolene is extd. with organic solvents immiscible with water (hexane, etc.) and purified by distn., etc.

Bisabolene (useful in perfumery) is thus produced under mild reaction conditions in high yields. 8.6.77 as 067472 (4pp136)

NISH- D23 61965X/33 =J7 9000-892
Lecithins prepn. - by acylating opt. monoacylated glyceryl phosphoryl-choline cpds.
NIPPON SHOJI KK 04.02.75-JA-015143
*B05 E11 (18.01.79) *DT2604-283 C07f-09/10*

Lecithins of formula (I):-



$$\begin{array}{lll} CH_2\text{-O-COR} & & \\ | & & \\ CH\text{-O-COR}' & O & \\ | & | & \\ CH_2\text{-O}\text{———} & P\text{-O-}CH_2CH_2\overset{\oplus}{N}(CH_3)_3 & \\ & | & \\ & O^{\ominus} & \end{array}$$

(I)

(where R and R' are each the residue of a satd. or unsatd. fatty aicd), e.g. 1,2-dilinoleoyl-L-3-glyceryl-phosphoryl-choline, are prepd. by reacting corresponding cpds. in which ≥ 1 of -COR and -COR' is/are replaced by H, or a salt thereof, with a 1-acyl-imidazole or a 4-acyl-3-phenyl-1,2,4-oxadiazol-5-one as acylating agent in the presence of sodium methoxide or of an alkali salt of an N-contg. 5-membered heterocyclic cpd. as catalyst.

Lecithins of formula (I) make up > 50% of the phospholipids found in plants and animals. Lecithins contg. a high proportion of essential fatty acids e.g. linoleic acid or linolenic acid have been used as medicaments. Lecithin is also one of the components of various biomembranes. 4.2.75 as 015143 C07f-9/10 (18.1.79) NIPPON SHOJI KK (5pp)(J51091213)

MONS D23 78742R/42 =J7 9000-907

Aromatic esters of terpenols used in - perfumery

MONSANTO CO 28.04.69-US-819966

*E15 (18.01.79) *BE-749-602*

NISW ★ D23 13567B/07 ★J7 9001-324

Purificn. of palm oil - by heating under reduced pressure with introduction of water vapour, then decolourising and deodorising

NISSHIN OIL MILLS KK 18.12.69-JA-101255

(23.01.79) C11b-03/10

Palm oil which has been treated with an alkaline substance is heated at 230-270°C with introduction of water vapour under reduced pressure for 10 to 60 mins., and then the prod. is decolourised by use of an adsorbent, followed by deodorisation. There is obtd. purified palm oil having good taste and high stability to heat, in high yield at low cost.

In an example, palm oil which had been treated with alkaline substance in conventional manner was heated at 250°C with introduction of water vapour for 30 min., under reduced pressure, and the prod. was treated with a mixt. of 9 wt.pts. of acid clay and 1 wt. pt. of activated carbon to decolourise it, and then deodorised. The colour of the obtd. purified oil was as follows; chromaticity Y was 5.0 and R was 0.5 (Robibond colorimeter, 133.4 mm cell). Even when the obtd. palm oil was heated at 180°C for 20 hrs. no obnoxious smell was detected. 18.12.69 as 101255 C11b-3/10 (23.1.79) NISSHIN OIL MILLS KK (3pp22)

LVPE= ★ D23 13820B/07 ★SU -600-169

Perfume compsn. having floral scent with resinous tinge - based on hydroxy-citronellal, di:ethyl phthalate, benzyl salicylate and foundation mixts., with addition of odorous cpds. and resinoid(s)

LVOV PERFUME COSMET 23.11.76-SU-423831

(03.04.78) C11b-09

Perfume compsn. having an original flower-scented aroma with a resinous tinge contains (in wt.%) vanilin 0.1-0,3, eugenol 0.4-0.6, muscatel sage oil (first fraction) 0.9-1.1, extract of oak moss (50% alcohol soln.) 1.3-1.7, linalool D 1.2-1.8, sandal oil 1.3-1.7, vetiveryl acetate (or compsn. 'vetiver oil') 1.4-1.6, compsn.'Fleur d'orange oil 1.8-2.2, heliotropin 1.9-2.1, ladanum resinoid 2.4-2.6, jasmine aldehyde 3.5-4.5, compsn. 'Honeysuckle' (RTM) 4.0-6.0, benzyl salicylate 9.0-11.0, compsn. 'Traviata' (RTM) 11.0-13.0, diethyl phthalate 12.0-14.0, hydroxy-citronellal 17.0-19.0, and compsn. 'Jasmine No. 2' (RTM) 18.0-22,0.

Pokolenko, I.T., Kartoshkina, A.I., Chernyuk, S.M. et al. Bul. 12/30.3.78. 23.11.76 as 423831 (2pp70)

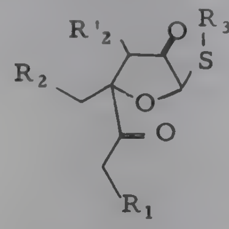
INFL D23 53305A/29 =US 4138-413

2-Acyl-tetra:hydro:furan-4-one-5-thioether derivs. - flavouring and aroma components for foods, medicines, tobacco etc.

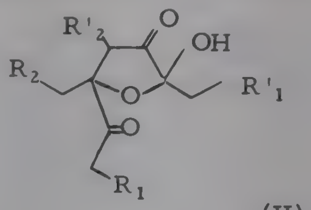
INT FLAVORS & FRAGR INC 28.07.77-US-819888 (17.03.78-US-887631)

*B07 E13 +P15 (B03 D13 D18) (06.02.79) *US4092-333 C07d-307/32*

Prepn. of 2-acyl-5-substd. thiatetrahydrofuran-4-one cpds. of structure (I) comprises (i) dimerising in the presence of base, a 4-6C α,β-diketone R_{11}-CH_2-C(O)-C(O)-CH_2-R_{12} to form an α,β-diketone dimer of structure (II);



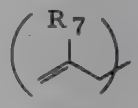
(I)



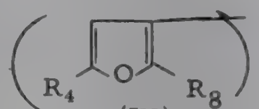
(II)

then (ii) reacting the dimer with mercaptan, R_3SH in the presence of an acid catalyst.

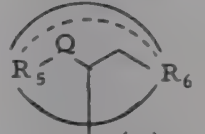
In the formulae, R_1, R_2R_1' and R_2' are H or methyl, R_3 is 1-9C alkyl, benzyl, phenyl, (un)substd. allyl of structure (III); (un)substd. 3-furyl of structure (IV); oxy



(III)



(IV)



(V)

or hydro alkyl of structure (V). Q is > C=O or > C-OH. R_5 and R_6 are lower alkyl or together complete a cycloalkyl ring. R_4, R_7 and R_8 are H or methyl. R_{11} and R_{12} are H or methyl provided that the total number of moles of methyl gps. and H gps. constituting R_{11} and R_{12} is equiv. to the total number of moles of methyl gps. and H gps. constituting R_1, R_2, R'_1 and R'_2.

The new cpds. are used in enhance or modify the flavour and aroma of foods, tobacco, medicines, perfumes, etc. Coffee, roasted almond, liquorice or caramel notes may be provided. US 4092333 claimed the cpds. per se. 17.3.78 as 887631 Div. ex. 4092333 (11pp945)

DAII D23 25706A/14 =US 4138-416

Allergen-free lanolin wax - produced by adsorbing lanolin on an adsorbent and eluting with a non-polar solvent and used in pharmaceutical and cosmetic compsns.

DAI-ICHI CRODA CHEM (DAII-) 28.09.76-JA-117034

*B07 (D21) (06.02.79) *DT2743-674 +C07j-09*

Non-allergenic lanolin, free from skin irritants, is obtd. by fractionating woolgrease or lanolin into non-polar lanolin wax (I) and polar lanolin wax (II). A soln. of woolgrease or lanolin in non-polar solvent (III) is passed through a column of an adsorption medium (IV) for free fatty alcohols. The passed soln. is evaporated to obtain (I) whilst (II) is recovered by eluting the column with polar solvent, e.g. CH_3OH and evaporating the elute.

(III) is e.g. n-hexane, $CHCl_3$; (IV) is e.g. activated clay with particle size 16-200 (30-200) mesh. (I) is substantially odour and colour-free, with total free fatty alcohol content ≤ 1.7% and 1,2 diol content ≤ 0.26%, and has wide applications in cosmetics and pharmaceuticals. (II) has uses in industry due to improved hydrating, emulsifying, plasticising and lubricating properties. 26.9.77 as 836794 (5pp1392)

D24: SOAP; SOAP DETERGENTS

NOTHING TO REPORT

D25: OTHER DETERGENTS

FARH ★ D25 11931B/07 ★BE -869-719
Detergent additive contg. sodium sulphate and/or tri:poly:phosphate - which is used as a powder sprayed with specified phosphoric acid ester
HOECHST AG 19.08.77-DT-737409
A97 E11 (E34) (12.02.79) C11d

The granular free-flowing powder contains (a) a primary, secondary or tetiary orthophosphoric acid ester, in which the alcohol constituent is a 1-24C aliphatic alcohol, the reaction prod. of a fatty alcohol with 2-3 mols. ethylene oxide, phenol, or the reaction prod. of a 7-20C mono-, di, or trialkylphenol with 4-20 mols ethylene oxide and (b) powdered anhydrous sodium sulphate and/or sodium tripolyphosphate having a max. apparent density of 500 g/l.

The ratio of (a):(b) is 0.5-1:1 and (a), liquid or molten, is applied by spraying to the surface of the particles of (b) The prod. is used at 0.1-50% in an organic surfactant detergent prod.

Used esp. in washing powders, the prod. is stable to storage, is easier to prepare than previous prods. contg. the phosphoric acid esters and the prepn. provides a satisfactory method of incorporating the often waxy or pasty esters. 11.8.78 as 869719 (9pp597)

BENC ★ D25 11963B/07 ★BE -871-047
Granulation products contg. polymerised phosphate and aluminosilicate - prepd. in nebuliser or rotating tube by spraying
BENCKISER J A GMBH 05.10.77-DT-744773
E37 (01.02.79) B01j C11d

The prod. based on polymerised phosphate and alkali metal aluminosilicate ion-exchanger, in which the phosphate polymer is a highly polymerised phosphate opt. mixed with sodium tripolyphosphate, according to the parent patent, are prepd. by spraying water on a granulation plate. The improvement comprises spraying the water on phosphate polymer/aluminosilicate in a rotating tube or in a nebuliser.

The prods. used in washing powders, are free flowing, do not cake and resist abrasion. 5.10.78 as 871047 Add to 865572 (8pp597)

UNIL ★ D25 B/07 ★BR 7704-792
Detergent in bar form
UNILEVER NV 21.07.77-BR-004792
(06.02.79) C11d-03/06

QUIM- ★ D25 B/07 ★BR 7805-654
Non-polluting detergent compsn.
QUIMICA MILEN S/A 30.08.78-BR-005654
(06.02.79) C11d-09/26

VELW ★ D25 12033B/07 ★DL -133-233
Granular oleyl methyl tauride, useful as surfactant - prepd. by direct reaction of oleyl chloride and N methyl tauride
VEB LEUNA-WERK W ULBRICH 10.10.77-DL-201417
E16 F06 (20.12.78) C07c-143/15

A process for the continuous prodn. of granular oleylmethyltauride (I) by reacting oleyl chloride and N-methyltauride in the presence of an acid binding agent. In a first stage, the reactants are reacted at 60-120°C and 10-120 atmos. for 10-60 sec. In a second stage, the reaction prod. is released to 50-70°C and 250 Torr to dehydrate it. In a third stage, the prod. is raised to 90-120°C and 10-110 atmos. and finally released through a perforated plate.

The prodn. are useful as surface active agents, e.g. in the textile industry as cleaning, wetting and dispersing agents, dyeing aids, etc. and as components in body care agents. Compared with prior art agents of this type, the present material have little ballast substance content and a high apparent density (0.6 g/cm^3), giving good keeping properties and improved transport properties. 10.10.77 as 201417 (7pp513)

JOHN/ ★ D25 12453B/07 ★GB 1540-386
Water-based cleansing and degreasing compsns. - contg. water-in-oil emulsifier together with high HLB surfactant, useful for skin cleaning etc.
JOHN W H T 15.11.75-GB-047150
E19 (14.02.79) C11d-01

Aq.-based surface active compsns. for use as cleaning or degreasing agents consists of a mixt. of a surfactant (I) of HLB $\ngtr$ 6, and another surfactant (II) of HLB $>$ 6. The amts. of (I) and (II) are such that the HLB of the mixt. is high enough for the mixt. to have detergent properties.

Compsn. is effective in removing unwanted dirt and grease from objects, but does not leave the treated surface completely oil-free. Compsn. is thus useful for cleaning ferrous metal surfaces (and preventing subsequent rusting) etc. In partic., however, the compsn. is useful for cleaning hands, and esp. after repeated use the hands do not roughen or chap, and the texture and appearance of the skin may even improve.

Suitable (I) include mono- and diglycerides of long chain fatty acids; sugar fatty acid esters; polyoxyethylene alcohols. Suitable (II) include nonionics (esters of $\nless$ 8C pref. 12-20C fatty acids with sugars, opt. further substd. with polyethers; polyoxyalkylene acids, alcohols and their adducts, such as fatty glycerides), and cationics (substd. NH_4 cpds.,) but are esp. anionic surfactants (fatty alcohol hydrogen sulphates or alkyl aryl sulphonates both usually as Na salts; or esters formed by addn. of H_2SO_4 to the double bond of olefins of mol. wt. $\nless$ 140). 15.11.76 (5pp478)

ICIL D25 79357X/43 =GB 1540-719
Emulsifiers decomposing on change of acidity in aq. emulsions - for removing mineral or vegetable oils from surfaces, and for use in metal-working oils
IMPERIAL CHEM INDS LTD 12.02.76-GB-005610 (07.04.75-GB-014143)
*E19 M12 +P43 (14.02.79) *BE-840-485 B01f-17/18 C10m-01/06 C11d-07/50*

Emulsion comprises water, a water-immiscible liquid and an emulsifying agent (I) which is decomposable by alteration of the pH of the emulsion and has formula $R_1R_2R_3N^+(CH_2)_mCOO[CH_2CH(Y)O]_nR_4\ X^-$. In the formula, R_1, R_2 and R_3 are each opt. substd. alkyl or alkenyl of 1-4C or H; or one of R_{1-3} may also be cyclohexyl or benzyl; or R_1 and R_2 together with the N may form a ring contg. 4-5C atoms and opt. a further heteroatom.

R_4 is a 1-30C hydrocarbon gp. X^- is an anion. Y is H or methyl; m is 1 or 2; n is 0 or has an average value of 1-30; and when R_4 contains $<$8C then Y is methyl and n $\geqslant$ 3.

The emulsion can readily be broken by addn. of acid or alkali to decompose (I). It is esp. useful in the form of a metal-working fluid, e.g. a cutting or rolling oil. The oil component is readily recoverable after use. 25.3.76 (6pp927)

UNIL D25 79396X/43 =GB 1540-722
Fabric conditioning compsn for use in washing rinse - contg anti soiling agent and softener of solubility below 500 ppm
UNILEVER LTD 15.04.75-GB-015450
*A87 E16 F06 (A97 E14) (14.02.79) *BE-840-614 +C08l-05/16 C08l-77*

Fabric treatment compsn. comprises (A) (i) a condensatio prod. (I) or (ii) a reaction prod. of an alkylene oxide with polyamide; (B) a cationic fabric softener cpd. having a solubility in water of ≯500 ppm at 25°C; and (C) an aq. medium.

(I) is a condensation prod. of (a) an aliphatic dicarboxylic acid or an ester- or amide-forming deriv. thereof; (b) a hydroxy-polyoxyalkylene cpd. contg. $\geqslant$1 polyalkylene chain consisting of oxyalkylene radicals linked directly to one another, or an ester- or amide-forming deriv. thereof; and (c) a cpd. selected from (1) a (cyclo)aliphatic amino acid or lactam; (2) a (cyclo)aliphatic diamine or a salt thereof with an aliphatic dicarboxylic acid; (3) a mixt. of (1) and (2) and (4) an ester- or amide-forming deriv. of (1), (2) or (3).

Compsn. is used in a rinsing process subsequent to a washing operation. It provides improved softness and soil release effect, and is esp. suitable for treatment of polyamide fabrics. 13.4.76 (5pp927)

UNIL D25 81222X/44 =GB 1540-832

Powdered spray-dried detergent compns - from aq suspensions giving homogeneous incorporation of activators of per-compounds

UNILEVER LTD 18.04.75-GB-016147

*E19 (E37) (14.02.79) *BE-840-887 C11d-03/39 C11d-11*

Prodn. of a detergent powder compsn. comprises (i) forming an alkaline aq. slurry of a surfactant, a builder salt and an organic activator for peroxy cpds. having a hydrolysis rate (as measured by a described test) of ≯15%; and (ii) spray-drying the slurry to form a particulate compsn. having the activator homogeneously distributed in it.

Pref. slurry comprises 40-60 wt.% of water and 0.2-10 (esp. 0.5-7.5) wt.% of the activator. The activator is pref. N,N,N',N'-tetraacetylethylene diamine. Pref. the slurry is heated to 60-90°C before spray-drying, and is spray-dried at an inlet air temp. of 275-350°C and an outlet air temp. of 100-115°C.

Method provides a stable prod. in which sepn. of the activator during transport and storage is minimised. 15.4.76 (8pp927)

DUPO D25 57582X/30 #GB 1540-858

Decreasing soil redeposition of dry cleaning fluids - by adding an organic ester of ortho-titanic acid

DU PONT DE NEMOURS CO 20.01.75-US-542235 (12.04.76-GB-014831)

*E12 G04 (14.02.79) *US3969-073 +C11d-01 C11d-03/20 C11d-10/02*

Textile cleaning compsn. comprises textile dry cleaning organic solvent and 0.1-2.0 wt.% dry cleaning detergent and 0.01-0.3 wt.% organic ester of ortho-titanic acid.

Pref. organic ester of ortho-titanic acid is tetraisopropyl-, tetrastearyl-, tetrakis(2-ethylhexyl)- or tetrabutyl titanate or titanium diisopropylate diacetylacetonate. Compsn. additionally contains ≯1.5 wt.% water. Process for dry cleaning comprises agitating textile material in compsn. contained in bath, separating material and drying.

Compsn. results in marked reduction in soil redeposition on fabrics during cleaning as well as improved cleaning efficiency. Compsn. are applicable to dry cleaning processes where oil and water repellents such as wax and polyfluoro repellent materials are incorporated into liq. 12.4.76 as 014831 (5pp931)

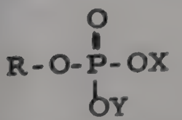
KAOS ★ D25 12731B/07 ★J5 4001-307

Detergent compsn. for dry cleaning use - contain alkyl phosphate ester cpds. and pref. nonionic surfactant comprising fatty acid ester

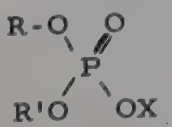
KAO SOAP KK 06.06.77-JA-066476

A97 E11 G04 (E17) (08.01.79) C11d-07/60 C11d-10/02

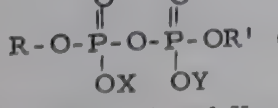
Detergent compsns. for dry cleaning are composed of alkyl phosphate esters of formula (I), (II) and (III) which form 4-50 wt.% in the compsns.



$R-O-\overset{O}{\underset{OY}{P}}-OX$ (I)



(II)



$R-O-\overset{O}{\underset{OX}{P}}-O-\overset{O}{\underset{OY}{P}}-OR'$ (III)

(where R and R' are 6-10C alkyl or alkenyl; X and Y are alkali metal or alkaline earth metal). The compsns. pref. contain 0.5-30 wt.% nonionic surfactants comprising mono or diester of 10-20C fatty acid with polyethylene glycol with average polymerisation degree 2-200, or mono-, di- or triester of 10-20C fatty acid with sorbitan or polyoxyethylene sorbitan with ethylene-oxide addn. mol. no. < 200.

The detergent compsns. provide simultaneous washing, antistatic treatment and softening treatment, while eliminating fundamentally the disadvantages pertaining to the use of cationic surfactants, like development of disagreeable odour, discolouration when used in combination with fluorescent dyes and corrosion of metals. 6.6.77 as 066476 (7pp43)

ASAH ★ D25 13118B/07 ★J5 4003-107

Tri:carboxylic acid additive for soaps and cleaners - improving soap solubility in water

ASAHI CHEMICAL IND KK 10.06.77-JA-067860

E14 (E12) (11.01.79) C11d-03/20 C11d-09/26

Novel additive for soaps and cleaners is of formula CH$_2$(COOM$_1$)-CH$_2$-CH$_2$-CH(COOM$_2$)-CH$_2$-CH$_2$(COOM$_3$) (I) (where M$_1$, M$_2$ and M$_3$ are H, Na, K, Li and/or NH$_4$).

Solubility of soap and cleaner in water is increased (i.e. content of solid soap can be increased). Cpds. of nitrogen and phosphorus are not present (i.e., components encouraging growth of algae and undesirable water plants are avoided). The tricarboxylic acid can be prepd. easily by the hydrolysis of 1,3,5-tricyanohexane which is the byproduct in the electrolytic dimerisation of acrylonitrile. It is neutralised with alkali, and usually added in amt. of 1-90 wt.% (pref. 5-70 wt.%) on solid soap. 10.6.77 as 067860 (4pp170)

DOWC ★ D25 14072B/07 ★US 4138-352

Detergent for synthetic fabrics, esp. polyester(s) - comprises polyethylene glycol alkyl mono:ether, sodium sesqui:carbonate, sodium silicate hydroxy:butyl methylcellulose and sodium carbonate

DOW CHEMICAL CO 03.02.78-US-878122 (23.04.76-US-679536)

A97 E34 (A11 A25 E17) (06.02.79) C08b-11/19 C11d-03/37 D06m-13/18 D06m-15/24

The compsn. contains (by wt.) (a) 20% of an 8-22C alkyl monoether (I) of a polyethylene glycol having 5-20 alkylene oxide units; (b) 60% Na sesquicarbonate; (c) 10% Na silicate (SiO$_2$:Na$_2$O ratio 2-3:1) (d) 0.1-2% hydroxybutyl methylcellulose (II) of DS 1.5-2.3 and MS 0.01-0.6; and (e) 10% Na$_2$SO$_4$.

The compsn. inhibits the redeposition of soil, imparts potent antisoil props. to fabrics, and is partic. useful for washing synthetic fabrics, esp. polyesters. In an example a compsn. was prepd. from surfactant (20%) NaHCO$_3$. Na$_2$CO$_3$ (60%), Na silicate (SiO$_2$:Na$_2$O-2.4:1) (10%), (II) (1%), and Na$_2$SO$_4$ (9%). 3.2.78 as 878122 (+7.3.77-US-775136)(7pp478)

PQCO- ★ D25 14076B/07 ★US 4138-363

Sodium form zeolite for use as detergent builder - is reacted with silane having hydrophilic functionality to reduce agglomeration

PQ CORP 14.09.77-US-833122

E33 (E11) (06.02.79) B01j-29/06 B01j-31/02

A hydrophilic silane zeolite compsn. consists of 96.65-99.95 wt.% zeolite and 0.05-3.35 wt.% of a silane having a hydrophilic functionality. The zeolite is in the Na form and contains 15-35% in water. Used as a builder in detergent compsns. The silane modified zeolite does not agglomerate with other detergent ingredients.

Suitably, the zeolite is slurried in a soln. of 0.1-0.9 wt.% water in an organic solvent and a silane contg. an acrylate, epoxy, amine or carboxylate gp. is added to react with the zeolite surface. The organic solvent is then removed. Pref. the zeolite has the formula $Na_x[(AlO_2)_x(SiO_2)_y]\,ZH_2O$ where x and y are each $\geqslant$ 6 and the molar ratio x:y is 0.1-1.1:1. 14.9.77 as 833122 (4pp1302)

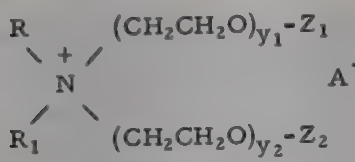
GENA D25 77054Y/43 =US 4138-371

Amphoteric surfactants, useful in soap and shampoos - comprise sulphated quaternised ethoxylated long chain alkylamines

GAF CORP 07.04.76-US-674442 (09.04.73-US-349560)

*A25 (A97) (06.02.79) *NL7612-898 C11d-01/12*

Aq. compsn. for washing human hair and skin contains amphoteric surfactant of quat. ethoxylated amine of formula (I) where R is 8-14 alkyl, R_1 is 1-2 alkyl or benzyl, y_1 and y_2 are each integers with sum 5-50, Z_1 is with the bonded O, a sulphate ester in free acid form or as sodium, potassium, calcium or magnesium salt, Z_2 is H or Z_1, A is a halide, sulphate, 1-2C alkyl sulphate or mixt.



$$R(R_1)N^+(CH_2CH_2O)_{y_1}\text{-}Z_1(CH_2CH_2O)_{y_2}\text{-}Z_2\ A^-$$

(I)

Pref. Z_1 is sodium salt, R_1 is ethyl and A is ethyl sulphate or R_1 is benzyl and A is chlorine. Sum of y_1 and y_2 is 10-20. Pref. R is derived from cocoamine. Compsn. is in aq. soln. of a shampoo formulation contg. 20% surfactant and 1.5% of long chain amine oxide, or bubble bath concentratecontg. 20% surfactant and 5% coconut diethanolamide.

Cpds. have advantage of preventing accumulation of electrostatic charges, impart a soft hand to hair and permit ready combing. 8.8.77 as 822703 (+25.3.75-US-561673)(8pp931)

KHOD/ ★ D25 14099B/07 ★US 4138-425

Anionic surfactant prepn. - from phenol extracts of petroleum distn. by propoxylation, then sulpho-esterification

KHODZHAKHANOV N A 09.11.77-US-849982 (14.02.72-US-226307)

E14 H01 M25 (06.02.79) C07c-141/16 C11d-01/22

New anionic surfactants are of formula (I) R-Ar-$(CH_2)_3$-O-SO_3NH_4 (where R-Ar is a radical resulting from phenol extracts obtd. from the bottoms of petroleum distn.; R is 9-15C aliphatic radical; and Ar is a mixt. of benzene, naphthalene and anthracene radicals).

(I) are prepd. from readily available, inexpensive starting materials, and are useful as domestic detergents, as floating agents in metallurgy, as mud fluid stabilisers, and as antifoam agents. (I) are readily and completely soluble in H_2O and EtOH, and reduce H_2O surface tension to 27-29 erg/cm^2 (with known detergents, redn. is to 30-32 erg/cm^2).

In an example, a (I) was prepd. in 85% yield by alkylation of a phenol extract (obtd. in a petroleum distn. at 360-500°C) with propylene oxide and NH_4Cl at 30°C, followed by treatment with NH_2SO_3H and urea (catalyst) in petroleum ether for 2 hr. at 115°C. 9.11.77 as 849982 (3pp478)

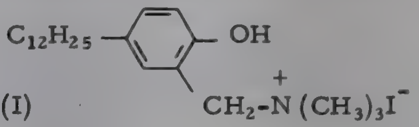
UNIL D25 32625Y/18 #US 4138-435

Novel hydroxamic betaines - useful as fabric softeners compatible with surfactants

LEVER BROTHERS CO 19.09.72-GB-043274 (03.12.76-US-637249)

*E19 F06 (06.02.79) *US4020-100 +C07c-87/30*

N-(dodecyl-hydroxybenzyl)-N,N,N-trimethylammonium iodide of formula (I) is prepd. for use in detergent compsns. by adding 0.3 mol of 30% aq. formaldehyde to 0.2 mol. of dodecyclphenol in 100 ml. ethanol, then using solvent extraction procedure by addition of 30% ethanolic dimethylamine, product being contained in oily layer.



(I)

Detergent compsn. are formed by hydroxamic betaines with formula $R^1(R^2)(R^3)N^+\text{-}R^4\text{-}CO\text{-}NH\text{-}O^-$ where R^1, R^2, R^3 and R^4 are 1-25C hydrocarbons such that betaine has < 45C, ≥ 1 carbon chain has ≥ 12C, carbon chain of R^4 between the quat. N and carbonyl gp. is ≤ 4C.

Compsn. are used in fabric softening rinse compsns. as well as detergents, remain in dispersion during the washing process, but deposit onto the fabric when the pH decrease during subsequent rinsing. 27.12.76 as 754720 Div. ex. 4020100 (+3.12.76-US-637249)(4pp931)

See Also

D22 J5 4004287 D23 DT 2832137

*AAIN= 19.07.77 AS ARMN INORG CHEM A97 D13 (A14) *DT 2830-324
Chewing gum base - 12242B/07
*AGEN 08.06.77 AGENCY OF IND SCI TECH A91 D15 H07 J01 *J5 4003-363
Purificn. of emulsified effluent e.g. contg. cutting oil - 13205B/07
*AGRI= 14.07.75 AGRIC MECHANISAT RE D14 *SU -599-765
Farm animal fodder press - 13624B/07
*AGRI= 27.02.76 AGRIC AGROCHEM SERV D13 *SU -599-186
Silage and hay drilling sampler - 13605B/07
AGRO- 06.08.76 AGROFERM AG A35 D16 E17 (A23) =US 4138-291
Selecting bacterial strains to produce poly:hydroxy-butyric acid - 10279A/06
*AGRO= 05.05.76 AGROPHYSICAL RES A91 D15 (A13 A35) *SU -600-146
Synthesis of lightweight ion exchange resin - 13797B/07
*AJIN 06.06.77 AJINOMOTO KK B04 D16 J04 *J5 4001-693
Determination of peroxidase activity - 12812B/07
*AJIN 07.06.77 AJINOMOTO KK D13 (D17) *J5 4002-351
Starch-contg. heat-processed food prodn. - 12938B/07
AJIN 08.06.77 AJINOMOTO KK B05 D16 E19 =J5 4002-398
Enzymatic d-alpha-amino acid prodn. - 91750A/51
AJIN 14.10.77 AJINOMOTO KK D13 #US 4138-271
Powdered caramel prodn. from starch or dextrin - 11069A/06
*AKMI= 23.11.76 AS KAZA MICROBIOL D16 *SU -600-170
Mould fungus, e.g. Aspergillus niger strain, culturing - 13821B/07
ALBR 26.07.77 BUSH BOAKE ALLEN D16 =NL 7807-919
Isomerising hops extract to form iso-alpha-acids for beer - 08010B/05
ALBR 27.07.77 BUSH BOAKE ALLEN D16 =NL 7807-975
Isomerising hops extract to form iso-alpha-acids for beer - 08017B/05
ALKU 27.06.77 AKZO NV A92 D25 E17 =NO 7802-178
Alkaline carbonate-acid detergent compsn. - 78401A/44
*ALTA= 23.11.76 ALTAI BUTTER CHEESE D13 *SU -599-774
Cheese-pressing mould without filter cloths - 13627B/07
ALWA- 20.03.72 ALWATECH A/S D13 =J7 9001-260
Concentrating aq proteinaceous sludge - 60500U/41
ALZA 24.08.77 ALZA CORP A96 B07 C03 D21 (A23) =US 4138-344
Biodegradable ortho-ester polymers - 48032X/26
AMBS 05.09.75 AMERICAN BRANDS INC D18 =CA 1047-352
Dilation process and appts. for cigarette tobacco - 16414Y/10
*AMCA= 20.07.77 AM USSR CARDIOLOGY D16 G06 *DT 2831-782
Forming visible images by ultrasonic irradiation of ferment plate - 12268B/07
AMCY 23.01.74 AMERICAN CYANAMID CO B03 D16 =US RE29-903
Antibiotics from Streptoverticullium netropsis - 82848X/44
AMCY 30.06.76 AMERICAN CYANAMID CO B03 C02 D16 =US 4138-481
Anticoccidial antibiotic BL 580 delta - 02059A/02
AMCY 20.06.77 AMERICAN CYANAMID CO B04 C03 D16 =DK 7802-756
Antibiotic BL 580 ZETA useful as anticoccidiosis agent - 00004B/01
*AMIN- 18.07.77 AMINKEMI AB B07 D22 *DT 2831-360
Heparinisation of charged surfaces - 12259B/07
ANIS 30.10.74 ANIC SPA D23 E16 =CA 1047-535
Dimethyl-3-hydroxy-6-octene nitrile prepn - 36376X/20
ANKE/ 10.05.77 ANKERSMIT H J D15 H03 J01 (H05) =FR 2390-190
Oil water sludge gravity sepn. - 84417A/47
ANVR 11.05.77 AGENCE NAT VALORISATION D13 =FR 2390-202
Kiln drying or roasting of beans - 84378A/47
ANVR 04.08.77 AGENCE NAT VALORISATION B04 C03 D16 =GB 2001-995
Immunostimulant 34129 RP from Streptomyces stimulosus - 06048B/04
*AOHA- 13.06.77 AOHATA KANZUME KK D15 (D16) *J5 4003-802
Treating organic waste liq. esp. contg. viscous polymeric material - 13227B/07
*ARAD/ 28.03.77 ARADI L C03 D13 *HU T015-930
Phosphate-contg. fodder mfr. - B/07
ASAG 19.05.75 ASAHI GLASS KK D15 J01 M12 (J03 M28) =J7 9001-096
Metal and acid recovery from waste liquor - 02600Y/02
*ASAG 14.06.77 ASAHI GLASS KK D15 E33 *J5 4004-874
Treating waste soln. contg. fluoride and arsenic cpds. - 13489B/07
ASAH 01.05.75 ASAHI KASEI KOGYO K A14 B04 D16 (A91) =GB 1540-711
Porous, polar copolymers having ion exchange capacity - 85369X/46
*ASAH 10.06.77 ASAHI CHEMICAL IND KK D25 E14 (E12) *J5 4003-107
Tri:carboxylic acid additive for soaps and cleaners - 13118B/07
ASAH 20.06.77 ASAHI KASEI KOGYO A88 D15 J01 (A11) =GB 2001-899
Hollow cellulose ester ultrafiltration membrane - 00328B/01
*ASAH- 08.06.77 ASAHI CARBON KK C03 D13 *J5 4004-767
Feedstuff for racehorses - 13443B/07
*ASEL= 29.11.76 AS USSR ELEMENT ORG D13 *SU -599-792
Gelled fruit flavoured confectionery prodn. - 13638B/07
ASHL 09.05.77 ASHLAND OIL INC A96 D25 E17 (A25 A97) =FR 2390-498
Detergent compsn. partic. for shampoos - 82097A/46
ATAR- 21.04.75 ATARA CORP D15 J02 =US 4138-335
Mixing gases into liquids - 85290X/46
*AUMO= 01.08.76 AS UKR MOLEC BIOL B04 D13 (D16) *SU -600-175
Biosynthesis of biologically active cpds. e.g. microbial enzyme - 13826B/07
*AZCH= 12.11.75 AZCHERRYBA BUR D12 *SU -599-783
Appts. for sorting fish according to thickness - 13630B/07

BADI 05.08.75 BASF AG D13 E17 =GB 1540-584
(2E)- (4Z)- unsatd. esters prepn. for use as flavouring agents - 14033Y/08
BADI 14.05.77 BASF AG A60 C03 D22 E14 =FR 2390-427
2-Tri:chloro:methyl-4-nitro:benzene:sulphenic acid derivs. - 82112A/46
BADI 27.07.77 BASF AG A97 D25 =NL 7807-932
Cold bleaching activators for washing compsns. - 08009B/05
BALG 23.04.76 BALLAST-NEDAM GRP NV D15 =US 4138-342
Gravity settler with many narrow channels - 75876Y/43
*BALL/ 10.05.77 BALLEIX R C03 D13 *FR 2390-109
Ruminant feed compsns. - 12403B/07
*BARO- 01.12.76 BAROMFIFELDOLGOZO D12 *HU T015-928
Meat hooks for processing plant - B/07
BATT 10.06.77 BATTELLE MEMOR INST C03 D13 =J5 4004-768
Carbohydrate based ruminant feedstuff - 89608A/49
BEEC 20.04.74 BEECHAM GROUP LTD B02 C02 D16 =HU T015-976
Clavulanic acids and derivs - 72840W/44
BEEC 12.06.75 BEECHAM INC A96 D21 (A23) =GB 1540-384
Conditioning shampoo compsn. - 31930A/17
BEEC 29.07.75 BEECHAM GROUP LTD B02 D22 =US 4138-403
Aza bicycloheptanes inhibitors of beta:lactamase - 07566Y/05
*BEEC 09.08.78 BEECHAM GROUP LTD A96 D21 E15 *BE -869-644
Skin treating compsn. based on oil-in-water emulsion - 11912B/07
BEGH- 25.07.77 BEGHIN-SAY SA D22 =NL 7807-795
Disposable nappies with integral elastic tie tapes - 72808A/41
*BENC 05.10.77 BENCKISER J A GMBH D25 E37 *BE -871-047
Granulation products contg. polymerised phosphate and aluminosilicate - 11963B/07
*BIOM- 23.12.77 BIO-MEDICAL SCIEN A97 D22 E13 *US 4138-216
Ethylene oxide sterilisation monitor - 14021B/07
*BLUE- 28.10.76 BLUE WING CORP C03 D13 *US 4138-505
Mfr. of nutrient compsn. for animal feed supplement - 14124B/07
BOEF 30.12.76 BOEHRINGER MANNHEIM GMBH D13 J07 =DL -133-295
Freeze drying granules of foods, drinks and pharmaceuticals - 47728A/27
*BOEF 23.12.77 SUDDEUTSCHE ZUCKER A97 D15 (D17) *DS 2757-859
Biological sugar refinery effluent treatment - 12099B/07
*BOHM/ 23.12.75 BOHM H D16 *DL -133-248
Autotrophic and mixotrophic culture - 12044B/07
*BOHM/ 23.12.75 BOHM H D15 *DL -133-249
Illuminator for large volumes of liquid media - 12045B/07
*BOHM/ 23.12.75 BOHM H D16 *DL -133-250
Alternate light and dark treatment of algae - 12046B/07
*BOHM/ 23.12.75 BOHM H A97 D16 *DL -133-251
Adaptors permitting insertion of fluorescent lamps in liquids - 12047B/07
*BOHM/ 23.12.75 BOHM H D16 *DL -133-252
Uniform illumination for photosynthesis - 12048B/07
*BOHM/ 23.12.75 BOHM H D16 *DL -133-253
Rapid photosynthesis efficiency test - 12049B/07
BOHT 00.00.75 BOHME DR T KG D18 =DS 2625-436
Fur pickling and tanning - 90369Y/51
BOHT 18.02.76 BOHME DR T KG D18 =DS 2606-420
Leather and animal skin processing into furs(SW140277) - 18780Y/11
*BOLO/ 22.12.75 BOLOGNA A D15 *US 4138-343
Appts. for removing debris from rolling sewage - 14068B/07
BRAU- 05.07.77 FA BRAUN K O KG A96 D22 F07 =SW 7807-497
Readily torn elastic bandage for surgical and sports usage - 80224A/45
BREW 11.06.74 BREWING PATENTS LTD D16 (D17) =CA 1047-436
Hop oil prepn - 77075W/47
BRIM 13.05.68 BRISTOL MYERS CO D21 E16 E24 =J7 9000-895
Nitro-p-phenylenediamine type cpds for use in hair - 22301R/14
BRTA 12.03.74 BRIT AMER TOBACCO LTD A97 D18 =CA 1047-241
Smoking material contg. a substd. cellulose binder - 50969W/31
BRTA 25.11.74 BRIT AMER TOBACCO LTD A97 D18 E37 =CA 1047-242
Tobacco substitute for mixing with natural tobacco - 26483X/15
BRTO 14.04.76 BOC LTD D15 J02 =US 4138-330
Dissolving gases in liquid - 77836Y/44
*BRUN/ 04.08.77 BRUNDBJERG N D22 *EP -----738
Charge absorbing, insulating casing for regenerating type air purifier - 12339B/07
BTEB- 00.00.73 BTE BRAUEREI TECH D16 =DS 2407-519
Brewery wort copper or mash tub - 58466V/33
BUCL 14.04.75 BUCKMAN LABS INC A26 D15 F09 (A97 D22) =CA 1047-692
Water soluble cationic amine-epichlorohydrin polymers - 02061X/02
BUCY 21.10.70 BUCKEYE CELLULOSE CORP A11 D22 F01 (A96) =J7 9000-935
Insoluble craboxy methyl cellulose salts - 28811T/18
BUCY 02.12.74 BUCKEYE CELLULOSE CORP A96 D22 F04 =CA 1047-384
Rustleless laminated web comprising three matted fibre webs - 46410X/25
*BUNA 05.08.77 CHEM WERK BUNA VEB A97 D18 (A13 A14) *DL -133-099
Aq. copolymer dispersion for treating leather - 11992B/07
BURP 09.06.77 BURTON PARSONS CO D22 E36 (E34) =J5 4003-807
Proteinaceous material separation from soft contact lens material - 63164A/35

BUTT= 16.05.75 BUTTER CHEESE IND D16 =SU -599-790
Spirits prodn. from milk - 90971X/49

• BUTT= 27.05.76 BUTTER CHEESE IND D13 *SU -599-789
Cheese enriched in milk protein(s) prepn. - 13636B/07

• CALY 24.11.75 CALIFORNIA INST OF TECHN A96 B04 D16 (A18) *US 4138-383
Aq. emulsion polymerisation compsn. - 14085B/07

CARP- 27.07.77 CARPIGIANI BRUTO D13 =DT 2832-878
Scraper blade for ice cream mixer - 10452B/06

CEVY- 26.04.77 CESKE VYSOKE TECHN D13 #GB 1540-793
Heat treatment of granular fruit seeds - 79379A/44

CEVY- 12.05.77 CESKE VYSOKE UCENI D13 #FR 2390-206
Heat treatment of granular fruit seeds - 79379A/44

CHAL- 18.11.75 ETAB CHALON-MEGARD D13 =US 4137-836
Cheese making in perforated vertical tube - 59773Y/34

CHAL- 23.06.77 CHALLENGE-COOK BROS D18 =GB 2002-041
Tumbler drum for treating hides - 75993A/42

CHIN 01.07.77 CHINOIN GYOGYSZER A97 D13 (A11) =SW 7807-384
Food flavours contained in cyclodextrin complex - 78426A/44

• CHLO- 15.06.77 CHLORINE ENGINEERS D15 J01 *J5 4004-880
Treating waste soln. from countercurrent washing of ion exchange resin - 13495B/07

CHRI- 08.08.77 CHRIST FILS SA D13 (D15 D16) =BE -869-592
Proteinaceous food made by controlled fermentation of waste water - 25801A/14

CIBA 29.10.73 CIBA GEIGY AG B05 C03 D22 =CA 1047-537
Halo-substd o-benzyl-phenols - 30963W/19

CIBA 02.11.76 CIBA GEIGY AG D15 E16 M14 (E12) =GB 1540-603
Aq. compsns. contg. salts of N,N-di:carboxymethyl alkyl amide(s) - 33403A/19

CIBA 11.05.77 CIBA GEIGY AG B05 D21 E14 =FR 2390-424
2-Phenylamino phenyl acetyl amide(s) - 82116A/46

CIBA 20.07.77 CIBA GEIGY AG A26 B07 C03 D22 (A18 A96 B04) =DT 2831-274
Water insoluble polysiloxane hydrogel - 09935B/05

CINT/ 30.07.77 CINTER J A84 D14 (A14) =NL 7807-828
Deep frying non-stick drum and heater for potato chips - 08036B/05

CLAR 27.05.77 CLARKE CHAPMAN LTD A88 D15 J04 =J5 4001-279
Ion exchange resin regeneration - 87800A/49

COLG 09.08.73 COLGATE PALMOLIVE CO D21 =CA 1047-405
Solid, effervescing denture cleaning agent - 03850W/03

COLG 24.02.75 COLGATE PALMOLIVE CO A96 D22 F07 =GB 1540-474
Absorbent pad - 56071X/30

COLG 08.10.75 COLGATE PALMOLIVE CO D22 =CA 1047-201
Reinforced throw away babys nappy - 11206Y/07

COLG 10.05.76 COLGATE PALMOLIVE CO A96 D22 (A11 A14) =GB 1540-794
Absorbant pads with enhanced absorption capacity - 63102Y/36

• COLG 28.05.76 COLGATE PALMOLIVE CO A96 B04 D21 *US 4138-477
Zinc-polymer complex in compsn. to control mouth odour - 14115B/07

COLG 20.12.76 COLGATE PALMOLIVE CO D22 =PT --67-395
Baby's disposable napkin with pressure sensitive adhesive tapes - 30282A/17

COLG 10.05.77 COLGATE PALMOLIVE CO D25 E19 =FR 2390-497
Opaque liquid detergent compsn. for cleaning hard surfaces - 67110A/38

COLG 10.05.77 COLGATE PALMOLIVE CO D25 E14 (E16 E34) =FR 2390-499
Liquid detergent compsn. for cleaning hard surfaces - 67111A/38

CORG 25 02.77 CORNING GLASS WORKS D16 E36 =FR 2390-376
Photo-metabolic hydrogen prodn. from water - 63766A/36

CORG 25.02.77 .CORNING GLASS WORKS D16 E36 =FR 2390-501
Photo-metabolic hydrogen prodn. from water - 63766A/36

COSA/ 18.04.77 COSACK C D15 J01 =US 4137-756
High pressure membrane cell - 78507A/44

• COUT/ 13.06.77 COUTURE F D14 *US 4137-839
Spiral peeling of axially rotated vegetable - 13974B/07

• CRAF- 10.06.77 CRAFT DENTAL LAB A96 D21 *J5 4004-496
Mouldable compsn. for dental use - 13413B/07

CRDC 10.06.77 CORDIS DOW CORP A32 D15 J01 (A88) =US 4138-460
Moulding resin baffles at intervals along filamentary bundles - 89666A/50

CSIR 18.07.77 COMMONWEALTH SCIENT ORG D14 =DT 2831-309
Threshing drum for stripping haulm from vegetable matter - 11282B/06

DAII 28.09.76 DAI-ICHI CRODA CHEM B07 D23 (D21) =US 4138-416
Allergen-free lanolin wax - 25706A/14

• DAIR= 19.11.76 DAIRY IND RES INST D16 *SU -600-179
Streptococcus lactis 220 strain - 13830B/07

• DAIR= 16.12.76 DAIRY IND RES INST D13 (D16) *SU -599-787
Fungal strain for alcoholic fermentation of milk - 13634B/07

DAMO- 20.08.75 DAMON CORP A97 B04 D16 J04 (A23) #GB 1540-461
Microencapsulation of labile biological material - 36210Y/21

DASU- 30.12.76 DANSKE SUKKERFAB D17 J04 =DL -133-367
Measurement of fluid concns. - 30285A/17

DEBA- 28.07.71 DEBAG DEUT BACKOFEN D11 =DT 2167-135
Automatic bakery plant - 09899U/08

DEBA- 05.05.77 DEBAG DEUT BACKOFE D11 =FR 2390-102
Hot air circulating baking oven - 10506A/06

DEGM 18.11.71 DEGREMONT SA D15 J01 =FR 2390-192
Biological submerged sewage filter - 86437A/48

DEGS 16.03.74 DEUTSCHE GOLD & SILBER C03 D13 E17 =CA 1047-301
Propylene glycol propionate used as silage additive - 64180W/39

DEGS 29.07.77 DEUTSCHE GOLD AND SILBER D25 E33 =DT 2734-296
Prepn. of cation-exchanging aluminosilicate(s) - 08024B/05

DEGS 29.07.77 DEUTSCHE GOLD AND SILBER D25 E33 =NL 7807-197
Prepn. of cation-exchanging aluminosilicate(s) - 08024B/05

DEJI- 04.08.78 DEJ INT RESEARCH A97 D13 =GB 2001-838
Removing caffeine from green coffee beans - 09978B/06

DEJI- 04.08.78 DEJ INT RESEARCH D13 =GB 2001-865
Selective extn. of a sol. component from granular material - 09979B/06

• DOWC 23.04.76 DOW CHEMICAL CO A97 D25 E34 (A11 A25 E17) *US 4138-352
Detergent for synthetic fabrics, esp. polyester(s) - 14072B/07

DOWO 27.07.77 DOW CORNING CORP A96 C03 D21 (A26) =NL 7807-912
Emulsions of polar liq. in methyl-siloxane fluid - 80048A/44

DRAG 12.02.75 DRAGERWERK AG D22 =GB 1540-752
Filtration unit with UV radiation - 65224X/35

• DREV/ 09.04.74 DREVICI U C03 D13 *GB 1510-144
Animal feed prodn. from cocoa fruit flesh - 12450B/07

DSOP 09.08.76 DSO PHARMACHIM D21 E13 (E12) =DL -133-236
UV-absorbing (3)-furyl-(2)-phenyl-propionic acid derivs. - 16185A/09

DUPO 12.04.76 DU PONT DE NEMOURS CO D25 E12 G04 #GB 1540-858
Decreasing soil redeposition of dry cleaning fluids - 57582X/30

• EBAI 11.06.77 EBARA INFILCO KK A88 D15 J01 *J5 4003-893
Refining of aq. soln. contg. high molecular material - 13287B/07

• EBAI 11.06.77 EBARA INFILCO KK A88 D15 J01 *J5 4004-277
Treatment of liq. e.g.waste water, contg. (in organic substances - 13362B/07

ELEC 05.07.77 ELECTRICITE DE FRANCE D13 #SW 7707-762
Thawing frozen prod. esp. food with HF or UHF radiation - 21907A/12

ELIL 05.08.77 ELI LILLY & CO A96 D21 G02 (A14 A82) =EP -----819
Nail varnish based on aq. polymer emulsion - 42204A/24

ELIL 05.08.77 ELI LILLY & CO A96 D21 G02 (A14 A82) =GB 2002-013
Nail varnish based on aq. polymer emulsion - 42204A/24

ELSA/ 09.05.77 EL-SAYED R M D15 =FR 2390-386
Rapid sewage treatment under anaerobic conditions - 86442A/48

• ENVI 03.08.77 ENVIROTECH CORP D15 J04 *GB 2001-932
Appts. for taking liq. sample from flowing stream - 12488B/07

ERAP 24.10.73 SOC NAT ELF AQUITAI D21 E19 =CA 1047-505
Organic sulphoxides prepn. - 31036W/19

ERAP 01.04.77 SOC NAT ELF-AQUITAI D15 =J5 4001-090
Continuous measurement of enzymatic activity of biomass - 55154A/31

ERBA 10.12.76 ERBA C SPA B04 D16 J04 =PT --67-384
Immunological determn. of antigens and hapten(s) - 28849A/16

ETHI 10.06.77 ETHICON INC A87 D22 F06 (A25) =J5 4004-493
Poly:alkylene oxalate coating for sutures - 92755A/51

ETHI 24.06.77 ETHICON INC A23 D22 F01 (A96) =US 4137-921
Crystalline lactide-glycolide copolymer - 04377B/03

• EUMA/ 30.07.77 EUMANN H H D15 *DT 2734-531
Water carbonate hardness and salt content adjustment - 12202B/07

EXTR- 30.07.77 EXTRAKTIONSTECHNIK D23 H02 =DT 2734-492
Recovery of oils from filter cake of decolourising earth - 89673A/50

FAIQ 16.05.77 FAIRFIELD ENG CO D15 (D16) =US 4138-333
Digester to dispose of organic rubbish, sewage sludge etc. - 68944A/39

FARB 07.11.75 BAYER AG B04 D16 #US 4138-479
Phenol and water extraction products from yeast cell-wall components - 38239X/21

FARB 10.05.77 BAYER AG D21 E12 (E33) =FR 2390-157
Treating dental ivory esp. dentine lesions - 82086A/46

FARB 01.07.77 BAYER AG D18 E12 (E16) =SW 7807-372
Smokable prods. based on cellulose and combustion modifiers - 02458B/02

• FARE= 16.10.75 FAR EAST POLY D12 *SU -599-785
Fish decapitating equipment - 13632B/07

FARH 07.10.74 HOECHST AG A97 D12 (A11) =DS 2447-757
Cellulose hydrate sausage casings - 30141X/17

FARH 15.02.75 HOECHST AG A96 D21 (A23) =GB 1540-862
Hair setting agents - 67152X/36

FARH 25.07.77 HOECHST AG A60 D22 E16 M25 (D21) =DT 2829-907
Non-symmetrical sec. ether-amine derivs. - 10263B/06

• FARH 11.08.77 HOECHST AG A82 D22 F08 (A83 A84 A96) *EP -----775
Water vapour absorbent and permeable rubber web - 12364B/07

• FARH 11.08.77 HOECHST AG A81 D18 F06 G03 *EP -----776
Water vapour absorbent and permeable adhesive compsn. - 12365B/07

• FARH 19.08.77 HOECHST AG A97 D25 E11 (E34) *BE -869-719
Detergent additive contg. sodium sulphate and/or tri:poly:phosphate - 11931B/07

FELU 19.10.74 FELDMUHLE AG D15 F09 =CA 1047-411
Removing biologically non-decomposable organic cpds from waste water - 32256X/18

*FERM= 23.06.76 FERMENTATION PROD D16 *SU -600-171
Yeast prodn. for use in alcoholic fermentation - 13822B/07

FIAT 12.05.77 FIAT SPA D15 J03 M25 =FR 2390-384
Treating acid and alkaline effluent from electrolytic installations - 67119A/38

FIRM 30.04.65 FIRMENICH SA D13 E13 =US 4138-410
Pyrazine sulphur cpd - 75057T/47

FIRM 17.08.71 FIRMENICH SA D23 E15 (D13) =DS 2240-311
Unsatd cycloaliphatic ketones - 13173U/10

*FOOD= 26.11.76 FOOD IND INST D16 *SU -600-176
Low cost high quality sherry prodn. - 13827B/07

*FORM- 02.11.77 FORMAX INC D12 *US 4137-604
Stacker-processor for papered food patties etc. - 13933B/07

*FUJD 02.06.77 FUJIKURA CABLE WORKS KK D15 E33 J03 M11 *J5 4000-462
Purifying acidic aluminium-contg. waste water - 12606B/07

*FUJI- 07.06.77 FUJI CAPSULE KK A96 B05 D21 (A25) *J5 4002-333
Soluble bathing pharmaceutical capsule prepn. - 12934B/07

GENA 09.04.73 GAF CORP A25 D25 (A97) =US 4138-371
Amphoteric surfactants, useful in soap and shampoos - 77054Y/43

*GENE 23.05.77 GENERAL ELECTRIC CO D14 *BR 7803-317
Juice extracting appts. - B/07

GENO 20.06.69 GENERAL FOODS CORP D13 =J7 9000-988
Raw coffee pressure and heat treatment - 02274S/02

*GENO 08.10.70 GENERAL FOODS CORP D13 *US 4138-502
Darkened freeze dried coffee prodn. - 14123B/07

GENO 01.07.76 GENERAL FOODS CORP D13 =GB 1540-515
Carbonated candy mfr. - 05533Y/03

GENO 30.12.76 GENERAL FOODS CORP D13 (D12) =PT --67-467
Simulated bacon prodn. with fat and lean phases - 32122A/18

GENO 30.12.76 GENERAL FOODS CORP D13 (D12) =PT --67-468
Simulated fat product used in meat substitutes - 32149A/18

GENO 13.05.77 GENERAL FOODS CORP D13 #FR 2390-107
Decaffeination of green coffee - 36526A/20

GENT/ 12.05.77 GENTIL A D22 =FR 2390-170
Vapour disinfection using antiseptic soln., esp. of respirators - 67131A/38

GESL 12.05.77 KERNFORSCH KARLSRUH D15 =FR 2390-385
Purifying phosphate- contg. waste water - 84285A/47

*GIVA 25.07.77 GIVAUDAN L & CIE SA D23 E13 (D13 D21 D25) *DT 2832-137
1,4-Epoxy-1,3,3-tri:methyl-2-cyclohexane prepn. - 12275B/07

GIVA 25.07.77 GIVAUDAN L & CIE SA D23 E13 (D13 D21 D25) =EP -----719
1,4-Epoxy-1,3,3-tri:methyl-2-cyclohexane prepn. - 12275B/07

GIVA 25.07.77 GIVAUDAN L & CIE SA D23 E13 (D13 D21 D25) =NL 7807-609
1,4-Epoxy-1,3,3-tri:methyl-2-cyclohexane prepn. - 12275B/07

GIVA 04.08.77 GIVAUDAN L & CIE SA D23 E17 =EP -----771
Tri:methyl-octanol(s) and di:methyl-nonanol(s) odorants - 12500B/07

*GIVA 04.08.77 GIVAUDAN L & CIE SA D23 E17 *GB 2001-984
Tri:methyl-octanol(s) and di:methyl-nonanol(s) odorants - 12500B/07

GOLD 28.07.77 GOLDSCHMIDT TH AG B05 C03 D13 E17 =DT 2734-059
Lactic acid, citric acid and fatty acid partial glyceride mixed ester - 86200A/48

GOLD 28.07.77 GOLDSCHMIDT TH AG B05 C03 D13 E17 =GB 2001-977
Lactic acid, citric acid and fatty acid partial glyceride mixed ester - 86200A/48

GOLD 28.07.77 GOLDSCHMIDT TH AG B05 C03 D13 E17 =NL 7807-594
Lactic acid, citric acid and fatty acid partial glyceride mixed ester - 86200A/48

*GOME= 25.12.76 GOMEL SPARTAK CONFE D13 *SU -599-791
Caramel lumps feeder for wrapping machine - 13637B/07

GRAC 28.07.76 GRACE W R CO D12 =GB 1540-775
Poultry storage and package system - 10675A/06

GRAC 07.12.76 GRACE W R CO C03 D13 (D16) =US 4138-498
Feed supplement for ruminants to prevent lactic acidosis - 42538A/24

*GRAM- 06.10.77 BRODRENE GRAM A/S D13 *BE -871-063
Deeply inlaid decoration of iced lollies with contrast material - 11966B/07

*GRAM- 06.10.77 BRODRENE GRAM A/S D13 *BE -871-064
Decoration of iced lollies with patterned imprint - 11967B/07

GRAN- 29.07.77 GRANDE BRASSERIE D16 =DT 2832-993
Prepn. of non-alcoholic beer from low concn. must - 84188A/47

GREH 10.04.68 GREER HYDRAULICS INC D13 =DS 1910-512
Direct fluid passage pressure accumulators - 94314R/51

HAHG 11.05.77 HAHN C GMBH D22 F07 =FR 2390-155
Dimensionally stable tampons prodn. - 38154A/21

*HAMP/ 12.07.77 HAMPTON M G D13 *GB 2002-099
Drying moist fermented tea leaf - 12519B/07

HASH/ 17.02.72 HASHIMOTO S D15 =J7 9001-098
Chromium-containing waste waters treatment - 57577V/32

HAVE- 20.06.77 HAVERHILL MEAT PROD D12 =DK 7802-783
Device for removing fat from lean heat on a carcass - 03434B/02

HAYA/ 24.03.72 HAYASHI H A96 D21 =J7 9000-978
Cream compsn for protecting and cleaning skin - 40728V/22

HAYB 19.01.73 HAYASHIBARA BIOCHEM D11 =DS 2402-437
Low calorie food esp bakery prodt - 57180V/32

HAZH 11.05.77 HAZEMAG ANDREAS E D16 =FR 2390-198
Microorganism containing filtering medium - 84269A/47

*HEAT= 29.10.74 HEAT MASS EXCHANGE D16 J08 *SU -600-360
Dehydrator for highly thermo:labile fluids and pastes - 13892B/07

*HEDE/ 04.07.77 HEDEN C G D16 J04 *SW 7707-720
Disposable device for routine microbiological analysis - B/07

*HEIN- 09.06.77 HEINRICH FRINGS GMB D16 *J5 4002-400
Prodn. of vinegar having high acidity - 12953B/07

HENK 13.04.73 HENKEL KG AUF AKTIEN D25 F06 =J5 4000-008
Textile cleaning bath contg alumino silicates - 75753V/44

HENK 13.04.73 HENKEL KG AUF AKTIEN D25 F06 =J5 4000-009
Textile cleaning bath contg alumino silicates - 75753V/44

HENK 04.11.75 HENKEL KG AUF AKTIEN D21 E11 =US 4138-478
Compsn. contg. (3)-amino-(1)-hydroxy-propane-(1,1 -diphosphonic acid - 32754Y/19

HENK 12.05.77 HENKEL KG AUF AKTIEN D21 E14 =FR 2390-160
Antiinflammatory agents for cosmetics - 82130A/46

HENK 14.05.77 HENKEL KG AUF AKTIEN D24 =FR 2390-500
Extrusion device to make soap with coloured streaks - 82153A/46

HENK 20.07.77 HENKEL KG AUF AKTIEN A97 D23 E19 =DT 2732-714
Acyloin prepn. by aldehyde condensn. - 10248B/06

*HENK 29.07.77 HENKEL KG AUF AKTIEN D23 E13 (D21) *DT 2734-295
2,2,5-Tri:methyl-5-phenyl-1,3-dioxan - 12190B/07

HENK 29.07.77 HENKEL KG AUF AKTIEN D25 E33 =DT 2734-296
Prepn. of cation-exchanging aluminosilicate(s) - 08024B/05

HENK 29.07.77 HENKEL KG AUF AKTIEN D25 E33 =NL 7807-197
Prepn. of cation-exchanging aluminosilicate(s) - 08024B/05

HENK 29.07.77 HENKEL KG AUF AKTIEN D23 E13 (D21) =NL 7807-381
2,2,5-Tri:methyl-5-phenyl-1,3-dioxan - 12190B/07

HENK 05.08.77 HENKEL KG AUF AKTIEN D15 E33 J01 =GB 2001-944
Mfr. of aluminosilicate cation exchangers contg. surfactants - 09982B/06

HERC 25.03.76 HERCULES INC A14 C03 D22 =GB 1540-818
Crosslinked (co)polyacrylamide absorbents - 61225Y/35

HIES/ 20.05.77 HIESINGER E D15 J01 (D13 D16) =BR 7803-194
Filter with filter aid on support fabric between chambers - 68980A/39

*HIRO- 14.06.77 HIRONO KAGAKU KOGYO D15 H07 J01 *J5 4004-464
Phase sepn. of oil-in-water dispersion - 13406B/07

HISA- 22.01.72 HISAKA SEISAKUSHO D14 J01 =J4 8078-086
Filter assembly for water, blood or juices - 13556B/07

*HISA- 22.01.72 HISAKA SEISAKUSHO D14 J01 *J7 9001-267
Filter assembly for water, blood or juices - 13556B/07

*HITA 06.06.77 HITACHI KK D13 E24 G02 *J5 4001-103
Ink compsn. for jet printing on food, e.g. fruit or eggs - 12666B/07

*HITA 08.06.77 HITACHI KK A88 D15 J01 (A23) *J5 4002-279
Polyamide reverse osmosis membrane - 12898B/07

HITB 26.05.75 HITACHI CHEMICAL KK B05 D16 E16 =J7 9000-997
Glutathione prepd. by culturing a Candida or Pichia yeast - 04745Y/03

HITB 03.09.75 HITACHI CHEMICAL KK A97 B04 D16 =J7 9000-999
Antitumour protein substance VI-7501 - 18520Y/11

*HITF 09.06.77 HITACHI SHIPBLD ENGG KK D15 *J5 4003-365
Biological treatment of night soil - 13207B/07

*HODO 15.06.77 HODOGAYA CHEM IND KK D15 J01 *J5 4004-880
Treating waste soln. from countercurrent washing of ion exchange resin - 13495B/07

HOFF 10.05.76 HOFFMANN-LA ROCHE INC B05 D16 E14 (B03 E13) =US 4138-289
Optically active vitamin E and vitamin K1 intermediates prodn. - 85072Y/48

HOFF 11.05.77 HOFFMANN-LA ROCHE SA D21 E12 =FR 2390-449
Antiperspirant organo-aluminium cpds. - 82107A/46

HOFF 26.07.77 HOFFMANN-LA ROCHE AG B05 D16 E19 =DT 2832-230
Optically active alpha-hydroxy-carboxylic acid prepn. from racemate - 10296B/06

HOFF 26.07.77 HOFFMANN-LA ROCHE AG B05 D16 E19 =NL 7807-332
Optically active alpha-hydroxy-carboxylic acid prepn. from racemate - 10296B/06

*HOND 22.01.72 HONDA MOTOR INDS KK D14 J01 *J7 9001-267
Filter assembly for water, blood or juices - 13556B/07

HONP 29.00.72 HONSHU PAPER MFG KK D22 F09 =DS 2248-354
Fibrous sheeting prodn. plant - 45658U/33

HOOR/ 01.12.75 HOOREMAN M B07 C03 D13 (D16) =GB 1540-607
Gelatine and protein concentrate prepn. - 40329Y/23

*HUNT- 26.07.77 HUNTER VALLEY COOP D13 *NL 7807-853
Prodn. of instant powders, esp. of whole milk - 13588B/07

ICIL 29.03.74 IMPERIAL CHEM INDS LTD D17 (D16) =CA 1047-425
Gluclose-isomerase enzymes from curtobacterium species - 69270W/42

ICIL 09.05.74 IMPERIAL CHEM INDS LTD A96 D21 (A25) #CA 1047-670
Dental filling compsn. based on urethane prepolymer - 81444W/50

ICIL 07.04.75 IMPERIAL CHEM INDS LTD D25 E19 M12 =GB 1540-719
Emulsifiers decomposing on change of acidity in aq. emulsions - 79357X/43

ICIL 11.01 77 ICI AMERICAS INC D17 E13 =GB 1540-556
Sepg. mannose from glucose and mannose contg. soln. - 49711A/28

ICIL 23.06.77 IMPERIAL CHEM INDS LTD B06 D21 E33 =DK 7802-743
Cleaning teeth using specified rare earth element cations - 00007B/01

ICIL 23.06.77 IMPERIAL CHEM INDS LTD B06 D21 E33 =NO 7801-972
Cleaning teeth using specified rare earth element cations - 00007B/01

*ICIL 09.08.77 IMPERIAL CHEM INDS LTD D16 (D13) *BE -869-589
Industrial aerobic fermentation - 11897B/07

ICIL 20.06.78 IMPERIAL CHEM INDS LTD B06 D21 E33 =GB 2001-849
Cleaning teeth using specified rare earth element cations - 00007B/01

ICIL 20.07.78 IMPERIAL CHEM INDS LTD A97 D16 E13 (D17) =GB 2001-993
Enzyme fixed to support - 08018B/05

IDEK 05.07.74 IDEMITSU INDUSTRIES D15 =J7 9001-099
Treating waste water using activated sludge process - 16105X/09

IMMN 24.10.65 IMMUNE MILK CO AMER LTD B04 D16 =DS 1617-538
Anti toxin production from milk - 33048F/00

INFL 28.07.77 INT FLAVORS & FRAGR INC B07 D23 E13 (B03 D13 D18) =NL 7807-974
2-Acyl-tetra:hydro:furan-4-one-5-thioether derivs. - 53305A/29

INFL 28.07.77 INT FLAVORS & FRAGR INC B07 D23 E13 (B03 D13 D18) =NL 7808-012
5-Alkanoyl-2-furfuryl-thio-di:hydro-2,5-di:alkyl- 2H)furan-3-one(s) - 53306A/29

INFL 17.03.78 INT FLAVORS & FRAGR INC B07 D23 E13 (B03 D13 D18) =US 4138-413
2-Acyl-tetra:hydro:furan-4-one-5-thioether derivs. - 53305A/29

INSP 08.08.77 INST PASTEUR A97 D16 (A14) =GB 2001-871
Coated supports for cell culture - 09966B/06

*ISEK- 06.06.77 ISE KAGAKU KOGYO KK D15 J01 *J5 4001-271
Liq. sludge concentrator - 12710B/07

*ISHI 14.06.77 ISHIKAWAJIMA-HARIMA HEAV D15 *J5 4004-462
Biological denitrification of organic nitrogen contg. waste water - 13405B/07

*ISHI 14.06.77 ISHIKAWAJIMA-HARIMA HEAV D15 E36 J01 (D14) *J5 4004-893
Appts. for continuously adding ozone to carrier gas - 13505B/07

*IZAW/ 07 06.77 IZAWA Y D13 *J5 4002-354
Chinese noodles prepn. - 12939B/07

*JAGA 08.06.77 JGC CORP D15 J01 K06 *J5 4003-364
Sepn. of water from effluent contg. low boiling organic cpds. - 13206B/07

JOHJ 24.06.74 JOHNSON & JOHNSON A96 D21 (D16) =CA 1047-406
Denture-cleansing tablets contg enzymes - 05816X/04

JOHJ 23.06.76 JOHNSON & JOHNSON A96 D22 =PT --66-698
Absorbent bandage contg. thin flexible support film - 02572A/02

JOHJ 02.06.77 JOHNSON & JOHNSON A96 D22 E12 =J5 4003-393
Binder for orthopaedic bandage - 90017A/50

JOHJ 03.08.77 DEVRO INC A97 D12 (A11 A32) =US 4138-503
Edible sausage skins - 58111X/31

*JOHN/ 15 11.75 JOHN W H T D25 E19 *GB 1540-386
Water-based cleansing and degreasing compsns. - 12453B/07

KABI 18.03.76 KABI AB A96 B04 D16 (A11) =US 4138-287
Isolation of hepatitis B virus for vaccine prepn. - 48855Y/28

KAGA- 21 07.75 KAGAKU GIJUTSU SHIN D15 H03 J01 =J7 9001-322
Purifying petroleum sludges, esp. discharges from ships - 18767Y/11

KAKE 21.06.77 KAKEN CHEM KK B03 C02 D16 #US 4138-496
Anticoccidiosis compsn. contg. antibiotic SY/1 - 54396A/30

*KALL 11.08.77 KALLE AG A82 D22 F08 (A83 A84 A96) *EP -----775
Water vapour absorbent and permeable rubber web - 12364B/07

*KALL 11.08.77 KALLE AG A81 D18 F06 G03 *EP -----776
Water vapour absorbent and permeable adhesive compsn. - 12365B/07

*KANA/ 04.06.77 KANAI M D15 J03 *J5 4001-956
Removal of ammonia from water - 12843B/07

*KANE 06.06.77 KANEBO KK D14 *J5 4001-280
Tablets prodn. from powder, e.g. cocoa powder - 12715B/07

KANE 14.06.77 KANEBO KK A35 D21 E36 L02 (A21) =J5 4004-895
Carbon-carbon composite with fibrous reinforcement - 02480B/02

*KANF 11.08.77 KANEGAFUCHI KAGAKU D16 *BE -869-684
Yeast fermentation appts. - 11920B/07

KAOS 14 09.73 KAO SOAP KK D21 =DS 2442-825
Toothpaste contg. anionic surfactants and sec. phosphates - 21308W/13

KAOS 30 04.75 KAO SOAP KK A97 D13 E19 =J7 9000-982
Chemically peeling fruits or vegetables - 96831X/52

KAOS 30 04.75 KAO SOAP KK A97 D13 E19 =J7 9000-983
Chemically peeling fruits or vegetables - 96832X/52

*KAOS 06 06.77 KAO SOAP KK A97 D25 E11 G04 (E17) *J5 4001-307
Detergent compsn. for dry cleaning use - 12731B/07

KAWA- 16.01.75 KAWAKEN FINE CHEM B03 D21 E13 F06 =J7 9000-910
Aluminium 2-pyrrolidone-5-carboxylate - 67578X/36

*KAWJ 04.06.77 KAWASAKI HEAVY IND KK D15 E36 J01 *J5 4001-955
Dechlorination of waste gas treatment liquor - 12842B/07

*KDGR= 26.11.75 KRASD GRASS SEEDS D14 *SU -600-362
Maize cob dryer with compartments - 13894B/07

*KELL 02.05.77 KELLOGG M W CO D13 *US 4138-500
Bland, non-odorous, acid-soluble acylated protein - 14122B/07

KEMA 10.05.77 KEMANOBEL AB C03 D22 E19 F09 =FR 2390-100
Fungicidal preparations for e.g. wood preservatives - 91648A/51

KEND 01.07.77 KENDALL CO D22 F07 =SW 7807-416
Full length therapeutic elastic stockings - 78453A/44

*KENY/ 07.06.77 KEN Y A91 D15 J01 M11 *J5 4002-226
Recovering rhodium from waste plating and wash liq. - 12868B/07

KEWP- 05.07.76 KEWPIE KK A97 D13 (A11) =US 4138-507
Coagulated protein food compsn. - 06650A/04

*KHOD/ 14.02.72 KHODZHAKHANOV N A D25 E14 H01 M25 *US 4138-425
Anionic surfactant prepn. - 14099B/07

KIKK 25.06.73 KIKKOMAN SHOYU KK D13 (D16) =J7 9001-000
Viscous shoyu prodn from a koji - 45162W/27

KIKK 09.08.73 KIKKOMAN SHOYU KK D13 (D16) =J5 0040-794
Soy sauce prepn. - 13513B/07

*KIKK 09.08.73 KIKKOMAN SHOYU KK D13 (D16) *J7 8043-599
Soy sauce prepn. - 13513B/07

KIMU/ 07.12.76 KIMURA S D12 =J7 9000-984
Binding meat lumps together - 55948A/31

KIRI 11.12.76 KIRIN BEER KK D16 =GB 1540-552
Brewers wort prepn. - 47091A/26

KIYO/ 06.10.72 KIYOHARA K B04 D21 (D16) =J4 9055-854
Tooth paste contg. miso paste - 13520B/07

*KIYO/ 06.10.72 KIYOHARA K B04 D21 (D16) *J7 9000-979
Tooth paste contg. miso paste - 13520B/07

*KOBM 10.06.77 KOBE STEEL KK D15 J01 *J5 4002-979
Cleaning a membrane used in tubular reverse osmosis separator - 13062B/07

*KOEI 06.06.77 KOEI CHEM IND KK A91 D15 E31 F06 *J5 4001-959
Hexa:valent chromium recovery from waste water in fibre dyeing process - 12846B/07

*KOEI 07.06.77 KOEI CHEM IND KK D21 E13 *J5 4003-123
Oxidn.-colouring dyeing compsns. for keratin fibres - 13130B/07

*KOIK- 03.06.77 KOIKE SHOTEN KK D13 *J5 4002-360
Dried gourd shavings pickled in plum vinegar - 12941B/07

*KOLL/ 28.07.77 KOLLROSS G A92 D12 *DT 2733-996
Sausage skin sheath - 12161B/07

*KOMI/ 08.06.77 KOMINATO J D15 E16 (E13) *J5 4003-358
Removing chlorine from domestic waste water - 13203B/07

KRPP 16.10.70 KRUPP F GMBH D15 =DS 2050-874
Liquid effluent treatment - 27045T/17

KRUC- 00.00.76 KRUCHEN-BETTEN BETT D12 E16 =DT 2733-389
Cleaning poultry feathers using chloro-hydrocarbon(s) - 34985A/20

*KUBI 06.06.77 KUBOTA KK A97 C03 D16 (D17) *J5 4004-704
Rearing bed for paddy rice seedlings - 13436B/07

*KUBI 07.06.77 KUBOTA KK C03 D22 E32 L02 *J5 4001-920
Building material for external use - 12840B/07

*KUBI 07.06.77 KUBOTA KK D15 *J5 4002-270
Appts. for heat-treating sludge from waste water treatment etc. - 12891B/07

*KUBI 11.06.77 KUBOTA KK D15 *J5 4004-459
Bacterial treatment of polluted water - 13402B/07

*KUBI 11.06.77 KUBOTA KK D15 *J5 4004-460
Nitrification and denitrification of waste water - 13403B/07

*KUBI 11.06.77 KUBOTA KK D15 *J5 4004-461
Nitrification and denitrification of polluted water in single vessel - 13404B/07

*KUBI 11.06.77 KUBOTA KK D15 *J5 4004-469
Pretreating night soil-bearing organic waste water - 13408B/07

*KUBI 13.06.77 KUBOTA KK D15 *J5 4004-465
Biological de-nitrogenation of organic waste water - 13407B/07

*KUBI 13.06.77 KUBOTA KK D15 *J5 4004-471
Treating night soil-bearing organic waste water - 13410B/07

*KUBI 14.06.77 KUBOTA KK D15 *J5 4004-470
Accelerating nitrification of organic waste water - 13409B/07

*KUBI 14.06.77 KUBOTA KK A97 C03 D16 (D17) *J5 4004-706
Rearing bed for paddy rice seedlings - 13437B/07

KULZ 02.06.77 KULZER GMBH A96 D22 L02 (A14) =J5 4001-345
Material for prepn. of bone cement - 72816A/41

KUNZ/ 15.04.75 KUNZ P D14 =HU T015-931
Machine for steam peeling - 63497X/34

KURK 25.11.75 KURITA WATER IND KK D15 J03 =J7 9001-097
Waste water electrolytic treatment - 48051Y/27

*KURK 04.06.77 KURITA WATER IND KK A91 D15 J01 *J5 4001-278
Removing impurities from liq. using precoated filtration element - 12714B/07

KYOK- 20.12.76 KYOKUYO KK D12 =J7 9000-985
Food prod. from Euphausia superba - 59478A/33

KYOW 06.02.75 KYOWA FERMENTATION KK D13 (D12) =J7 9000-986
Euphausia superba autolysis prevention - 72934X/39

KYOW 11.05.77 KYOWA HAKKO KOGYO B03 D22 E13 =FR 2390-452
Antibacterial (N)-methyl-fortimicin derivs. - 82125A/46

*KYOW 15.06.77 KYOWA FERMENTATION KK A97 C03 D13 *J5 4004-766
Storable feedstuff for marine creatures - 13442B/07

*KYUS- 08.08.66 KYUSHU SEITO KK D17 *J7 9000-981
Treating waste salt water from ion-exchange resin regeneration - 13521B/07

LEAN= 19.08.75 LENGD ANTIBIOTICS B04 C03 D16 #HU T015-991
Antimycotic antibiotic mycoheptin prodn. - 16576Y/10

*LECI= 27.08.75 LENGD CIVIL ENG D15 J01 M25 *SU -600-093
Organic impurities removal from liq. waste - 13751B/07

*LEEN= 15.12.76 LENGD ENG CONS INST B05 C03 D16 E17 *SU -600-173
Microbiological prodn. of citric acid - 13824B/07

*LEFO= 27.02.76 LENGD FOOD IND INST D17 (D16) *SU -600-172
Prepn. of molasses for fermentation into citric acid - 13823B/07

*LIOC 02.06.77 LION DENTIFRICE KK A96 D21 *J5 4002-345
Hair-conditioning compsn. - 12937B/07

LIOC 06.06.77 LION DENTIFRICE KK D13 E13 =J5 4003-048
Spiro-5-isopropyl-bi:cyclo(3,1.0)hexane-2,2′ oxirane isomers - 76755A/43

LIOC 06.06.77 LION DENTIFRICE KK D13 E13 #J5 4003-049
Spiro-5-isopropyl-bi:cyclo(3,1.0)hexane-2,2′ oxirane isomers - 76755A/43

LIOY 07.12.73 LION FAT & OIL KK D21 =J7 9000-976
Protective skin lotions - 83936W/51

*LIOY 10.06.77 LION FAT & OIL KK A96 D21 E12 (A25) *J5 4003-808
Shampoo compsn. contg. anionic sulphur-contg. surfactant - 13230B/07

*LVEP= 22.11.76 LVOV EPIDEMIOLOGY D16 *SU -600-181
Nutrient medium for culturing haemophilic bacteria - 13832B/07

*LVPE= 23.11.76 LVOV PERFUME COSMET D23 *SU -600-169
Perfume compsn. having floral scent with resinous tinge - 13820B/07

*MAGA= 01.12.76 MAGARACH D16 *SU -600-177
Grapes and berries crusher - 13828B/07

*MATS/ 06.06.77 MATSUMURA S D12 *J5 4002-368
Smoked fish meat prepn. - 12944B/07

*MAUE- 28.07.77 MAUERMANN J BACKOF D11 *DT 2734-018
Multideck baking oven - 12164B/07

MAYB 08.12.76 MAY & BAKER LTD B03 C02 D13 =GB 1540-397
Spiramycin di:carboxylic acid ester(s) - 42169A/24

MAZN 11.01.74 MARUZEN OIL KK A91 D15 J01 =CA 1047-681
Graft copolymer for ion exchanger membranes - 49718W/30

MCAR/ 21.06.77 MCARTHUR D A D11 #DK 7702-731
Dispenser attached to bakery mixing bowl - 01992B/02

MECA- 11.12.75 MECAFINA SA D15 (D13 D16) =US 4138-334
Aq. effluent purification by microbial fermentation - 41660Y/24

MECC- 13.05.77 LA MECCANICA REFFO C03 D13 J04 =FR 2390-275
Pelletiser drum quick coupling device - 84354A/47

*MECH- 26.07.77 VEB MECHAN LEIPZIG D11 *DT 2831-154
Doughnut icing applicator - 12250B/07

MEGG 13.07.70 MEGGLE MILCHIND GMB C03 D13 =DS 2034-692
Trace element concentrates - 08490T/06

MEGG 21.07.77 MEGGLE MILCHINDUST C03 D13 =DT 2831-951
Stable milk replacement, esp. for calf rearing - 45267A/25

MEHO 06.08.76 MEIKO KASEI KK A97 D15 =J7 9000-942
Treating water-contg. industrial waste - 26253A/14

MEIJ 29.10.75 MEIJI SEIKA KK B04 C03 D16 =GB 1540-466
Antibacterial and antifungal antibiotic SF-1771 - 33117Y/19

MEIJ 28.11.75 MEIJI SEIKA KAISHA D13 #US 4138-506
Deodorising soybean or defatted soybean - 80682Y/45

MEIJ 11.12.76 MEIJA SEIKA KK D16 =GB 1540-552
Brewers wort prepn. - 47091A/26

MERI 09.05.77 MERCK & CO INC D13 =FR 2390-103
Foodstuff icing compsn. contg. fat and gelatinisation system - 86439A/48

MERI 11.05.77 MERCK & CO INC C02 D22 E13 H07 (D15 H01) =FR 2390-446
Tetra:hydro:furyl:alkyl substd. 1,3,5-triazine cpds. - 76194A/42

*MERI 12.05.77 MERCK & CO INC A97 D13 (A11) *FR 2390-105
Compsn. for preparing yoghurt by direct acidification - 12402B/07

MERI 05.08.77 MERCK & CO INC B04 D16 =GB 2001-851
Preserving vaccine from polysaccharide(s) of Neisseria meningitidis - 07792B/04

*MGAF 20.12.76 MAGYAR ASVANYLOLAI FOLDG A97 D16 H07 *HU T015-990
Extreme pressure grease compsn. - B/07

MINJ 01.08.77 MINE SAFETY APPLIAN D15 =DT 2833-146
Appts. for increasing pH of waste water - 72478A/40

MINN 26.07.74 MINNESOTA MINING CO A25 D21 E19 =J7 9000-973
Chromophores-substd. long chain hydrocarbon sun cream UV-absorbers - 11621X/07

*MINS- 07.06.77 MINSEI KAGAKU KENKY D15 E31 J01 M11 *J5 4001-270
Removal and recovery of hexavalent chromium from waste plating water - 12709B/07

*MITN 10.06.77 MITSUBISHI GAS CHEM IND B04 D16 *J5 4003-100
RNA extraction from bacterium suspensions - 13114B/07

*MITO 13.06.77 MITSUBISHI HEAVY IND KK D15 (D16) *J5 4003-802
Treating organic waste liq. esp. contg. viscous polymeric material - 13227B/07

MITP 11.05.77 MITSUBISHI PETROCH KK B04 D16 =FR 2390-455
Polysaccharide prepn. from Pseudomonas polysaccharogenes - 82126A/46

MITP 11.05.77 MITSUBISHI YUKA PHARMACE B04 D16 =FR 2390-455
Polysaccharide prepn. from Pseudomonas polysaccharogenes - 82126A/46

*MITQ 03.06.77 MITSUBISHI ELECTRIC CORP D15 *J5 4001-964
Treating waste water contg. cyanogen complexes - 12847B/07

*MITQ 06.06.77 MITSUBISHI ELECTRIC CORP D22 J01 *J5 4001-277
Deodorising system for exhaust gas - 12713B/07

*MITR 10.06.77 MITSUBISHI RAYON KK A88 D15 J01 (D16) *J5 4004-283
Semipermeable sepn. membrane prodn. - 13368B/07

*MITU 08.06.77 MITSUBISHI CHEM IND KK A88 D15 J01 *J5 4002-276
Membrane for use in ultrafiltration and reverse osmosis - 12896B/07

*MITU 08.06.77 MITSUBISHI CHEM IND KK D23 E19 *J5 4003-040
High yield bis:abolene prodn. - 13092B/07

MOBI 01.03.76 MOBIL OIL CORP A96 D16 E19 H01 (D17) =CA 1047-395
Oil recovery by water-flooding - 16222Y/09

*MOMA= 26.11.76 MOSC MAGARACH D16 *SU -600-176
Low cost high quality sherry prodn. - 13827B/07

MONS 28.04.69 MONSANTO CO D23 E15 =J7 9000-907
Aromatic esters of terpenols used in - 78742R/42

MONT 23.02.77 MONTEDISON SPA D18 E33 =PT --67-472
Skin tanning prod. contg. acid, aluminium salts and complexing agent - 47772A/27

MOOC 14.04.76 MO OCH DOMSJO AB D17 F09 J01 =US 4138-313
Wash liquor flow control in continuous washing of suspension - 77838Y/44

*MULL- 22.07.77 MULLER J & SOHNE D11 *DT 2733-097
Bread slicing machine - 12134B/07

*MUNC- 03.10.77 MUNCHMEYER & CO D12 *BE -870-932
Machine to cut open and clean stomach of chickens, etc. - 11937B/07

NAGA- 09.08.74 NAGANO PREFECTURE D15 J01 =J7 9001-095
Waste liq treatment from oil extn from softwood - 25402X/14

*NATR 07.08.75 NATIONAL RES DEV CORP D14 *GB 1540-837
Dehusking coconut by pushing past knives - 12464B/07

NATT 15.12.77 NAT STARCH & CHEM CORP A11 D17 =BE -870-956
Prepn. of highly substd. polysaccharide deriv. - 93173A/51

NATW 21.02.74 NATTERMANN A & CIE GMBH B04 D16 =CA 1047-422
Lipase-rich enzyme prepn. from pancreatic tissue - 46130W/28

NEST 14.05.65 SOC PROD NESTLE SA D13 =DS 1792-739
Tea extract prodn - 09816U/08

NEST 05.09.69 SOC PROD NESTLE SA D13 =J7 9000-987
Fruit flavoured beverage powder - 15362S/08

NEST 23.05.77 ASSIS TECH NESTLE S D13 =US 4138-501
Demineralisation of whey - 89955A/50

NEST 29.07.77 SOC PROD NESTLE SA D13 =NL 7807-483
Removing caffeine and/or chlorogenic acid from aq. vegetable extracts - 86149A/48

*NICA 07.06.77 NIPPON CARBIDE KOGY KK A81 D15 *J5 4001-286
Flocculating agent used in waste water treatment - 12719B/07

*NICN 06.06.77 NIPPON CARBON KK A88 D18 J01 (A35 A97) *J5 4001-172
Tobacco filter contg. fibrous activated carbon - 12672B/07

*NIES 14.06.77 JAPAN METAL AND CHEM KK D15 *J5 4004-457
Removal of e.g. arsenic and hydrogen sulphide from spring water - 13401B/07

*NIGY 23.12.76 NICHIRO GYOGO KK D13 *J5 4002-362
Meat loaf-like smoked salmon prod. - 12942B/07

NIKM 24.03.71 NIKKEN KAGAKU KK B04 D16 =J7 9000-998
Antibiotic espinomycin a prodn - 76954T/48

*NIOC 15.06.77 NIPPON OIL KK D15 M25 *J5 4004-813
Recovering copper from aq. soln., partic. from mining operation - 13454B/07

*NIOC 15.06.77 NIPPON OIL KK D15 M25 *J5 4004-816
Mercury recovery from aq. soln. - 13457B/07

*NIOF 10.06.77 NIPPON OILS & FATS KK D13 *J5 4003-106
Refining fatty oils - 13117B/07

*NIPC 09.06.77 NIPPON CHEM IND KK D15 E31 M11 *J5 4002-269
Treating waste water contg. chromium - 12890B/07

*NIPC 15.06.77 NIPPON CHEM IND KK D15 J01 *J5 4004-872
Deodorisation of malodorous gas - 13487B/07

NISH- 04.02.75 NIPPON SHOJI KK B05 D23 E11 =J7 9000-892
Lecithins prepn. - 61965X/33

*NISW 18.12.69 NISSHIN OIL MILLS KK D23 *J7 9001-324
Purificn. of palm oil - 13567B/07

NITN 20.09.76 NIHON TOKUSHU NOYAK B05 C01 D22 =DL -133-189
(N)-Sulphonyl phosphoric acid ester amide derivs. - 23603A/13

*NIWO 06.06.77 JAPAN WOOL TEXTILE KK A91 D15 E31 F06 *J5 4001-959
Hexa:valent chromium recovery from waste water in fibre dyeing process - 12846B/07

NMHB 18.10.77 NORDISCH MASCH R BAADER D12 #GB 1540-686
Fish processing machine feeder - 38621A/22

*NMHB 29.11.77 NORDISCH MASCH R BAADER D12 *DS 2753-111
Press liquoring machine for meat or fish - 12098B/07

NOVO 10.11.67 NOVO TERAPEUT LAB A/S B04 D16 =DS 1807-185
Proteolytic enzyme preparations - 37454F/00

NOVO 22.04.76 NOVO LABORATORIES D17 E13 (D16) =US 4138-290
Isomerising glucose to fructose on a bed of glucose isomerase - 63094Y/36

•ODFO= 26.11.75 ODESS FOOD IND TECHN INS D14 *SU -600-362
Maize cob dryer with compartments - 13894B/07
•OKAM/ 10.06.77 OKAMURA C D17 M24 *J5 4004-218
Desulphurising agent for molten pig iron or steel - 13327B/07
•OKAN/ 25.05.77 OKANO K D15 *J5 4000-461
Mfr. of waste water treatment agent for heavy metal removal - 12605B/07
OREA 16.07.76 L'OREAL SA A25 B04 D21 (A97 B07) =US 4138-427
Polyether-poly:ol surfactants with sequenced structure - 06349A/04
OREA 26.04.77 L'OREAL SA A96 D21 E16 =J5 4002-347
Aerosol dispenser contg. hair lacquer compsn. - 76265A/43
OREA 10.05.77 L'OREAL SA D21 E23 =FR 2390-158
Colourant soln. for hair dyeing compsn. prepn. - 82087A/46
OREA 21.07.77 L'OREAL SA D21 E12 =DT 2832-010
Bis(2-thio-(N)-oxy-pyridyl) aluminium sulphonate s) prepn. - 06053B/04
•OREA 29.07.77 L'OREAL SA A97 D22 E12 *DT 2833-291
Deodorant agents for personal hygiene, animal litter etc. - 12309B/07
•ORSZ- 12.03.76 ORSZAGOS HUSIPARI D12 *HU T015-929
Meat prods. mfr. - B/07
OSAY 01.07.77 ENSO GUTZEIT OY D15 E14 F09 =SW 7801-146
Purifying waste waters, esp. sulphate pulp bleaching waters - 04344B/03

•PABS 10.11.76 PABST BREWING CO D16 *US 4138-499
Low carbohydrate beer prodn. - 14121B/07
PACJ 28.02.74 PATTERSON C J CO D11 E17 (E12) =CA 1047-305
Conditioning and softening bread doughs - 20888W/12
PACK/ 09 05.77 PACKER E D15 M11 #FR 2390-516
Metal recovery unit having concentric electrode elements - 57315Y/32
PASE 28.07.77 PASSAVANTW MICHELBACHER D15 =DT 2734-119
Sewage grid cleaning rake - 10245B/06
•PASE 01.08.77 PASSAVANTW MICHELBACHER D15 *DT 2734-629
Sewage aerator cowl - 12204B/07
•PERU 14.06.77 PERMUTIT-BOBY LTD D15 J01 K07 *GB 2001-863
Ion exchange element for polishing water or radioactive condensate - 12472B/07
PETE- 12.05.77 PETER G KG D12 =FR 2390-336
Machine fills sausage casing supplied flat wound on reel - 67138A/38
•PETE/ 21.01.77 PETERSEN R K D14 *US 4137-835
Food can warmer and mixer - 13972B/07
PETL 09.06.77 PETROLITE CORP D23 (D13) #J5 4003-806
Colour improvement of organic liquid - 70460Y/39
PETR- 23.10.74 VEB PETROCHEM SCHWEDT A97 D16 =HU T015-992
Microbially-produced protein recovery - 34243X/19
PETZ- 12.03.75 PETZHOLDT MACH J S D13 =GB 1540-636
Milk chocolate mass continuous prodn. - 74184X/40
PFIZ 09.01.74 PFIZER INC B02 D16 =HU T015-979
Antibiotic mixts. contg. thiomethyl rifamycin S and - SV - 49733W/30
PFIZ 18.02.74 PFIZER CORP D13 =CA 1047-306
Flavouring or seasoning agent - 57523W/35
PFIZ 01.06.77 PFIZER INC B04 D16 =J5 4003-001
Animal growth promoting polypeptide antibiotic 46192 - 40248A/22
PFIZ 24.06.77 PFIZER INC B04 C03 D16 (D13) =DK 7802-835
Poly:cyclic-ether antibiotics from Actinomycetes ATCC 31286 - 02359B/02
•PHIG 03.08.77 PHILIPS GLOEILAMPEN NV B04 D16 J04 *GB 2002-127
Appts. for component concn. determn. in biological fluid - 12524B/07
POGC 06.07.77 DAVY POWERGAS LTD D15 E37 J01 M25 =SW 7807-501
Recovering e.g. copper or cyanide from aq. soln. - 80227A/45
POLA 21.01.77 POLAK'S FRUTAL WORKS INC D13 E19 =FR 2390-111
Aroma-reinforcing agents, esp. for citrus juice drinks - 55432A/31
POLA 26.07.77 POLAK'S FRUTAL WORKS INC D25 E19 =DT 2832-135
Quat. ammonium salt dispersants - 68716A/38
POLA 26.07.77 POLAK'S FRUTAL WORKS INC D25 E19 =NL 7807-698
Quat. ammonium salt dispersants - 68716A/38
•POPR= 16.09.75 POLT PROVISION MACH D12 *SU -599-781
Fine meat mincer for sausage meat prodn. - 13628B/07
•PQCO- 14.09.77 PQ CORP D25 E33 (E11) *US 4138-363
Sodium form zeolite for use as detergent builder - 14076B/07
PROC 20.12.66 PROCTER & GAMBLE CO A96 D22 =DS 1610-547
Fluorinated acrylics as hydrophobic and oleophobic base - 07635Q/00
PROC 30.07.70 PROCTER & GAMBLE CO D21 E33 =J7 9000-975
Anti-perspiration aerosols - 10391T/07
PROC 12.11.73 PROCTER & GAMBLE CO D23 E14 (D13) =CA 1047-525
Specific complete mixed polyol esters prodn. - 34106W/20
PROC 01.04.75 PROCTER & GAMBLE CO D21 E19 =GB 1540-648
Compositions for retarding teeth staining - 77552X/42
PROC 28.03.77 PROCTER & GAMBLE CO A97 D25 E23 F06 =J5 4000-010
Bleach compsn. contg. sulphonated zinc phthalocyanine photoactivator - 74412A/42
PROC 28.03.77 PROCTER & GAMBLE CO D21 E19 =J5 4002-346
Hair conditioning agent e.g. quat. ammonium salt - 70786A/40
PROC 31.03.77 PROCTER & GAMBLE CO D13 =J5 4002-380
Decaffeinated coffee obtd. by solvent extraction - 72688A/41
PROC 09.05.77 PROCTER & GAMBLE CO D13 =FR 2390-108
Modified soya protein prepn. by heating soya in aq. alkali - 82084A/46
PROC 27.06.77 PROCTER & GAMBLE CO D22 F04 =BE -868-479
Low-density disposable absorbent bandage - 10315B/06
•PROV= 21.07.76 PROVISION MACH RES D13 *SU -599-788
High moisture butter mfr. from high fat cream - 13635B/07
•PROV= 29.11.76 PROVISION MACH RES D14 J01 *SU -599-850
Centrifugal separator for liquid systems e.g. milk - 13665B/07
•PROV= 24.12.76 PROVISIONS ENG RES D13 *SU -599-773
Milk homogeniser of increased output - 13626B/07
•PRYO/ 29.09.76 PRYOR T A C03 D12 *US 4137-868
Growing seafood on land - 13983B/07

•QPJO- 09.06.77 Q P JOZO KK D16 *J5 4002-400
Prodn. of vinegar having high acidity - 12953B/07
•QPPP 09.06.77 Q.P. CORP D16 *J5 4002-400
Prodn. of vinegar having high acidity - 12953B/07
•QUIM- 30.08.78 QUIMICA MILEN S/A D25 *BR 7805-654
Non-polluting detergent compsn. - B/07

RAND 22.12.76 CHEM IND RANDSTAD NV C03 D13 =PT --67-383
Stabilising folic acid by microencapsulation - 40323A/23
REAK- 02.06.77 REAKTORB ENN ELEMEN D15 K07 =J5 4001-800
Decontaminating radioactive nuclear fuel prodn. effluent - 89897A/50
REMY/ 12.02.75 REMY E D16 =DS 2559-925
Optical instrument for laser bombardment of microbiological test zones - 65223X/35
•REPR- 05.05.69 REPROCOM SOC RECH D15 J01 *FR 2390-191
Effluent belt filter - 12412B/07
•RESN/ 03.08.77 REZNIK S D15 E36 J03 *DT 2735-055
Thermoelectric breakdown of water - 12211B/07
REWO 24.06.74 REWO CHEM FAB D21 E16 F06 (E14) =DS 2430-140
Cation-active, quaternary ammonium finishing agents - 15062X/09
RHOD 23.12.76 DEUTSCHE RHODIACETA D18 E37 =PT --67-419
Metal oxide mixt. decreasing tobacco smoke toxicity - 30279A/17
RHOD/ 04.03.77 RHODES J A96 D22 G03 =FR 2390-171
Medical adhesive gel e.g. for surgical tape - 65276A/37
RHON 16.10.73 RHONE-PROGIL SA D15 E33 J04 =CA 1047-225
Aluminium oxy-chlorides from activated alumina - 27958W/17
RHON 30.12.76 RHONE-POULENC INDUSTRIES D25 E36 =PT --67-480
Silico-aluminate(s) esp. for use in washing powders - 47754A/27
RHON 01.07.77 RHONE-POULENC INDUSTRIES D13 =SW 7807-428
Drying process for heat sensitive feedstuffs - 05449B/03
RHON 27.07.77 RHONE-POULENC INDUSTRIES A97 D16 E13 (A11 D17) =DT 2832-577
Cells contg. glucose-isomerase enclosed in cellulose ester - 08012B/05
RHON 27.07.77 RHONE-POULENC INDUSTRIES A97 D16 E13 (A11 D17) =NL 7807-934
Cells contg. glucose-isomerase enclosed in cellulose ester - 08012B/05
RICC/ 04.12.73 RICCIARDI R J A35 D15 =J7 9001-264
Polyectrolyte powder for sewage coagulation is wetted - 39753W/24
RIES/ 23.07.77 RIESS G A96 D21 =BR 7801-991
Artificial tooth root of plastic loaded with a bioactive phosphate - 47821A/27
•RING/ 05.07.77 RING L M D15 H03 *SW 7707-768
Treatment of floating oil slick - B/07
RITP 02.04.73 SYBRON CORP D22 =DS 2403-525
Cylindrical steam sterilizer tank - 73190V/42
RITP 20.12.73 SYBRON CORP A96 D21 =CA 1047-290
Implant matl. for direct insertion into tooth sockets after extraction - 46490W/28
•ROKK- 06.06.77 ROKKO BUTTER KK D13 *J5 4002-372
Soft cheese having excellent heat stability - 12945B/07
ROMA- 03.08.77 ROMA NP D15 =GB 2001-945
Multicompartment activated sludge treatment tank - 87870A/49
ROQF 26.07.74 ROQUETTE FRERES SA D13 E17 #CA 1047-538
Crystalline sorbitol prodn. - 54516Y/31
•RUSS= 03.12.76 RUSSIAN AGRIC MECHA D15 J01 *SU -599-852
Centrifugal separator for dewatering of manure - 13666B/07

•SANE 01.06.77 SAN EI CHEM IND KK B05 D13 E17 (B03 E13) *J5 4002-381
Sweetener contg. stevia - 12947B/07
SANO 14.01.74 SANDOZ AG B04 D16 =HU T015-993
Extn. of immunogens hemagglutine and neuraminase - 50924W/31
SANO 21.02.74 SANDOZ LTD D13 =CA 1047-304
Stable aq. tomato-based drink - 59081W/36
SANO 10.05.77 SANDOZ SA B04 D16 =FR 2390-420
Cyclosporin D and its derivs. - 82080A/46
SANO 22.06.77 SANDOZ AG B04 C03 D16 =DK 7802-653
Piglet Escherichia coli bacillosis vaccine - 00431B/01
•SAPB 09.06.77 SAPPORO BREWERIES B04 D16 (D13) *J5 4002-393
Fungus body contg. germanium and selenium prodn. - 12948B/07
SATO/ 24.08 72 SATO Y D15 =J7 9001-276
Cation exchange zeolite prepn. - 62118V/35

SCHC 24.06.77 SCHERICO LTD B03 C02 D21 =DK 7802-834
Amino-glycoside derivs. - 10246B/06

*SCHE/ 06.08.77 SCHENCK G D22 (D15) *DT 2735-550
Multichamber sterilising photo-reactor - 12217B/07

SCHE/ 06.08.77 SCHENCK G O D22 (D15) =EP -----773
Multichamber sterilising photo-reactor - 12217B/07

*SCHI/ 06.06.77 SCHIFFNER E D13 *DL -133-191
Form meat heat treatment - 12011B/07

SCHN/ 05.06.76 SCHNITZLER E D15 =US 4138-328
Activated sludge system for waste water purificn. - 70779Y/40

SCHU- 24.02.75 SCHUYLKILL CHEM CO B05 D21 E12 =CA 1047-517
Aluminium chlorhydroxy (opt propylene glycol) glycine complexes - 59614X/31

SCHU- 24.04.76 FA SCHULER W D15 J01 =DS 2618-034
Holder and seal for filtration or aeration cartridge - 79702Y/45

SCHW- 28.07.77 SYNTHESEW SCHWARZHE A96 D22 (A25) =NL 7807-781
Medical dressing prepd. from soft polyurethane foam - 86171A/48

SCMZ 06.06.77 SCM CORP B05 D23 E15 #J5 4003-041
Stereoselective hydrogenation of cyclic unsaturated cpds. - 84604Y/47

SCOL 10.09.76 SCHOLL UK LTD A83 D22 E36 =GB 1540-669
Odour absorbing footwear insole - 91563Y/51

SCPS- 07.02.74 SCP-EXPLOATERING AB D13 =CA 1047-303
Protein concentrate having low nucleic acid content - 55946W/34

SEAR 01.08.75 SEARLE G D & CO A97 B04 D16 =GB 1540-579
Cultivating lymphoblasts on a pig serum contg. medium - 09338Y/06

SEAR 28.03.77 SEARLE G D & CO B04 C03 D16 =J5 4002-310
Antimycotic compositions - 74694A/42

*SEKI 03.06.77 SEKISUI CHEMI IND KK B04 C03 D16 (D13) *J5 4002-394
Fungal body prodn. e.g. for animal feedstuff - 12949B/07

SEMP 10.05.77 SEMPERIT AG D22 =FR 2390-154
Composite foot bandage - 86421A/48

*SEND- 15.06.77 SENDAI KAYABA KOGYO D15 J01 *J5 4004-872
Deodorisation of malodorous gas - 13487B/07

*SHIE 08.06.77 SHINETSU CHEM IND KK D15 J01 M25 *J5 4003-362
Mercury recovery from waste water - 13204B/07

SHIS 14.02.74 SHISEIDO KK D21 E17 =J7 9000-977
Stable aerosol antiperspirant compsn. - 81680Y/46

SHOK- 08.06.77 SHOKEN KAGAKU KK A97 D22 =J5 4002-332
Deodorant contg. turpentine resin (derivs.) - 91703A/51

*SHOW- 08.06.77 SHOWA SEKIYU KK D16 H07 *J5 4003-104
Lowering the pour and cloud points of naphthenic lubricating oil - 13116B/07

SIMO- 11.05.77 SIMON-HEESEN BV D13 =FR 2390-112
Animal fodder preparation before pelletising - 84402A/47

SKIM- 23.04.76 SKIMOVEX BV D15 =US 4138-342
Gravity settler with many narrow channels - 75876Y/43

SMIN 03.12.76 SMITH & NEPHEW LTD A96 D22 L02 (A93) =PT --67-355
Poly:carboxylate based cement contg. water soluble glass - 27008A/15

SNAM 05.07.77 SNAMPROGETTI SPA D17 E13 (D16) =SW 7807-551
Fructose prepn. from glucose solns. - 01939B/02

SNAM 27.07.77 SNAMPROGETTI SPA A96 B07 D22 =NL 7807-986
Biocompatible polymers prepn. - 08021B/05

SOAF- 06.12.76 SOAF D15 =PT --67-361
Horizontal rotary turbine disc to aerate waste water - 32114A/18

SOAF- 09.12.76 SOAF SA D15 =PT --67-373
Activated sludge plant for purificn. of waste water - 21581A/12

SOCE- 06.10.75 SOCEA EAU AND ASSAINISSE D15 =DS 2645-150
Sewage sludge disposal system - 25635Y/15

SODA- 29.07.77 SODASTREAM LTD D15 =EP -----813
Portable water carbonator for sparkling drinks - 84161A/47

*SOLA- 10.05.77 SOLAIPA SOC LAITIER C03 D13 *FR 2390-110
Ruminant feed blocks - 12404B/07

SPEC- 16.07.75 SPECIAL METALS CORP D21 M26 =GB 1540-763
Alloy powder mixt for dental amalgam prepn - 73794X/39

SQUI 08.06.77 SQUIBB E R & SONS INC A81 D22 G03 (A18 A96) =J5 4003-847
Adhesive used partic. for abdominal stoma - 89643A/50

SQUI 08.06.77 SQUIBB E R & SONS INC A96 D22 G04 (A18) =J5 4004-491
Formable compsn. used as protective layer for stoma in surgery - 89644A/50

*STAD 19.08.77 STANDARD OIL CO (IND) D13 *BE -869-716
Simulated french fried potatoes - 11930B/07

STAL 25.02.74 STALEY A E MFG CO D16 =CA 1047-424
Pullulanase microbiological prodn - 55651W/34

STAL 20.06.77 STALEY A E MFG CO A11 C03 D22 F06 (A87 A97) =DK 7802-733
Water absorbent starch copolymer contg. hydrophilic gps. - 70620A/39

*STAL 04.08.77 STALEY A E MFG CO D17 G05 *EP -----820
Large granule starch sepn. from native starch - 12381B/07

STEI 25.02.76 STEINECKER A MASCH GMBH D16 =GB 1540-692
Clarifying tank for brewery - 36329Y/21

*STRA/ 10.08.77 STRANSKY C E D13 E24 *US 4138-212
Curcumin colouring agent prodn. - 14019B/07

*SUEH- 09.06.77 SUEHIRO TEKKOSHO KK D13 *J5 4003-099
Dehydration of animal material - 13113B/07

*SUGA= 08.07.74 SUGAR IND RES INST D17 *SU -599-824
Gas-liquid separator for sugar - 13649B/07

*SUMD 07.06.77 SUMITOMO CEMENT KK C04 D15 F06 *J5 4001-957
Raw wool wash water treatment, with by/production of soil stabiliser - 12844B/07

*SUMO 03.06.77 SUMITOMO CHEMICAL KK B04 D16 *J5 4002-395
Urokinase purificn. from human urine - 12950B/07

SUMO 03.06.77 SUMITOMO CHEMICAL KK A91 B04 D16 =J5 4002-396
fibrinolytic and anticancer potentiator enzyme urokinase purificn. - 00262B/01

*SUMO 06.06.77 SUMITOMO CHEMICAL KK A91 D15 E31 F06 *J5 4001-959
Hexa:valent chromium recovery from waste water in fibre dyeing process - 12846B/07

SUNZ 02.05.73 SUNSTAR CHEM IND LTD A96 D21 =J7 9000-980
Stable calcium hydrogen phosphate dentrifice - 40062W/24

SUNZ 24.12.75 SUN STAR DENTIFRICE D21 =J7 9000-974
Synergistic skin whitening compsn. for cosmetics - 58393Y/33

*SUNZ 06.06.77 SUN STAR HAMIGAKI K B04 D21 *J5 4002-344
Medicinal cosmetic prepd. from natural prods. - 12936B/07

SVME- 10.05.77 SVENSKA MEJER RIKSF D13 =FR 2390-106
Desalting whey using anionic and cationic exchangers - 65363A/37

SVME- 10.05.77 SVENSKA MEJER RIKSF D13 =J5 4002-371
Desalting whey using anionic and cationic exchangers - 65363A/37

SWIF 01.08.74 SWIFT & CO D12 =CA 1047-308
Injecting poultry carcasses without penetrating the skin - 26133X/14

SWIF 23.09.74 SWIFT & CO C03 D13 =CA 1047-302
Calcium-limiting feed contg grain, protein source and roughage - 67230W/40

*TABU/ 04.06.77 TABUSHI I D15 E31 (E16) *J5 4001-273
Sepn. of ferric ion from aq. phase by contact with hydrophobic liq. - 12711B/07

*TAID 03.06.77 TAIYO FOOD KK D11 *J5 4002-377
Instant choux prepn. - 12946B/07

*TAIF 08.06.77 TAIYO FISHERY KK D13 *J5 4002-363
Food having meat-like properties obtd. from fish - 12943B/07

*TAKE 06.06.77 TAKEDA CHEMICAL IND KK A97 C03 D16 (D17) *J5 4004-704
Rearing bed for paddy rice seedlings - 13436B/07

*TAKE 14.06.77 TAKEDA CHEMICAL IND KK A97 C03 D16 (D17) *J5 4004-706
Rearing bed for paddy rice seedlings - 13437B/07

*TAKE 04.08.77 TAKEDA YAKUHIN KOGY B04 D16 (D22) *GB 2001-954
Antibiotic C-14482 A1, antibacterial and antitumour agent - 12493B/07

*TAKH/ 15.09.75 TAKHISTOV V A D22 *SU -599-809
Disinfector for clothing, footwear etc. - 13641B/07

TAKS 10.06.77 TAKASAGO PERFUMERY KK D23 E13 =GB 2001-848
Perfumes with natural aroma - 01335B/01

*TAKS 28.07.77 TAKASAGO PERFUMERY KK D23 E15 *DT 2833-283
Substd. norbornene and norbornane cpds. - 12307B/07

TAKS 28.07.77 TAKASAGO PERFUMERY KK D23 E15 =NL 7808-011
Substd. norbornene and norbornane cpds. - 12307B/07

TANA 02.07.76 TANABE PHARMACEUTICAL KK A97 B04 D16 (A11) =US 4138-292
Immobilised catalytically active enzyme or microorganism - 04663A/03

*TANI/ 02.06.77 TANI Y B05 D16 E16 *J5 4002-397
L-Serine prodn. - 12951B/07

TECN- 19.07.77 TECNICOMPLEX SPA D16 =DT 2829-915
Mechanised digester used to produce fertiliser from organic waste - 84173A/47

*TEEP 28.09.77 TEE PAK INC A97 D12 *US 4137-947
Internally coated cellulose sausage casings - 13989B/07

TEIJ 14.12.71 TEIJIN KK D14 J01 =J4 8066-079
Appts. for sepg. fluid e.g. juice - 13555B/07

*TEIJ 14.12.71 TEIJIN KK D14 J01 *J7 9001-266
Appts. for sepg. fluid e.g. juice - 13555B/07

*TEIJ 02.06.77 TEIJIN KK D13 *J5 4002-399
Prepn. of dry bean paste for miso soup with slow sedimentation - 12952B/07

TEIJ 08.06.77 TEIJIN KK A88 D15 J01 (A26) =J5 4003-153
Composite permselective membranes - 91751A/51

TEIJ 10.06.77 TEIJIN KK A88 D15 J01 (A26) =J5 4002-980
Composite permselective membranes - 91751A/51

TENH/ 02.06.75 TENHUNEN L A C03 D13 =CA 1047-446
Handling mechanism for a succulent food bale - 61579X/33

*TERU- 10.06.77 TERUMO KK A96 B04 D22 (A14) *J5 4003-389
Film-forming anticoagulative medical material - 13208B/07

TEXC 22.12.73 DEUTSCHE TEXACO AG B07 D13 H08 (D16 D21) =DS 2364-333
Purification of slack wax - 46376W/28

TOKE 05.03.76 TOKYO SHIBAURA DENK D15 E36 =US 4138-724
Computerised control of ozone generating plant - 72758Y/41

*TOKE 08.06.77 TOKYO SHIBAURA ELEC LTD D22 E36 J01 *J5 4002-265
Appts. for deodorisation by ozone - 12886B/07

*TOKI- 08.03.69 TOKYO IKASHIKA A96 D21 (A12) *J7 9001-400
Hard, abrasion resistant polymer having dental applications - 13577B/07

*TOKZ 13.06.77 TOKYO ORG CHEM IND KK D22 E19 (D25) *J5 4004-287
Cleaning compsn. - 13372B/07

*TOSH- 09.06.77 TOSHOKU KK D16 *J5 4002-400
Prodn. of vinegar having high acidity - 12953B/07

•TSUK/ 08.06.77 TSUKAMOTO K D15 E31 (D16) *J5 4002-282
Flocculant for use in waste water treatment - 12901B/07
TURN- 20.08.69 MASCHINENFABRIK TUR D18 =DS 2036-636
Leather softening apparatus - 57845S/36
•TYRE/ 07.09.77 TYREE L D14 *US 4137-723
Direct contact liq. carbon di:oxide cooling - 13952B/07

•UALC= 08.04.76 UKR ALCOHOL LIQUER D16 *SU -600-180
Trichosporon cutaneum yeast strain determn. - 13831B/07
•UMEA= 22.12.76 UKR MEAT DAIRY IND D12 *SU -599-786
Sausages heat treatment and smoking - 13633B/07
•UMEA= 26.01.77 UKR MEAT DAIRY IND D16 (D13) *SU -599-793
Dietary meat paste - 13639B/07
UNDE/ 19.07.77 UNDERBERG E D16 =DT 2822-906
Prepn. of bubbling, sparkling and champagne type wines - 84154A/47
UNIC 28.10.75 UNION CARBIDE CORP D15 =GB 1540-469
Removing phosphates from effluent by the activated sludge process - 30923Y/18
UNIC 28.06.77 UNION CARBIDE CORP A97 D12 =NO 7802-220
Food casings providing brown smoke colour - 02455B/02
•UNIC- 13.06.77 UNI CHARM KK A96 D22 *J5 4004-498
Absorbent sanitary towel - 13414B/07
•UNIC- 14.06.77 UNI CHARM KK A96 D22 *J5 4004-499
Absorbent sanitary towel - 13415B/07
•UNIC- 14.06.77 UNI CHARM KK A96 D22 *J5 4004-500
Absorbent sanitary towel - 13416B/07
•UNIL 19.02.75 UNILEVER LTD D13 *GB 1540-376
Ultrafiltration concn. of globular protein solns. - 12451B/07
UNIL 15.04.75 UNILEVER LTD A87 D25 E16 F06 (A97 E14) =GB 1540-722
Fabric conditioning compsn for use in washing rinse - 79396X/43
UNIL 18.04.75 UNILEVER LTD D25 E19 (E37) =GB 1540-832
Powdered spray-dried detergent compns - 81222X/44
UNIL 21.06.76 UNILEVER NV A96 D21 E17 =PT --66-688
Hair conditioning shampoo contg. cationic cellulosic resin - 90077Y/51
UNIL 14.07.76 LEVER BROTHERS CO D12 =US 4137-605
Meat deboning process and machine - 04174A/03
UNIL 03.12.76 LEVER BROTHERS CO D25 E19 F06 #US 4138-435
Novel hydroxamic betaines - 32625Y/18
UNIL 22.04.77 UNILEVER NV D13 E17 =J5 4001-190
Tea bag material esp. paper, impregnated with acid substance - 76337A/43
UNIL 01.07.77 UNILEVER NV A97 D25 E19 (A25) =SW 7807-388
Nonionic washing compsns. suppressing colour transfer - 01918B/02
•UNIL 21.07.77 UNILEVER NV D25 *BR 7704-792
Detergent in bar form - B/07
UNIL 28.07.77 UNILEVER NV A96 D21 =DT 2832-451
Sprayable hair lacquer compsn. - 08019B/05
UNIL 30.06.78 UNILEVER LTD A97 D25 E19 (A25) =GB 2002-022
Nonionic washing compsns. suppressing colour transfer - 01918B/02
UNIO 18.01.77 UCB SA B02 C02 D13 =HU T015-982
Spiro-thiopyran or-pyran penicillin derivs. - 53860A/30
UNIO 18.01.77 UCB SA B02 C02 D13 =HU T015-983
6-Amino-2-spiro-heterocyclyl-penam carboxylic acids - 53859A/30
•URAL= 08.04.76 URALS BR THERM TECH D15 J04 *SU -599-185
Automatic liquid sampler - 13604B/07
USMC 04.11.76 USM CORP D18 =DL -133-154
Skins and hide processing machine - 36714A/21
•USNA 03.08.77 US SEC OF NAVY B04 D21 (D16) *US 4138-476
Long-acting plaque-dispersing enzymes - 14114B/07
•UVIN= 14.12.76 UKR VINE GROWING D16 *SU -600-178
Wine maturing unit - 13829B/07
•UYFL- 29.01.77 UNIV FLORIDA D22 L02 (L01) *J5 4000-017
Biologically active glass coated alumina ceramic - 12531B/07
•UZME= 27.12.76 UZB MEAT DAIRY MIN D12 *SU -599-782
Cutter for meat used in soups etc. - 13629B/07

VAJN/ 01.04.75 VAJNA S D15 J01 =GB 1540-481
Industrial ion exchange process for effluent treatment etc. - 77548X/42
•VALL/ 12.05.77 PRATS VALLDEPERES R D22 F04 *FR 2390-529
Machine for knitting fabric tapes with knitted selvedges - 12432B/07
•VANI/ 19.07.77 VANINI A D14 *DT 2830-976
Oven drop door for domestic cooker - 12246B/07
VEHN- 21.07.77 OY VEHNA AB D17 F09 G03 =DT 2830-397
Unmodified starch adhesives for corrugated cardboard - 11280B/06
•VELW 10.10.77 VEB LEUNA-WERK W ULBRICH D25 E16 F06 *DL -133-233
Granular oleyl methyl tauride, useful as surfactant - 12033B/07
•VYBO= 15.12.76 VYBORG CITRIC ACID WKS B05 C03 D16 E17 *SU -600-173
Microbiological prodn. of citric acid - 13824B/07

•WAKP 29.07.77 WAKO PURE CHEM IND KK B04 D13 E13 J04 *DT 2833-612
Hydrogen peroxide determination - 12313B/07
•WARR/ 08.01.76 WARREN W H D13 *US 4137-837
Automatic machine for sepg. egg white from yolk - 13973B/07
WARR/ 29.12.76 WARREN W H D13 =US 4137-838
Egg breaking, yolk and white sepg. machine - 52818A/29
•WEIS- 23.07.77 WEISS A KG D14 *DT 2733-362
Roasting time control - 12139B/07
•WEND/ 22.09.77 WENDIG E D15 K07 *DL -133-281
Radioactive liquid effluent decontamination - 12061B/07
WERN 27.03.76 WERNER & PFLEIDERER D11 =GB 1540-694
Dough portion delivering machine with piston and stripper - 70957Y/40
WEST/ 13.05.77 WEST C W D14 =FR 2390-104
Closed-circuit smoke generator for smoking food - 84349A/47
•WIEL- 28.06.78 FA WIELAND T D21 M26 *DS 2828-304
Dental alloy of low gold content - 12101B/07
WIES/ 17.02.73 WIEST R D15 (D22) =DS 2307-877
Sterilising liqs. eg. drinking water - 64797V/37
•WING/ 27.11.70 WINGENDER B D18 E36 *DS 2058-438
Filter insert for tobacco pipes and cigar and cigarette tips - 12089B/07
•WINK/ 08.08.77 WINKLER R D15 *DL -133-224
Removing toxic residues from effluent water - 12025B/07
•WOLK/ 03.10.77 WOLKE M D22 E31 J01 *DL -133-300
Purificn. of air contg. noxious substances - 12064B/07
WOLR 29.10.76 WOLVERINE WORLD WID D12 =DL -133-130
Animal carcass skinning machine - 33717A/19

•YAMA/ 09.08.78 YAMAMURA Y A96 B04 D16 *BE -869-610
Antitumour and adjuvant solid microbial cell wall skeleton compsn. - 11904B/07
•YOKO- 14.06.77 YOKO YAKKA KOGYOSHO D15 *J5 4004-457
Removal of e.g. arsenic and hydrogen sulphide from spring water - 13401B/07
•YOKO- 14.06.77 YOKO YAKKA KOGYO-SH D15 E36 (E31) *J5 4004-898
Pure silicic acid recovery from iron-contaminated soln. - 13508B/07
•YOSH- 02.06.77 YOSHIKAWA SHOJI KK D13 *J5 4002-358
Coagulating bean milk - 12940B/07

•ZEPE/ 15.11.77 ZEPEDA-CASTILLO E D17 E13 *US 4138-272
Fructose prodn. from xerophyte plants - 14046B/07
•ZHIL/ 09.11.76 ZHILIN N I D12 *SU -599-784
Fish centring and orienting conveyor for filleting machine - 13631B/07
ZIEH/ 27.01.78 ZIEHM K F JR D15 =US 4138-293
Desalination by solar heating of aluminium balls - 25018A/13

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Central Patents Index

NEWSLETTER

4th April 1979.

1979 No. 6

1. 1979 SUBSCRIBER MEETINGS

The 1979 CPI Subscriber Meetings will be held as follows:

Washington	Stouffers National Center Hotel (Crystal City)	9-11 May
London	Heathrow Hotel (London Airport)	21-23 May
Tokyo	Okura Hotel	11-12 June

Meeting registration forms and details of the hotels were sent to all subscribers on Wednesday, 7th March and an additional registration form is attached to this Newsletter. Subscribers wishing to attend the meetings are asked to complete and return a copy of the form as quickly as possible.

Following the very successful meeting last year we are anxious to include as many papers as possible from subscribers on all aspects related to patents and the use and future development of Derwent Services.

Those intending to submit papers themselves or with suggestions for topics which they feel would be of general interest should contact Derwent without delay.

2. CPI/WPI CUMULATED INDEXES, 1974-78 AS COM

MICROFILM

All sections of the Basic Patentee Index were despatched to subscribers by the week ending 16th March, 1979. IPC, Patent Number Family and Priority Concordance Indexes were despatched by week ending 30th March. Accession Number Index is being despatched with this week's materials.

MICROFICHE

All sections of the Accession Number Index were despatched to subscribers by week ending 16th March. All remaining indexes were despatched by week ending 30th March.

3. BRAZILIAN PATENTS GAZETTE

As from 20th February, 1979, the above Gazette is publishing abstracts of patent applications instead of merely titles. This will enable Derwent to produce a more informative title and improved classification as from Week B10.

4. PRINT RESTRICTIONS IN SDC ONLINE FILE

In addition to restrictions imposed on users depending upon which Derwent sections they subscribe to, users should be aware of the following limitation:- if a restricted search parameter, e.g. MP or MC, is ORed with an unrestricted parameter, e.g. IC, then the restriction is applied to all hits, whether they are obtained from the restricted or unrestricted parameter, e.g. if a user with a full subscription to Section M only inputs the search M21-L/MC OR ALL B21L:/IC then the user would only be allowed to print hits classified in CPI Sections to which the user had a full subscription, i.e. Section M, and any hits obtained from the IPC which were not classified in Section M would be restricted.

It would be very difficult to modify the SDC program to avoid this restriction, and the only way subscribers to less than 4 CPI subscription units can overcome the problem is to enter the parameters as separate search statements, print the hits from both and manually check for hits common to both.

*5. COM LISTINGS OF SECTION A PUNCH POSITIONS BY ACCESSION NUMBER

Subscribers who have purchased these lists, as either fiche or roll film, should note that the following control positions (for use in searching over ranges) have been omitted from the lists:

(a) 01& from 60, 001P to 06000Q

(b) 65& from Week R01 onwards

(c) 06& from Week V01 onwards

If a search is to be conducted over a restricted chronological period these positions should be incorporated into the search logic as appropriate.

Subscribers still wishing to order these lists (and also those for the B, C and E codes) should refer to Item 11 of CPI Newsletter No. 5 of 21st March where details of costs, etc., are given.

*6. SDC ONLINE FILE POSITION

WPI	SDC has updated to	Update code
Bibliographies	B05	7901
Manual Codes	B03	7901 (part)
Multipunch A + Key Terms	A39	7810
Multipunch BCE	A48	7812

*7. DESIGNATED STATES GIVEN ON WP ABSTRACTS

National (N)- and European (E)-applications as specified on the PCT patent applications are treated in our publications in the following manner:

(a) Country code plus E if EP coverage only.

(b) Country code plus N if national application under PCT for European countries.

(c) Country code only if both EP and national application under PCT for European countries.

(d) Country code only if non-European application.

*8. INSTRUCTION MANUAL No. 6A - THIRD EDITION, MARCH 1979.

A revised edition of the 'List of Standard Thesaurus Terms' is being distributed to subscribers with their materials this week. Additional copies are available price £2 or $4 from our Patents Supply Division.

*9. DELAYED BRITISH PATENTS

The patents which were omitted from Weeks B03-B05 due to delays in printing have now been received and have been included in WPI/CPI as follows:-

Examined from	B03 in B09
Examined from	B04 in B10
Examined from	B05 in B11
Unexamined from	B05 in B12

*10. US OFFICE

For the time being, at least, Derwent will not be sending any London based staff for short periods to the office in Crystal City.

Whilst this absence of our staff continues our US Representative, Mr. E. J. Brenner, and his staff, will be providing extended coverage than hitherto so as to ensure that all customer enquiries are dealt with efficiently and expediently. Any enquires they are unable to answer immediately will be directed to London by telex for an immediate response. To assist subscribers a telephone answering service is being employed to handle any calls made outside of normal office hours.

REGISTRATION APPLICATION

CENTRAL PATENTS INDEX
ANNUAL SUBSCRIBER MEETING 1979

The Heathrow Hotel (London Airport)
Bath Road, Heathrow, Hounslow TW6 2QA
21st-23rd May

Please complete in BLOCK LETTERS or type and return as soon as possible, but no later than 17th April, to Derwent Publications Ltd. Please use a separate form for each person wishing to register.

(1) NAME AND COMPANY

Name:..

Position:..

Company:..

Address:..

....

....

(2) ACCOMMODATION

Please reserve the following accommodation for me at the Heathrow Hotel at room rates of £25 per night for single rooms and £28 for double rooms plus VAT and service:

Sunday, 20th May	Single ☐	Double ☐
Monday, 21st May	Single ☐	Double ☐
Tuesday, 22nd May	Single ☐	Double ☐

Additional accommodation (please specify)*: ....

....

Please tick if you are attending our Literature Division Meetings on 17th and 18th May. ☐

**Do not complete this section if your additional requirements relate to attendance at Literature Division Meetings, for which a separate Registration Application Form is available.*

PTO

(3) MEETING DINNERS

(a) Please reserve . . . . . places for me at the Conference Dinner to be held at the Heathrow Hotel on Monday, 21st May.

(b) Please reserve . . . . . places for me at the dinner to be held at Great Fosters country house on Tuesday, 22nd May.

(4) EXCURSIONS

(a) Please reserve . . . . . places for me for the visit to Hampton Court on the afternoon of Monday, 21st May.

(b) Please reserve . . . . . places for me for the visit to Polesdon Lacey on the afternoon of Tuesday, 22nd May

Signed: .... Date: ....

PLEASE RETURN YOUR COMPLETED FORM TO:—

Miss C McKellen
Conference Secretary
Derwent Publications Ltd
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4th April 1979

CENTRAL PATENTS INDEX

Material Despatched in Consignment of 4th April 1979

1: **ALERTING BULLETINS - COUNTRY ORDER**

14158B - 15966B (B08)

EXAMINED JAPANESE APPLICATIONS

The advanced version of the alerting abstracts which will appear as the current version in Week B13 Alerting Bulletins (Country Order) are included in this week's consignment.

2: **ALERTING BULLETINS - CLASSIFIED**

11896B - 14157B (B07)

3: **WEEKLY ALERTING BULLETIN INDEX BOOKLET**

14158B - 15966B (B08)

4: **BASIC ABSTRACTS JOURNALS**

09948B - 11895B (B06)

6: **BASIC ABSTRACTS ON MICROFILM**

C Reel 19 00002A - 93178A (A51)
E Reel 28 33397A - 63392A (A35)

7: **COMPLETE SERIES BASIC ABSTRACTS ON MICROFILM**

Reel 244 82501A - 85000A (A46/47)

8: **PROFILE BOOKLETS**

06045B - 07988B (B04)
07989B - 09947B (B05)

*

Profile 2A
Section A

A2 136513 - 136520 (B03)
A10 136658 - 136683 (B03)

Profile 21A
Section H

13737 - 13738 (B03)

Section J

19389 - 19391 (B03)

Section N

02526 - 02542 (B01)

* **Note** - Item 8: Advice Note 12 should have read 04021B - 06044B Week B03.

Directors: M. Hyams *(Chair. & Man.)* V. S. Hyams B. G. Paver A. B. Comfort P. T. Smith *Executive Directors:* A. M. Brooks M. J. Whiffin H. Birnbaum M. D. Dixon H. Winning I. S. Smith P. Norton S. J. Newey C. J. Page K. M. Walker M. E. Pope R. H. Hope T. M. Harvey

9: CS MICROFILM

A Reel	8	05943B - 06334B	(B04)
B Reel	4	05992B - 07974B	(B04)
C Reel	31	89095A - 92753A	(A51)
E Reel	4	04139B - 05957B	(B03)
H Reel	1	00020B - 04017B	(B02)
J Reel	39	89435A - 91462A	(A49)
M Reel	1	00030B - 02257B	(B02)
M Reel	2	02264B - 04511B	(B03)

10: COMPLETE SPECIFICATION BOOKS

B No.	1090	09948B - 10248B	(B06)
B No.	1091	10249B - 10335B	(B06)
B No.	1092	10336B - 11895B	(B06)
C No.	669	09948B - 10281B	(B06)
C No.	670	10282B - 11895B	(B06)

13: COMPANY CODE CARDS

07989B - 09947B (B05)

14A OVERALL BASIC PRIORITY INDEX

A40 - A51 A-M

17: MANUAL CODE CARDS

A	136505 - 136882	(B03)
B	07989B - 09947B	(B05)
C	07989B - 09947B	(B05)
D	22779 - 22870	(B03)
E	59015 - 59219	(B03)
F	30574 - 30638	(B03)
G	20142 - 20195	(B03)
H	13710 - 13756	(B03)
J	19346 - 19400	(B03)
K	06223 - 06237	(B03)
L	26720 - 26808	(B03)
M	33077 - 33172	(B03)

19: PUNCH CODE CARDS

E 00007B - 01868B (B01)

The following delayed cards are included in this week's consignment:

Section B:
B02: 76866A(2), 77540A, 77556A, 77560

Section C:
B02: nil

Section E:
72757A, 74887A(4), 74896A, 75051A(2), 76226A(3), 76227A, 76237A(4), 76238A(2).

23: WEEKLY SDI TAPE

14158B - 15966B	(B0
B5357B - B7997B	(B0

RIN SERVICE

Screen Cards

B Nos. 001 - 037	(B0
C Nos. 001 - 014	(B0
E Nos. 001 - 043	(B0

Sheets and Cards

50920 - 50937 (A5

CS MICROFILM BY COUNTRY

CA	1650 - 1651	OPI 27.2.79
CH	309 - 310	OPI 28.2.79
DT DAS	562 - 563	OPI 15.3.79
DT OLS	3529 - 3540	OPI 15.3.79
NL	969 - 970	OPI 2.3.79

CORRECTIONS TO RIN SERVICE

The following RIN's have been found to be equivalent to earlier RIN's.

STRUCTURAL FORMULA	RINGS		INCORRECT RIN NO.	CORRECT RIN NO.
C_3OPS	6	I	42110	11604
C_4NOP	7	I	42854	07760
C_5NOP	8	I	42856	07777
C_6NOP	9	I	42858	07786
$C_2O_2P-C_5$	5,5	II	42293	07886
$C_2N_3-C_4N_2$	5,6	II	41039	01087
$C_4N-C_4N_2$	5,6	II	45151	42619
C_3OS-C_7	5,7	II	42759	09990
$C_3O_2P-C_6$	6,6	II	41226	08079
C_5N-C_7N	6,8	II	49779	10094
$CNO-C_6-C_5N_2$	3,6,7	III	43622	12191
$C_4-C_5-C_5$	4,5,5	III	47546	10169
$C_4N-C_4N-C_4S$	5,5,5	III	48262	12261
$C_3NO-C_4O-C_4N_2$	5,5,6	III	40389	08295
$C_5-C_5-C_4N_2$	5,5,6	III	49038	12359
$C_3NS-C_5N-C_6$	5,6,6	III	40033	08400
$C_3N_2-C_4NS-C_6$	5,6,6	III	44506	08410
$C_4S-C_4NS-C_6$	5,6,6	III	41103	12537
$C_3N_2-C_6-C_5NS$	5,6,7	III	44513	43642
$As_3N_3-As_3N_3-As_3N_3$	6,6,6	III	45220	12630
$C_4N_2-C_5N-C_6$	6,6,6	III	49629	10470
$C_4O_2-C_5O-C_6$	6,6,6	III	47750	47713
$C_6-C_6-C_2S_5$	6,6,7	III	43761	10520
$C_6-C_6-C_5O_2P$	6,6,8	III	47247	10546
$C_5N-C_5N-C_6-C_6-C_6$	6,6,6,6,6	V	48497	49497

SCHEDULE OF FUTURE DESPATCHES

Due to a recent computer failure resulting in a disruption of our production schedules and for forward planning to allow for forthcoming Easter Holidays, the despatch of materials will be a few days later than the usual Wednesday date for the next few weeks but will return to normal by Wednesday 16th May. We apologise in advance for any inconvenience that these delays may cause to subscribers. The schedule of despatch for the next six weeks is given below:

B08 - Mon, 9th April
B09 - Tues, 17th April
B10 - Mon, 23rd April
B11 - Fri, 27th April
B12 - Thurs, 3rd May
B13 - Thurs, 10th May
B14 - Weds, 16th May

33048-F BD
FR 1523-166 Q00
CH -488-013 R22
CA -917-074 U01
J7 6036-326 X45
GB 1155-730 Q01
DS 1617-538 B07

37454-F BD
NL 6815-944 Q00
GB 1205-403 R37
CA -886-553 S48
US 3674-643 T29
CH -523-319 T34
SU -350-266 U33
BE -723-649 Q01
ZA 6807-148 Q01
DT 1807-185 Q01
DS 1807-185 B07

07635-Q AD
NL 6717-354 Q00
US 3489-148 R02
GB 1180-960 R06
CA -861-153 S04
FR 1548-038 Q01
DS 1610-547 B07

22301-R DE
FR 2008-431 R14
US 3591-638 S30
CA -889-347 T02
GB 1262-752 T06
CH -521-423 T26
US 3794-676 V10
NL -144-588 W08
DS 1924-249 A23
J7 9000-895 B07

78742-R DE
BE -749-602 R42
NL 7006-079 R44
FR 2040-304 S14
GB 1257-591 S50
CA -907-041 T34
US 3729-503 U19
CH -537-356 U35
DT 2020-554 R44
J7 9000-907 B07

94314-R D
FR 1600-645 R51
DS 1910-512 B07

02274-S D
DT 2030-376 S02
FR 2046-958 S21
GB 1308-249 U09
J7 9000-988 B07

15362-S D
BE -755-303 S08
DT 2042-572 S12
ZA 7005-388 S19
CH -507-666 S32
FR 2060-967 S37
GB 1260-776 T04
CA -905-204 T31
DT 2042-572 U06
US 3715-216 U08
NL -145-438 W20
J7 9000-987 B07

57845-S D
FR 2059-021 S36+
DT 2036-636 T07
US 3677-041 T31
CS 7005-623 X08+
DS 2036-636 B07+

08490-T CD
DT 2034-692 T06
DS 2034-692 B07

10391-T DE
NL 7110-511 T07+
BE -770-782 T07
DT 2137-857 T08
J4 7003-848 T10
FR 2099-688 T25
US 3792-068 V08+
GB 1353-915 V21+
CA -977-764 W48
DS 2137-857 A27+
J7 9000-975 B07

27045-T D
BE -773-896 T17
NL 7113-720 T18
DT 2050-874 T18
FR 2111-304 T40
CH -542-155 U51
US 3817-862 V26
GB 1372-395 V44
DS 2050-874 B07

28811-T ADF
BE -774-186 T18
NL 7114-462 T19
J4 7008-793 T19
DT 2151-973 T20
US 3678-031 T31
FR 2110-035 T39
GB 1372-256 V44
CA -960-651 W04
CH -579-106 X39
J7 9000-935 B07

75057-T DE
US 3702-253 T47+
J7 3000-063 U02
US 4113-891 A38+
US 4126-618 A48+
US 4138-410 B07+

76954-T BD
J4 7025-384 T48
J7 9000-998 B07

09816-U D
DT 1792-739 U08+
NL -149-065 X20+
DS 1792-739 B07+

09899-U D
DT 2137-770 U08
GB 1358-497 V27
OE 7204-390 W27
DT 2167-135 B07+

13173-U DE
DT 2240-311 U10
NL 7211-248 U10
FR 2149-479 U22
J4 8029-743 U24
CH -549-951 V30
GB 1393-718 W20
CH -562-192 W25
CH -562-186 W25
CH -562-316 W25
US 3890-370 W26
US 4028-278 Y24
DT 2265-462 A44
DS 2240-311 B07

45658-U DF
DT 2248-354 U33
GB 1395-924 W22
FR 2165-843 U43
US 3781-150 V01
CA -946-573 V21
J7 5030-752 W44
US 3984-898 X43
DS 2248-354 B07

60500-U D
DT 2311-568 U41
NL 7303-820 U41
FR 2176-848 V01
CH -552-541 V39
J4 9131-956 W08
US 3936-375 X07
J7 9001-260 B07

40728-V AD
J4 8095-406 V22
J7 9000-978 B07

57180-V D
DT 2402-437 V32
US 3872-228 W13
GB 1426-413 X09
FR 2294-644 X44
CA 1015-599 Y35
DS 2402-437 B07

57577-V D
J4 9025-765 V32
J7 9001-098 B07

58466-V D
BE -812-608 V33+
DT 2313-932 V44
DT 2407-519 W35
GB 1457-669 X50
DS 2313-932 A42
DS 2407-519 B07

62118-V D
J4 9047-298 V35
J7 9001-276 B07

64797-V D
DT 2307-877 V37
CH -562-615 W30
IT 1018-473 A01
DS 2307-877 B07

73190-V D
DT 2403-525 V42
US 3861-872 W05
GB 1457-304 X49
CA 1000-929 X52
DS 2403-525 B07

75753-V DF
BE -813-581 V44+
NL 7403-381 V44+
DT 2412-837 V45+
NO 7400-889 V49+
DK 7401-384 V51+
SF 7400-763 W01+
FR 2225-568 W06+
SW 7403-379 W12+
J5 0012-381 W14+
ZA 7402-360 W22
DL -112-673 W24+
PT --61-480 W25+
AR -201-687 W46+
OE 7303-277 X03
GB 1473-202 Y19+
GB 1473-201 Y19+
DT 2462-497 Y24+
DT 2462-709 A12+
DS 2412-837 A21+
SU -559-656 A26
CA 1036-455 A35+
CH -602-961 A37+
J5 4000-009 B07+
J5 4000-008 B07+

03850-W D
BE -818-668 W03
DT 2437-491 W09
SW 7409-973 W14
DK 7404-196 W20
FR 2239-987 W21
J5 0048-142 W26
US 3936-385 X07
ZA 7404-869 X21
GB 1483-502 Y34
GB 1483-501 Y34
SW 7708-170 Y44
CH -600-879 A28
IT 1023-046 A31
CA 1047-405 B07

20888-W DE
US 3870-799 W12
J5 0117-952 W46
GB 1464-661 Y07
CA 1047-305 B07

21308-W D
DT 2442-825 W13
J5 0053-544 W39
GB 1426-408 X09
J7 7043-895 Y47
DS 2442-825 B07

27958-W DEJ
DT 2449-100 W17+
BE -821-104 W18+
NL 7413-520 W18+
SW 7412-965 W23+
NO 7403-699 W24+
FR 2247-425 W29
DK 7405-390 W29+
J5 0078-594 W34+
FR 2276-266 X16
FR 2277-039 X17+
GB 1460-328 Y01+
DS 2449-100 Y05+
US 4034-067 Y28+
J7 8007-157 A14+
IT 1021-811 A21+
CA 1047-225 B07+

30963-W BCD
DT 2449-477 W19
BE -821-525 W20
NL 7413-613 W20
SW 7412-462 W25
DK 7404-876 W30
J5 0071-654 W32
FR 2249-058 W33
OE 7408-629 X28
CH -582-476 Y02
GB 1469-687 Y14
CH -592-408 Y48
CA 1047-537 B07

31036-W DE
DT 2450-634 W19
BE -821-409 W19
NL 7413-925 W19
FR 2249-077 W33
J5 0088-027 W37
CH -590-831 Y36
GB 1488-818 Y41
IT 1025-131 A42
CA 1047-505 B07

34106-W DE
US 3882-155 W20
DT 2452-812 W21
BE -822-047 W22
NL 7414-659 W22
FR 2250-737 W35
J5 0093-913 W38
GB 1441-693 X28
CA 1047-525 B07

39753-W AD
DT 2457-360 W24
J5 0087-153 W37
FR 2252-987 W38
CH -580-443 X47
GB 1483-376 Y33
CA 1041-994 A47
J7 9001-264 B07

40062-W AD
J4 9133-535 W24
J7 9000-980 B07

45162-W D
J5 0019-996 W27
J7 9001-000 B07

46130-W BD
BE -825-821 W28+
DT 2408-379 W36
NL 7501-945 W36+
SW 7501-873 W42
DK 7500-682 W46+
J5 0123-872 W48+
FR 2262-045 W50+
US 3925-158 W52+
DS 2408-379 X01
ZA 7501-076 X17
PT --63-363 X22+
DT 2505-887 X33+
GB 1454-983 X46+
OE 7501-360 Y01+
DS 2505-887 Y29+
SU -546-283 Y35
J7 8028-514 A36+
CA 1047-422 B07+

46376-W BDH
DT 2364-333 W28
BE -823-640 W28
US 3960-703 X24
FR 2299-394 X49
GB 1459-578 X52
DS 2364-333 B07

46490-W AD
DT 2460-196 W28
US 3919-773 W49
GB 1488-127 Y40
CA 1047-290 B07

49718-W ADJ
DT 2500-752 W30+
NL 7500-307 W31+
FR 2257-617 W44+
J5 0105-789 X03
DL -116-464 X05+
J5 1047-092 X23
GB 1472-232 Y18+
SU -578-009 A38
IT 1026-276 A49+
CA 1047-681 B07+

49733-W BD
DT 2500-898 W30
BE -824-104 W30
NL 7500-200 W30
SW 7414-855 W35
J5 0100-293 W40
DK 7406-731 W40
SF 7500-038 W40
FR 2256-756 W43
US 3914-218 W44
DL -115-917 X01
PT --63-202 X19
OE 7500-095 Y05
US 4013-789 Y13
GB 1478-469 Y26
IL --46-268 Y30
US 4062-944 Y51
CH -596-311 A15
CA 1033-674 A28
SU -575-038 A34
CS 7500-092 B06
HU T015-979 B07

50924-W BD
BE -824-372 W31
NL 7500-301 W31
DT 2500-785 W32
SW 7500-130 W36
NO 7500-031 W37
J5 0100-224 W40
DK 7500-014 W40
SF 7500-014 W40
FR 2257-305 W44
DL -116-239 X05
PT --63-220 X27
ZA 7500-259 X37
CH -589-453 Y34
US 4064-232 A01
GB 1498-261 A03
OE 7500-214 A06
IL --46-426 A09
CS 7500-255 A51
HU T015-993 B07

50969-W AD
BE -826-600 W31
DT 2509-336 W39
NL 7502-817 W40
NO 7500-791 W45
SW 7502-638 W45
DK 7500-977 W50
SF 7500-703 W51
FR 2263-711 X01
J5 1110-100 X46
GB 1475-315 Y22
CH -593-636 A02
ZA 7501-294 X13
CA 1047-241 B07

55651-W D
BE -825-317 W34
NL 7502-253 W37
SW 7501-458 W42
J5 0117-987 W46
DK 7500-613 W48
DT 2507-787 X09
FR 2273-065 X12
US 3963-575 X26
GB 1499-340 A05
CA 1047-424 B07

55946-W D
DT 2504-512 W34
SW 7401-668 W39
NO 7500-380 W40
J5 0107-188 W42
FR 2260-296 W48
US 3996-104 X51
GB 1474-313 Y21
CA 1047-303 B07

57523-W D
DT 2506-715 W35
BE -825-417 W35
NL 7501-741 W36
J5 0111-265 W44
DK 7500-571 W48
FR 2260-957 W49
US 3966-985 X28
DL -121-020 X36+
BR 7505-003 Y12+
GB 1469-331 Y14
DS 2506-715 Y47
CA 1047-306 B07

59081-W D
DT 2505-717 W36
GB 1490-144 Y43
CA 1047-304 B07

64180-W CDE
DT 2412-834 W39
BE -826-736 W40
NL 7502-743 W40
SW 7502-925 W45
NO 7500-724 W46
DK 7501-042 W51
FR 2263-702 X01
SF 7500-395 X04
DL -118-521 X22
HU T011-852 X33
US 3982-026 X40
GB 1489-320 Y42
CS 7501-242 Y47
OE 7501-968 A06
CA 1047-301 B07

67230-W CD
US 3908-020 W40
CA 1047-302 B07

69270-W D
DT 2513-903 W42
DK 7501-371 W52
BE -827-348 W42
NL 7503-703 W42
SW 7503-543 W47
J5 0132-176 W51
FR 2265-859 X03
ZA 7501-898 X17
GB 1451-273 X40
US 4053-361 Y42
CA 1047-425 B07

72840-W BCD
DT 2517-316 W44+
BE -827-926 W44+
NL 7504-621 W45+
NO 7501-407 W51+
J5 0142-591 X02+
FR 2267-778 X06+
DK 7501-672 X07+
SF 7501-133 X07+
J5 0142-789 X02+
SW 7504-541 X15+
PT --63-645 X27+
ZA 7502-492 X31+
DL -121-799 X41+
J7 7001-996 Y06+
J5 2085-189 Y35
J7 7046-957 Y51+
J5 3002-495 A08
J5 3002-494 A08
J5 3003-589 A08
J5 3003-588 A08
J5 3003-590 A08
HU T014-562 A12+
GB 1508-978 A17+
GB 1508-977 A17+
SF 7800-202 A24+
SF 7800-201 A24+
OE 7702-055 A26
DL -132-297 A46+
OE 7702-054 A48
OE 7702-052 A48
DK 7802-873 B03+
DK 7802-872 B03+
DK 7802-871 B03+
DK 7802-870 B03+
HU T015-976 B07+

77075-W D
BE -828-704 W47+
NL 7505-010 X01+
DT 2519-676 X01+
J5 0157-595 X04+
DK 7501-902 X12+
US 3979-527 X38+
FR 2309-632 Y09+
GB 1501-098 A07+
CA 1047-436 B07+

81444-W AD
BE -829-254 W50
FR 2271-807 X11
ZA 7502-828 X24
GB 1498-421 A03+
CA 1047-670 B07+

83936-W D
J5 0088-238 W51
J7 9000-976 B07

02061-X ADF
BE -832-399 X02
PT --64-149 X36
NL 7508-495 X44
SW 7508-334 X48
NO 7502-546 X49
SF 7502-178 X52
DK 7503-213 Y02
J5 1138-799 Y03
ZA 7504-568 Y04
BR 7602-024 Y45
GB 1507-406 A15
CA 1047-692 B07

05816-X AD
DT 2527-534 X04
SW 7506-869 X08
J5 1038-415 X20
US 3962-107 X25
ZA 7504-027 Y07
GB 1492-688 Y47
CA 1047-406 B07

11621-X ADE
DT 2533-467 X07
FR 2279-380 X20
ZA 7504-804 X31
J5 1125-762 X51
US 4002-733 Y04
US 4115-547 A39+
DS 2533-467 A44
J7 9000-973 B07

15062-X DEF
DT 2430-140 X09
DS 2430-140 B07

16105-X D
J5 1006-356 X09
FR 2276-866 X17
GB 1466-530 Y10
US 4098-689 A36
J7 9001-099 B07

25402-X DJ
J5 1020-471 X14
J7 9001-095 B07

26133-X D
US B493-686 X14
US 4008-338 Y08
US 4102-258 A44+
CA 1047-308 B07

26483-X ADE
BE -835-218 X15
DT 2552-152 X23
NL 7512-743 X24
DK 7505-281 X34
BR 7507-690 X41
US 4019-520 Y18
GB 1519-206 A30
CA 1047-242 B07

30141-X AD
BE -834-242 X17
NL 7511-731 X17
DT 2447-757 X18
SW 7511-165 X21
J5 1063-877 X29
DK 7504-497 X29
FR 2287-279 X30
OE 7507-631 A26
US 4097-623 A35
GB 1525-404 A38
CA 1046-867 B06
DS 2447-757 B07

32256-X DF
DT 2449-756 X18+
SW 7511-318 X23
NO 7503-510 X24
SF 7502-846 X31
FR 2288-062 X33
BR 7506-827 X42
DL -121-922 X45
US 3998-732 Y01
OE 7507-993 Y39
CA 1047-411 B07

34243-X AD
DT 2544-625 X19
SW 7511-859 X24
FR 2289-610 X36
GB 1499-118 A04
HU T015-992 B07

36376-X DE
DT 2548-420 X20
BE -834-897 X20
NL 7512-622 X21
NO 7503-642 X25
SW 7512-122 X25
J5 1068-524 X31
DK 7504-843 X32
FR 2289-494 X36
PT --64-423 X41
BR 7507-201 X42
ZA 7506-355 X44
DL -123-740 Y12
OE 7508-230 Y27
HU T013-404 Y29
GB 1494-939 Y50
IT 1025-318 A42
CA 1047-535 B07

38239-X BD
DT 2452-303 X21
J5 1070-809 X31
FR 2290-218 X37
GB 1502-902 A10
US 4138-479 B07+

46410-X ADF
DT 2553-812 X25
BE -836-190 X25
NL 7513-999 X25
SW 7513-568 X29
SF 7503-389 X35
DK 7505-427 X36
NO 7504-063 X37
FR 2293-311 X42
J5 1099-172 X42
GB 1525-135 A38
CA 1047-384 B07

48032-X ABCD
BE -837-935 X26
DT 2602-994 X32
NL 7600-881 X33
J5 1100-194 X42
DK 7600-320 X43
BR 7600-499 X44
DK 7603-380 X48
FR 2299-356 X49
SW 7600-760 Y04
ZA 7600-493 Y35
GB 1502-082 A08
US 4093-709 A31
US 4131-648 B02+
US 4138-344 B07+

56071-X ADF
BE -838-886 X30
NL 7601-792 X37
DT 2605-552 X37
BR 7601-125 X45
DK 7600-772 X45
SW 7600-860 X47
US 3994-299 X50
FR 2301-189 X52
PT --64-776 Y04
US 4014-341 Y14
ZA 7600-461 Y43
GB 1540-474 B07

57582-X DEG
US 3969-073 X30
DT 2617-480 Y45+
GB 1540-858 B07+

58111-X AD
DT 2600-716 X31
BE -837-660 X32
NL 7600-349 X32
NO 7600-049 X36
SW 7600-330 X37
DK 7600-062 X41
BR 7600-236 X44
SF 7600-083 X44
FR 2297-780 X47
ZA 7600-253 Y38
US 4060-361 Y49
GB 1520-934 A32
US 4138-503 B07+

59614-X BDE
US 3970-748 X31
FR 2301-512 X52
GB 1516-890 A27
CA 1037-052 A36
CA 1047-517 B07

61579-X CD
BE -839-623 X33+
NL 7602-490 X51+
SW 7603-357 Y03+
NO 7600-877 Y04+
SF 7501-617 Y08
DK 7601-051 Y08+
DL -123-854 Y12+

61579-X
FR 2312-943 Y12+
SF 7502-087 Y16
DT 2608-769 Y19+
US 4058-038 Y47+
GB 1508-246 A16+
OE 7601-747 A26+
CH -604-479 A41+
CA 1047-446 B07+

61965-X BDE
DT 2604-283 X33
J5 1091-213 X39
US 4130-571 B01
J7 9000-892 B07

63497-X D
BE -840-206 X34
NL 7602-874 X45
DK 7601-571 Y02
DL -124-865 Y23
FR 2330-336 Y32
US 4091-722 A29
CA 1035-658 A33
US 4101-682 A40
GB 1537-353 B01
HU T015-931 B07

65223-X D
DT 2505-774 X35
DT 2559-925 A19+
DS 2505-774 A34
DS 2559-925 B07+

65224-X D
DT 2505-785 X35+
NL 7600-187 X35
SW 7600-660 X39
CH -579-943 X42
FR 2300-972 X51
GB 1540-752 B07

67152-X AD
DT 2506-461 X36
BE -838-614 X36
NL 7601-325 X36
SW 7601-650 X40
BR 7600-877 X45
J5 1106-747 X45
DK 7600-598 X45
DS 2506-461 X50
FR 2300-547 X51
ZA 7600-854 Y17
OE 7601-054 B04
GB 1540-862 B07

67578-X BDEF
J5 1082-259 X36
J7 9000-910 B07

72934-X D
J5 1091-356 X39
J7 9000-986 B07

73794-X DM
US 3980-472 X39
NL 7607-835 Y06
DT 2631-906 Y07
J5 2012-795 Y11
SW 7608-169 Y14
FR 2317-908 Y17
BR 7604-611 Y33
GB 1540-763 B07

74184-X D
DT 2510-708 X40
NL 7602-545 X40
BR 7601-520 X45
FR 2303-484 Y03
DL -123-570 Y12
DS 2510-708 Y51
OE 7601-518 A18
CS 7601-635 A51
GB 1540-636 B07

77548-X DJ
BE -840-285 X42+
NL 7603-346 X43+
SW 7603-832 X49+
J5 1122-675 X50+
FR 2306-009 Y05+
DT 2514-222 Y10
DT 2543-573 Y14
ZA 7601-940 Y35
OE 7602-321 A18+
GB 1540-481 B07+

77552-X DE
BE -840-306 X42
NL 7603-389 X43
DT 2613-500 X44
J5 1139-639 Y03
FR 2305-965 Y05
GB 1540-648 B07

79357-X DEM
BE -840-485 X43+
NL 7603-578 X43+
DT 2615-127 X45+
BR 7602-074 X46+
NO 7601-120 X48+
J5 1132-188 Y01+
FR 2306-731 Y06+
ZA 7601-909 Y17
PT --64-973 Y17+
GB 1540-719 B07+

79396-X ADEF
BE -840-614 X43
NL 7603-998 X45
DT 2615-704 X45
NO 7601-270 X49
J5 1127-297 X51
SF 7600-975 X52
SW 7604-490 X52
DK 7601-736 Y02
FR 2307-909 Y07
PT --65-013 Y42
US 4075-110 A10
OE 7602-667 A18
GB 1540-722 B07

81222-X DE
BE -840-887 X44
NL 7604-122 X45
DT 2616-350 X45
NO 7601-294 X50
DK 7601-748 Y02
FR 2307-869 Y07
US 4048-085 Y38
GB 1540-832 B07

82848-X BD
US 3987-029 X44+
US RE29-903 B07+

85290-X DJ
DT 2616-395 X46
FR 2308-405 Y08
CA 1042-571 A48
US 4138-335 B07

85369-X ABD
DT 2618-481 X46+
BE -841-325 X47+
NL 7604-604 X47+
J5 1128-390 X52
J5 1130-475 X52
J5 1144-393 Y04
J5 1144-394 Y04
FR 2309-566 Y09+
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FR 2322-556 Y23+
US 4040-431 Y33
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US 4044-780 Y36
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GB 1483-695 Y34+
HU T015-991 B07+

18520-Y ABD
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18767-Y DHJ
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18780-Y D
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SW 7607-891 Y09+
SF 7602-065 Y16+
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30923-Y D
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32625-Y DEF
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32754-Y DE
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OE 7608-133 A11
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33117-Y BCD
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70460-Y D
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GB 1540-694 B07

72758-Y DE
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FR 2343-278 Y51
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75876-Y D
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BR 7606-808 A23
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DT 2725-777 A51+
J5 4003-041 B07+

85072-Y BDE
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91563-Y ADE
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11069-A D
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16185-A DE
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25801-A D
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26253-A AD
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27008-A ADL
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36714-A D
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79379-A D
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US 3994-299 X50
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PT --64-776 Y04
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US RE29-903 B07+
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NL 7508-495 X44
SW 7508-334 X48
NO 7502-546 X49
SF 7502-178 X52
DK 7503-213 Y02
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ZA 7504-568 Y04
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GB 1507-406 A15
CA 1047-692 B07
02061X-ADF
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NL 7706-096 A51+

US-75
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J5 4003-041 B07+
84604Y-BDE
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US 3980-472 X39
NL 7607-835 Y06
DT 2631-906 Y07
J5 2012-795 Y11
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FR 2317-908 Y17
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GB 1540-763 B07
73794X-DMP
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NO 7603-375 A21+
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SF 7602-802 A24+
J5 3052-616 A25+
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FR 2370-510 A32+
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36210Y-ABDJP
610-736 05.09
L US75 610-740
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16414Y-DP
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US 4044-780 Y36
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16414Y-DP
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BE -846-949 Y07
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FR 2326-882 Y28
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11206Y-DP
622-228 14.10
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NL 7705-291 A48+
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57315Y-DM
626-459 28.10
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NL 7611-913 Y20
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14085B-ABD
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US-76
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WEEK B08
11 APRIL 79
14158B - 15966B

CENTRAL PATENTS INDEX
CLASSIFIED ALERTING BULLETIN

Section D:

FOOD
DETERGENTS

ABSTRACTS

INDEXES

- **II – PATENTEE**
- **V – BASIC NUMBER**
- **VII – PATENT NUMBER**
- **VIII – PRIORITY CONCORDANCE**

COUNTRY	PUB. DATE(S)	NUMBER RANGE
BELGIUM		
-Delayed	13 FEB - 19 FEB 79	869,727 - 869,861
-Non Delayed	1 FEB 79	871,078 - 871,270
CANADA	6 FEB 79	1,047,701 - 1,048,200
DENMARK	29 JAN 79	7,700,041 - 7,802,995
W.GERMANY		
-DAS	15 FEB 79	1,567,791 - 2,817,109
-OLS	15 FEB 79	2,437,969 - 2,835,375
FRANCE*	15 DEC 78 (BOPI 19 JAN 79)	2,390,891 - 2,391,632
UNITED KINGDOM	21 FEB 79	1,540,871 - 1,541,210 2,002,211 - 2,002,620
ISRAEL	31 JAN 79	31,792 - 55,273
JAPAN		
-Unexamined	—	46,004,569 - 53,037,174
	14 JAN - 18 JAN 79	54,004,801 - 54,006,700
-Examined	25 JAN - 31 JAN 79	79,001,441 - 79,002,000
NETHERLANDS	5 FEB - 11 FEB 79	7,708,463 - 7,808,255
NORWAY	29 JAN 79	7,702,295 - 7,804,015
FINLAND	31 JAN 79	7,700,518 - 7,803,278
SOVIET UNION	—	600,490 - 601,714
SWEDEN	5 FEB 79	7,705,965 - 7,807,847
UNITED STATES		
-Reissues	15 AUG 78**	Re29,728 - Re29,735
	13 FEB 79	Re29,904 - Re29,912
-Patents	15 AUG 78**	4,106,119 - 4,107,794
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Arrangement of Abstracts

See Appendix I for definition of 'Major' and 'Minor' Countries.

'MAJOR' COUNTRIES – An alerting abstract of every basic and examined equivalent document is provided except for equivalents from Canada, East Germany and Switzerland. The abstracts are arranged in CPI class order and within any one of the 135 classes are in country and patent number order.

'MINOR' COUNTRIES – Basic headings are included in sequence with the entries from the 'Major' countries.

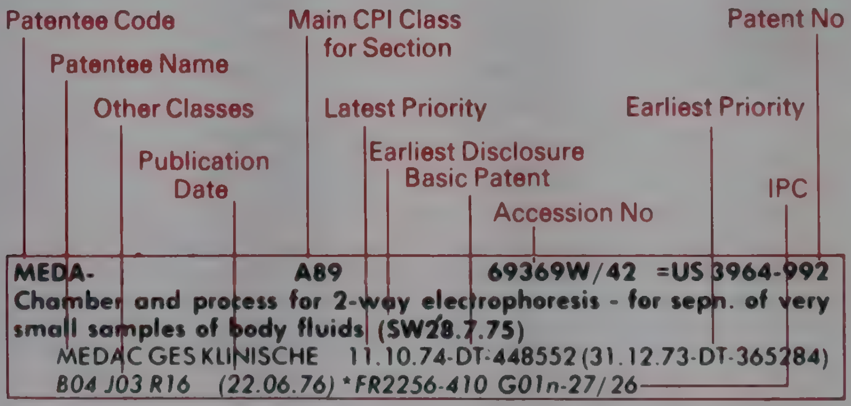
CPI Section Headings

See inside cover for further details.

A	Polymer Chemistry
A+	Polymer Applns.
AE	Polymer & General Chemistry
B	Pharmaceuticals
C	Agricultural Chemistry
D	Food, Disinfectants, Detergents
E	General Chemistry
E+	General Chemistry Applns.
F	Textiles, Paper, Cellulose
G	Printing, Coating, Photographic Chemistry
H	Petroleum
J	Chemical Engineering
K	Nucleonics, Explosives, Protection
L	Refractories, Ceramics
M	Metallurgy

Typical Abstract Heading

See CPI/WPI Instruction Manual No. 1A for explanation of the various flagged descriptors.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Patentee Name
Other Classes
Publication Date
Main CPI Class for Section
Latest Priority
Earliest Disclosure Basic Patent
Accession No
Earliest Priority
Patent No
IPC

MEDA- A89 69369W/42 =US 3964-992
Chamber and process for 2-way electrophoresis - for sepn. of very small samples of body fluids (SW28.7.75)
MEDAC GES KLINISCHE 11.10.74-DT-448552 (31.12.73-DT-365284)
*B04 J03 R16 (22.06.76) *FR2256-410 G01n-27/26*

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D1: FOOD; FERMENTATION

D11: BAKING

JOUL/ ★ D11 14242B/08 ★BE -871-229
Mfr. of loaves of bread, esp. French sticks - by half-baking, vacuum packaging and sterilising prior to storage
JOULIN G 21.10.77-FR-031710
(01.02.79) A21d

The process is of the type in which dough is made from flour, water, yeast, etc. and then kneaded and formed into loaves which are allowed to ferment and then baked. Initial baking is only partial, i.e. it is curtailed to a stage at which the loaf is structurally self-supporting but is not browned. The partly baked loaf is then vacuum packed and the package and contents heat sterilised.

Curtailment of initial baking pref. takes place when the temp. at the centre of the loaf is between 70 and 100°C. Initial baking time pref. lasts about half the duration of normal baking.

These loaves can be kept as emergency stock for peak demands by hotels, restaurants and other catering establishments. They remsin fresh for months without refrigeration and can be made ready for serving as freshly-baked bread by placing in a hot oven for ten mins. or so. 13.10.78 as 871229 (12pp448)

HACK- D11 57013A/32 =DS 2703-900
gingerbread house components - with anchoring portions fitting in mating recesses
HACK FEINBACKWAREN 31.01.77-DT-703900
*(15.02.79) *DT2703-900 A21d-13*

Shaped components of gingerbread, which form a house when assembled, have one or more fixing zones where one component bears against another inclined to it. In each such zone one component has a protrusion fitting in a mating recess in the other one. The design is simple both to mfr. and to assemble. 31.1.77 as 703900 (5pp160)

INTT ★ D11 14390B/08 ★DT 2735-622
Dough proving oven ventilating system - has moist air discharged through duct across top, to atmos., and catalyst inside duct
STANDARD ELEK LOREN 06.08.77-DT-735622
Q74 (15.02.79) F24c-15/32

The oven or chamber for dough proving, with a door at the front, has a chamber at the back, contg. the heating coil. Inside this is a fan rotor which forces air into the interior through gaps at the sides, driven by a motor at the rear. The moist air is then forced out centrally near the fan.

The moist air travels upwards to the top of the rear chamber, and is discharged through a channel over the top, and above the door. Inside this channel is located a catalyst. 6.8.77 as 735622 (6pp349)

PLAS/ ★ D11 ✓ 14397B/08 ★DT 2736-094
Dietetic bread stimulating intestinal activity - is prepd. by baking dough contg. wheat groats, water, yeast and salt
PLASSMANN S 10.08.77-DT-736094
(15.02.79) A21d-13/02

Dietetic bread is prepd. by baking a dough contg. by wt., 45-55 (48-50)% wheat groats, 45-55 (48-50)% water, 1.5-2.5 (1.9-2.1)% yeast and 0.4-0.6 (0.4-0.5)% salt. Pref. the dough, prepd. by mixing the individual components, is left to stand 2-10 (4-8) hrs. and then baked 40-60 (50) min. at 180-250 (200)°C opt. in a mould.

The coarse grain-rich bread stimulates intestinal activity and prevents body-retention of toxic materials. Teeth and gums are massaged and cleansed while eating. The wheat groats are easily obtd. and the bread is prepd. more cheaply than so-called "biological-dynamic" foods. The dough is prepd. easily and can be baked in a domestic oven. High vitamin B content promotes body-functions, e.g. hair growth. 10.8.77. as 736094 (7pp200)

ASCH/ ★ D11 ✓ 14443B/08 ★DT 2831-729
Dietetic bread compsn. - comprising a dough contg. wheat flour, wheat germ, bran, soy flour, yeast, salt and water
ASCHINGER A 02.08.77-CH-009518
(15.02.79) A21d-13/06 A23l-01/30

Low-carbohydrate, calorie-reduced dietetic bread is produced by forming a dough comprising 10-20%(15%) wheat flour, 10-20% (15%) bran, 7-15% (10%) wheat germ, 5-10% (7%) soy flour, 1.5-3% (2%) yeast, 1-2% (1-1.4%) salt and 45-55% (50%)water, kneading the dough for a time several times longer than for normal bread and baking. The soy flour is pref. defatted.

The bread has 30% less calories and 60% less carbohydrate than normal bread and an acceptable taste. 19.7.78. as 831729 (7pp922)

BALD/ ★ D11 14507B/08 ★FR 2390-902
Bakery transfer mechanism for dough lumps from flat conveyor - which automatically tilts sideways to drop lumps into proving pockets
BALDELLOU M 18.05.77-FR-016072
(19.01.79) A21c-09

The mechansim distributes dough lumps from a flat band conveyor, e.g. into proving carrier pockets in which the dough lumps are fermented.

The conveyor is hinged along one side edge to a fixed support. The other side edge of the conveyor can be lowered and raised between a conveyor horizontal position and a downward tilting postion which discharged dough lumps by gravity.

The outer, side edge of the conveyor is linked by a connecting rod to a powder-actuated eccentric. Automatic, electric actuation is initiated each time the full length of the conveyor is full of dough lumps, e.g. by a timer synchronised with the conveyor drive. 18.5.77 as 016072 (5pp)

MATE- ★ D11 14552B/08 ★GB 1540-995
In/line pie making machine - with a supplementary conveyor for relaxing and cooling dispensed pastry portions
MATELINE AUTOMATION 03.05.75-GB-018616
(21.02.79) A21c-09

In an in-line machine for making pies using hot water or boiled pastry having a main conveyor for transporting pastry portions past stations for blocking and filling the portions and a supplementary conveyor is provided which has a number of carriers each supporting at least one pocket for receiving pastry portions from a pastry dispenser and which conveys pastry portions around a separate relaxing and cooling circuit for delivery of the relaxed and cooled pastry portions to the main conveyor upstream of the blocking station.

Used particularly in the mfr. of pies with hot water or boiled pastry casing such as pork pies. Pastry must be relaxed and cooled to allow a skin to form before shaping, by blocking, into the desired shape. In hand made pies the tins, once filled with pastry, are left for some time to relax and cool, taking up considerable space. The automatic machine utilises proper control and regulation of the cooling and relaxation. 3.5.76 (4pp50).

CALP- ★ D11 ✓ 14566B/08 ★GB 2002-222
Treatment of wheat flour - with acetic acid, propionic acid, or ethanol, to replace natural ageing
CALPIS FOOD IND KK 13.08.77-JA-097140
E17 (21.02.79) A21d-02/14 A21d-06

The confectionery properties of wheat flour (I) are improved by addn. of acetic acid, propionic acid and/or ethanol, then storage and/or heating. Rapid, economical treatment with the volatile, readily removed additives successfullyreplaces natural ageing of wheat flour (normally 6 -12 months), and affords (I) suitable for use in the prodn. of cakes and Japanese-style confections (giving no 'cave-ins' or half-cooked layers, etc.).

In an example, weak flour which had been kept for 20 days after being milled was sprayed with 15% aq. HOAc (0.67 pts./100 pts. of flour). The treated flour was then stored for 30 days at 25°C to give a prod. which was used to prepare excellent cakes. 10.8.78 as 032861 (7pp478).

SATO/ ★ D11 15082B/08 ★J7 9001-781
Fermenting and baking bread dough contg. flour, yeast and milk - and mixed with dough on which Neurospora sitophila has been cultivated
SATO S 24.12.70-JA-116704
(D16) (29.01.79) A21d-08/04

To dough for bread contg. a least flour and yeast is added milk condensed milk, defatted milk etc. followed by kneading. On the other hand, microorganism Neurospora Sitophila is cultivated on a bread dough contg. at least flour and yeast. The two doughs are mixed followed by fermentation.

Bread having good properties can be obtd. in short fermentation time. 24.12.77 as 116704, A21d-8/04, (29.1.79) SATO S,MIYAJIMA T (3pp22)

MEIJ ★ D11 15086B/08 ★J7 9001-785
Baked cookies with improved flavour, taste and touch - prepd. using chocolate chips produced by shaping and solidifying chocolate-ethanol mixt.
MEIJI KK 05.06.73-JA-062570
(29.01.79) A21d-13/08 A23g-03

Chocolate material is mixed with 1-5 wt.% (as alcohol) of 95% ethyl alcohol, and the mixt. is shaped and solidified to give chocolate chips. The chips are mixed with baked cookie material and the mixt. is baked. Flavour and taste as well as touch are improved. 5.6.73 as 062570 A21d-13/08, A23g-3/00, (29.1.79) MEIJI SEIKA KAISHA (3pp22) (J50012263)

SHOS ★ D11 15087B/08 ★J7 9001-786
Corn cap or wafer prepn. - by baking a slurry contg. flour, malt flour, corn starch, sugar, oil, salt etc.
SHOWA SANGYO KK 25.10.73-JA-119421
(29.01.79) A21d-02/38 A21d-13/08

In prepn. of corn cap. or wafer, malt flour is added to the slurry starting material, e.g. flour, malt flour (in amt. 0.1-2% w.r.t to flour), corn starch and other components such as sugar, oil, salt, etc. are mixed and kneaded and the resulting slurry is baked in conventional manner to give corn cap having homogeneous properties and homogeneous and smooth appearance. 25.10.73 as 119421 A21d-13/08, (29.1.79) SHOWA SANGYO KK (3pp22) (J50070557)

KAME- ★ D11 15425B/08 ★US 4044-166
Flat food with rectangular cavities - formed by passing viscoelastic dough between rollers, pulling dough apart then scraping off
KAMEDA SEIKA KK 24.06.75-JA-078453 (06.06.75-JA-068375)
(23.08.77) A21d-13/08 A23l-01/16

A sheet-like food product has a pair of facing sheets sepd. by bulkhheads which create rectangular chambers. The chambers extend longitudinally through the produce and are formed by the facing sheets and bulkheads.

The product is made by passing a viscoelastic dough cake of edible vegetable material through the nip of a pair of contrarotating rollers. The dough clings to the surface of the rollers and is expanded as it moves through the downstream side of the nip. A pair of doctor blades scrape the expanded dough from the surface of the rollers to form the product. The dough may be gelatinised starch, rice, wheat or potatoes.

The apparatus produces a thin wafer-like expanded sheet food product. The rectangular chambers are integrally formed without the need to apply facing sheets to a corrugated interior as used previously. This reduces the cost of the apparatus and allows thinner products to be formed. 2.6.76 as 692037 (6pp295)

NOEL/ ★ D11 15457B/08 ★US 4106-400
Muffin griddle with cup and cover conveyors - operates by moving dough over heater then inverting and grilling other side
NOEL E M 14.07.77-US-815496
P28 (15.08.78) A47j-37

A muffin griddle comprises a conveyor with cups which are loaded with dough balls. The conveyor carries the cups over a burner array while the mouths of the cups are closed by covers. These covers are attached to an overhead conveyor which converges with the cup conveyor to constrain the dough while it is cooked.

After cooking the cup and cover conveyors pass simultaneously round a roller to invert the cups. In this inverted state the cups are again heated and finally the conveyors diverge to leave the cooked muffins on the cover conveyor. 14.7.77 as 815496 (12pp295)

AMMA ★ D11 15667B/08 ★US 4107-341
Three-stage mixing of dough - using differing mixing speeds, producing lower final dough temp.
AMF INC 22.11.76-US-743450 (14.07.75-US-595469)
(15.08.78) A21d-08/02

Raw dough ingredients are introduced into a mechanical mixer which is initially operated for a first time interval at a speed sufficient for preliminary blending of the ingredients. The mixing speed is then increased for a second time interval to develop the blended ingredients into a cohesive mass. The mixing cycle is terminated by reducing the mixing speed for a third time interval for final developing of the dough. This reduced mixing speed is greater than the mixing speed during the first time interval.

The method is used for preparing a batch of dough. The final dough temp. is about 4° cooler than using previous methods. The total mixing time is reduced by about 13%. 22.11.76 as 743450 (295)

KITA/ ★ D11 15740B/08 ★US 4138-938
Two/way folded three/dimensional crackers - with central cavity contg. printed fortune telling article
KITAMURA S 01.07.77-US-812332
(13.02.79) A21b-01/46 A21c-15

An appts. folds a baked circular cracker into a three dimensional product. The cracker is placed across two parallel vertical plates so as to span the gap between them. Each plate has a vertical slot and fingers press the cracker into the slots to produce a diagonal fold. A bulging plate is located midway between the plates and engages the midpoint of the folded cracker while the fingers descend further in the slots. The fingers next move inwards to further distort the cracker.

The motion of the fingers is controlled by vertical and horizontal cams driving sliding bars to produce the required motion. Pref. a printed fortune is placed in each cracker before it is folded. 1.7.77 as 812332 (9pp295)

D12 : MEAT ; FISH PROCESSING

CORO/ ★ D12 14229B/08 ★BE-871-190
Machine to form, cut and wrap hamburgers - has electromagnetic cutting mechanism actuated by a memory circuit
PERACAULA COROMINAS 31.08.78-ES-238001
(01.02.79) A22c

The machine has an entry passage into which is fed a continuous length of meat mixt. paste, e.g. from a mincing machine. The machine is free standing and has a housing contg. a cutting mechanism into which the length of paste is directed. The cutting mechanism action is powered by an electromagnet which is actuated via a memory circuit by depression of a detector under load of the advancing length of paste.

As it passes through the cutters, the paste is pref. sandwiched between wrapping strips delivered continuously from supply reels. As each hamburger length is cut from the paste, its wrapper strips are cut simultaneously by the same cutters.

The machine is automatic and can be adjusted to produce hamburgers of different cross-sections and different lengths. The machine entry passage can be coupled directly to a mincing machine. The machine delivers wrapped prod. 12.10.78 as 871190 (8pp448)

KJMA- ★ D12 B/08 ★DK 7702-943
Appts. for sawing off sharp ridges
KJ MASKINFAB A/S 01.07.77-DK-002943
(29.01.79) A22b

MEAT= D12 73752V/42 =DS 2409-725
Automatic loading of freezer for meat or fish prods. - including unloading of frozen prod. from its support
MEAT IND RES INST (MEAT-) 29.03.73-SU-899339
*+Q35 Q75 (15.02.79) *NL7402-685 F25d-25/04*

The freezing equipment has an insulated freezing chamber, between whose freezing plates foodstuffs in moulds are inserted by a mechanism and then removed when freezing is complete.

The mechanism comprises vertical guides in a frame accommodating a two storeyed truck. The lower storey is a frame and the upper a platform accomodating the mould with food to be frozen. Horizontal guides have grips delivering the loaded mould onto the platform, thrusting it further into the chamber between the plates, and returning the empty mould for reloading. A stop below the truck ejects the frozen food from the mould as this is lowered onto the truck frame. 1.3.74 as 409725 (9pp160)

WESS ★ D12 14269B/08 ★DS 2745-851
Abattoir waste treatment - facilitates biological process by mixing size water and animal blood
WESTFALIA SEPARATOR AG 12.10.77-DT-745851
(D15) (15.02.79) C11b-13

In a continuous treatment of abattoir waste the solids are sepd. after heat treatment from liquid phase which is sepd. after further heat treatment into fat and size water. The sepd. size water is mixed with animal blood, coagulated by the addn. of steam and the coagulum is finally sepd. by centrifuging into a solid and a liquid phase.

This reduces the fat and protein content in the size water sufficiently to make a satisfactory treatment in the biological effluent plant possible by a greatly reduced BOD 12.10.77 as 745851 (4pp39)

FARH ★ D12 14383B/08 ★DT 2735-551
lasticised cellulose hydrate film esp. for sausage skins - is plasticised with an alkylene oxide polymer with (N)-methylolcarbamate end gps.
HOECHST AG 06.08.77-DT-735551
A97 (A11 A25) (15.02.79) C08l-01/06

Modified cellulose hydrate packing material comprises (a) a reaction prod. of (i) cellulose hydrate (I) and/or (ii) a reaction prod. of (I) with alkylamine-bis-dimethylenetriazinonetetramethylol (II), with (iii) an (un)branched synthetic alkyleneoxide polymer with ≥1 terminal N-methylolcarbamate gp. $-CH_2-OCO-NH-CH_2OH$; (b) water and opt. (c) sec. chemical plasticisers.

The alkylene oxide polymer is based e.g. on an addn. (co)polymer of ethylene oxide, propylene oxide or a mixt. of these e.g. with hexamethylenediamine, glycol or butanediol. The sec. chemical plasticiser is e.g. glycerine, glycol or butanediol. The sec. chemical plasticiser is e.g. glycerine, glycol or a polyglycol.

The compsns. are esp. useful in the form of tubular films. The sausage skins have sufficient shrinkage to take the shape of the sausage without forming wrinkles, and do not become brittle on storage due to loss of plasticiser., as with prior art plasticised cellulose sausage skins. This avoids tearing and bursting of the skins e.g. during transport. 6.8.77. as 735551 (70pp513)

NMHB D12 70842Y/40 =GB 1540-971
Fish fillet skinning machine - with skinning blade and roll with specific indentations and peripheral velocity
NORDISCH MASCH R BAADER 27.11.76-DT-653946
*(21.02.79) *DS2653-946 A22c-25/17*

A machine for skimming fish fillets comprises an endless feed belt, a rotatable skimming roller, a transfer roller between belt and skimming roller, and a knife and pressing surface associated with the skimming roller.

The skimming roller is provided at its circumference with a number of depressions defined by first and second flanks, one being in advance of the other. The transfer roller is driven at a higher peripheral speed than the belt and the skimming roller. The upper belt surface lies in a plane which is tangential to the transfer roller, above the axis of the skimming roller, and which makes an angle of ≥ 30° with a plane tangential to the point of intersection of the skimming roller and the plane containing the upward facing belt.

The machine allows for the successful running in of the leading end of the fillet beneath the pressing surface, and operates wihtout damage to the fillet. 24.2.77 as 007769 (5pp1379).

AJIN ★ D12 14726B/08 ★J5 4005-057
Deodorisation of fish extract - by adding sugar to fish extract and culturing lactic acid bacteria or yeast in the extract
AJINOMOTO KK 10.06.77-JA-068644
(D16) (16.01.79) A23l-01/32

Method comprises adding sugar to fish extract and culturing lactic acid bacteria or yeast in it. Pref. fish extracts are obtd. by extracting oyster, sardine, crab, mackerel Euphausia superba, etc. with water or hot water simply or together with protease or autolysis. Sugar such as glucose, fructose, sucrose, starch hydrolysate, etc. is added in an amt. of 0.5-3.0% in the fish extract. Lactobacillus plantarium ATCC 14917, L. casei ATCC 27216, L. acidophilus ATCC 19992, Streptococcus faecalis ATCC 12984, Saccharomyces cerevisiae CBA 1487, S. luxii IFO 506, etc. are used.

Fishy smell of fish extract is removed efficiently without deteriorating its taste and flavour. 10.6.77 as 068644 (3pp5)

KIBU- ★ D12 14727B/08 ★J5 4005-059
Prodn. of minced meat of fish and crustacea - comprises collecting in aq. alkaline salt soln. which prevents acidification and enzymatic decay
KIBUN KK 15.06.77-JA-069802
(16.01.79) A22c-25 A22c-29 A23l-01/32

In the prepn. of minced meat of fish and crustacea, the meat of the fish or crustacea is collected in aq. alkaline salt soln. Minced meat of high quality can be prepd. from almost all kinds of fishes and crustacea. Using known methods rapid deterioration of the collected meat takes place.

In practice, fish are pre-treated to remove their heads and intestines and are opt. filletted and crustacea are decapitated. Soluble enzymes and sugars are dissolved out from the fish or crustacea in aq. alkaline salt soln. and the acidification and the enzymic decompsn. of their meat is prevented. Suitably, salt such as sodium (bi)carbonate, disodium phosphate, trisodium phosphate, sodium polyphosphate, etc. is dissolved 0.01-3.5% in water and opt. the soln. is adjusted to pH 7.0-8.5 with sodium or potassium hydroxide. It is pref. to cool the soln. below 10°C to prevent deterioration of meat quality. 15.6.77 as 069802 (10pp5)

MADS/ ★ D12 B/08 ★SF 7701-841
Sausage binder
MADSEN E 10.06.77-SF-001841
(31.01.79) A22c

FISH= ★ D12 15154B/08 ★SU -600-997
Loader and unloader for jars of preserves in autoclave baskets - causes them to slide along spiral guides by creating oscillating movement of platform
FISHING FLEET DES 20.02.76-SU-326256
(17.04.78) A23l-03

Equipment for loading and unloading autoclave baskets along spiral guides in the fish industry, by providing spiral weight-supporting plates and aluminum and foil cups. It comprises a vibrating platform on which the autoclave baskets are positioned, with the drive mechanism and base with cover mounted underneath it.

Operational reliability is increased by providing the drive mechanism with arms, one end of each of which is connected to the vibrating platform, so that it can move lengthwise, and the other to the cover of the base stand. Baranov Yu.B., Sosunov Yu.A., Baranova E.N., et al Bul. 13/5.4.78 20.2.76 as 326256 (3pp29)

EMPI- ★ D12 15435B/08 ★US 4106-161
Cleaning abdominal cavity of poultry - using supporting rack and pressurised water jets directed towards kidneys
EMPIRE FOODS INC 03.06.77-US-803412
(15.08.78) A22b-03/08

Appts. for washing out the abdominal cavities of poultry comprises a source of pressurized water connected to a movable central nozzle and two other adjacent nozzles. The fowl is supported on a rack which is positioned over the nozzles and is shaped and positioned so that when the surface of the abdominal cavity of the fowl is placed on the rack, the kidney area is closely adjacent and facing the nozzles.

The central nozzle is connected to a power source for moving it. A moving jet of water is discharged across a portion of the cavity for washing and cleaning it.

Appts. is used to clean the abdominal cavities of fowl following contamination resultant from rupture of the abdominal organs. The appts. satisfactorily cleans the abdominal cavity and removes the kidneys and associated membrane. 3.6.77 as 803412 (7pp295)

FOUR/ ★ D12 15436B/08 ★US 4106-162
Hamburger patty mould - of two parts with telescoping rod and tube to form condiment holding central opening
FOURNIER H L 29.06.77-US-810911
(15.08.78) A22c-07

A mould comprises an annular flat disc of larger dia. than the patty and an upper annular disc of the same size as the patty and with a depending wall. A hollow member extends from the centre of one disc and has a dia. 1/4-1/3 that of the upper disc, while a complementary telescoping solid element extends from the other disc centre.

The element slides into the member to guide the discs towards each other and provide the patty with a central opening and doughnut shape. The two mould parts are pref. ribbed to form annular grooves in the patty. The central opening and grooves can hold additives and condiments to retain these when placed in a roll. The mould parts are e.g. of stainless steel and the element may be of wood or plastics. 29.6.77 as 810911 (4pp1358)

PEMB- ★ D12 15439B/08 ★US 4106-174
Removing hangers from meat - using inclined meat support and vertically reciprocating stripper plate
PEMBERTON C A & CO 25.05.77-US-800340
P56 (15.08.78) B23p-19/04

Meat hangers comprise a body portion with a suspension hook at one end and meat penetrating needles at the other end, the needles being inclined w.r.t. the body portion in a penetrating direction towards the suspension hook.

Meat hangers are removed from a slab of meat using a frame-mounted appts. which has a first support at one side of a stripping station for supporting a hanger. A second support on the opposite side of the stripping station supports the meat with the hanger extending across the stripping station. A stripper device is reciprocated into the stripping station between the two supports to engage the hanger and drive the needles out of the meat.

Appts. is used to remove hangers from chilled or cured slabs of meat such as bacon. The removal of the hangers does not tear the slabs of bacon. 25.5.77 as 800340 (6pp295)

FISH/ ★ D12 15443B/08 ★US 4106-193
Rotary scraper with non-gouging flexible fingers - secured in slots in spool and held by slotted cover; used e.g. for removing fish scales
FISHER L 27.04.77-US-791307
P28 (15.08.78) A22c-25/02 A47l-13/08

A rotary scraper comprises a spool secured to a shaft and supporting sets of parallel flat fingers extending radially from it. The sets of fingers are spaced around the spool and the shaft is rotatable. Over a portion of their length the fingers are inclined so that during rotation their ends trail the points of connection to the spool.

The fingers are mounted with the base of each finger being received in a slot in the spool and a cover being secured over the spool. The cover is also slotted, the number of slots corresp. to the number in the spool but being displaced circumferentailly from those slots. Each finger has a base section extending through a spool slot, a section extending circumferentially of the spool, and a section bent out radially through the corresp. slot in the cover.

The scraper may be used to treat a surface for the removal of a surface layer e.g. removal of paint, burnishing of metal or the removal of fish scales. The rotating fingers do not gouge the working surface beneath the removed surface layer. 27.4.77 as 791307 (6pp295)

CHEL- ★ D12 15663B/08 ★US 4107-337
Sliceable sausage prod. simulating bacon - is produced by curing an emulsified mixt. of non marketable pork and bacon ingredients
CHELSEA IND INC 28.05.76-US-690860
(15.08.78) A23l-01/31

The process comprises curing pork belly robbins, lean pork and bacon ends and/or bacon slices and/or sliced, smoked port jowls, finely grinding the cured mixt. forming an aqs. emulsion of some of the ground product with a binder selected from Ca-reduced dried skim milk, Na caseinate, Ca caseinate, high fat caseinate, soy bean isolate and soy bean concentrate, mixing the emulsion with the rest of the cured mixt. and cooking the final mixt in a container.

The prod. may be sliced without crumbling, contains a non-fat (but fat-appearing) protein and suffers a smaller loss in wt. during cooking than does natural bacon. It also utilises low-grade bacon. 28.5.76 as 690860(5pp922)

ACTI- D12 39482Y/22 =US 4138-767
Stripping casings from sausage links etc. - by slitting then pulling casing by interleaved spirally grooved rollers
ACTIONITE CO (ACTO-) 10.02.75-US-548518 (28.02.77-US-772723)
*(13.02.79) *US4024-602 +A22c-11/02*

Appts. for decasing linked sausages comprises an accelerator which imparts initial feed-through velocity to pass the sausages to a preconditioner which facilitates casing removal by heating, a slitter assembly, a casing drive assembly and a stripping head of meshed gripping gears with air jets to assist the gears in pulling the casings away. The casing slitter head accurately follows the shape of the food to accurately effect slitting without damage. An adjustable guide assembly provides parallel axial alignment of the food links with the meshing gripping ears.

The high-speed appts. has high prodn. capacity and is easily maintained. The Parent Patent described on appts. including spirally grooved rollers. 28.2.77 as 772723

Div. ex 4024602 (29pp1364)

ROTH/ ★ D12 15726B/08 ★US 4138-768
Ground meat extruded onto refrigerated drum - and removed as sheet then cut into patties
ROTH E N 17.03.77-US-778492
(13.02.79) A22c-07

A ground meat product is frozen by extruding it onto the surface of a rotating refrigerated drum. The meat adheres to the surface of the drum and is then compressed by a roll for limiting the thickness of the product. A blade scrapes the meat sheet from the drum and deflects it onto a chute which terminates in a table. A cutter blade reciprocates onto the table to cut patties from the sheet. Pref. the cutter blade includes a stripper.

The appts. forms frozen meat patties. 17. 3. 77 as 778492 (8pp295)

MATC- D12 57576Y/33 =US 4138-769
Machine for removing shells from crustaceans - such as shrimps, prawns, lobsters and crayfish, without damage to flesh
MATCON RADGIVENDE 21.04.76-DK-001795
*(13.02.79) *BE-853-507 A22c-29/02*

Appts. for peeling shrimp and similar crustaceans comprises two rollers driven in opposite directions. Each roller consists of a cylindrical web through which a large number of radial rods positioned in a grid pattern extend; each rod can slide in its bore and is retained by a collar and stop device. A curved support sheet extends 180° along the periphery of the first roller and approaches a similar support sheet around the second roller; feed and discharge chutes are fitted at opposite ends. Wire pins extend through the support plates.

Shrimp fed between support sheet and roller is conveyed along, and pressed against the sheet by the rods on the roller acting under centrifugal force; both sides of the shrimp are peeled by the pins on the support plates as it traverses the two rollers. Mechanised peeling by a very gentle treatment is provided. 28. 3. 77 as 782228 (8pp1364)

See Also

D13 BE 869747 D13 BE 871090

D13: OTHER FOODSTUFFS

EFFE- ★ D13 14161B/08 ★BE -869-744
Animal food, esp. for cats and dogs, based on animal blood - is prepd. by coagulating sepd. blood phases opt. with complete blood
EFFEM FOODS PTY LTD 15.08.77-AU-001233
C03 (14.02.79) A23k-01/04

The food prod. is prepd. by submitting to a controlled stimulated coagulating action, a single coagulable phase of animal blood or a coagulable mixt. of predetermined proportions of animal blood phases. The phase(s) have been sepd. from blood previously treated to prevent natural coagulation, opt. with addn. or substitution, partial or total, of complete animal blood submitted to the same pretreatment.

Specifically ≥1cpd. stimulating coagulation is introduced into the phase(s) and/or the complete blood. Prod. is esp. for animal foods particularly for dogs and cats. The process enables a firm moist texture with a cooked meat appearnace. It is easily controlled, can be effected with simple cheap equipment, and with less need to add binders 14. 8. 78 as 869744 (14pp597)

NEST ★ D13 14162B/08 ★BE -869-747
Textured food prod. similar to cooked meat - is prepd. from spun protein, esp. soya, which is pressed and impregnated
SOC PRODS NESTLE SA 29.09.77-CH-011887
(D12) (14.02.79) A23j A23p

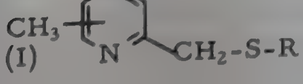
Prod. is prepd. from fibrous protein by spinning the protein into threads, which are arranged substantially parallelly in a mould. The threads are pressed/dehydrated by mechanical compression in an axial direction, and then impregnated with a flavour precursor soln. and sterilised in a wrapping.

The fibres are pref. at least 60% soya, specifically 60% soya/40% lactalbumin and 75-90% soya/25-10% casein.

The method is simpler than known processes and does not require a binder. It gives prods. which have an appearance, cohesion, hardness, colour, texture and taste similar to cooked meat. 14. 8. 78 as 869747 (17pp597)

QUAK ★ D13 14177B/08 ★BE -869-783
Methyl-pyrid-2-yl-methyl mercaptan derivs. - food flavouring agents, e.g. giving meat-like flavour to dog food
QUAKER OATS CO 26.09.77-US-836776
C02 E13 (C03) (19.02.79) A23l C07d

Methyl-pyrid-2-yl-methylmercaptans of formula (I) are new.


(I)

In the formula R is 1-5C alkyl, H, acetyl, phenacyl, benzyl or allyl).

(I) are flavouring agents partic. for domestic animal (e. g. dog) feedstuffs. (I) give a meat-type aroma and taste and mask undesirable flavours e. g. cereal-taste. The cpds. may be added to feedstuffs in amts. ≤2 wt. %, pref. 0.0001-1wt;% and partic. 1-100wt. ppm. (I) may be used alone or in combination with other active flavouring agents such as furfural, benzaldehyde or hexanal to give a large variety of organoleptic properties. 17. 8. 78 as 869783 (16pp395)

MILE ★ D13 14203B/08 ★BE -871-090
Simulated bacon product formed of fat and lean layers - with specified fat layer compsn. and opt. specified lean compsn.
MILES LABORATORIES INC 07.10.77-US-840123
(D12) (01.02.79) A23l A23p

The synthetic meat comprises alternate expanded layers simulating fat and lean, the lean parts are formed by cooking a compsn. contg. 10-40% vegetable protein fibres, 5-20% albumin, 5-20% starch, 30-60% water, 3-40% vegetable oil, 0. 1-5% vegetable gums, 2-20% vegetable protein isolate, 0. 05-0. 5% dextrin, 0. 005-0. 5% food colouring and 5-20% flavouring and seasoning agents and also contg. a dispersed gas.

The fat parts are formed by cooking a compsn. contg. essentially 3-7% albumin, 25-40% water, 0-6% vegetable protein, 52-65% vegetable oil; 0. 05-0. 6% vegetable gums and 4-10% flavouring and seasoning agents and also contg. a dispersed gas. The % relate to the total layer compsn. A further embodiment comprises the fat layer formed by cooking the above compsn. and the lean parts being unspecified.

When cooked the fat layer gives a wavy or folded appearance and gives a fatty juicy sensation. In spite of the high amts. of oil and relatively low amts. of albumin compared with analagous products, the emulsion does not separate before forming a layer and does not separate oil in cooking 6. 10. 78 as 871090 (9pp597)

WITT- D13 28969U/21 =DS 2155-150
Fodder granules - polymer coated but digestable by mammals used for feeding forest animals
WITTELSBACHER AUSGL (WIT -) 05.11.71-DT-155150
*C03 (15.02.79) *DT2155-150 A23k-01/20*

Shapes of complete feedstuffs (I) are coated with a layer of celluloseacetatephthalate or PVA. (I) may be in the form of pellets or granulates etc. The ready-mixed and shaped feedstuffs may contain admixtures of air- and/or moisture-sensitive materials. The moulded shapes are sprayed with coating in volatile carrier. PVA is esp. suitable and shapes coated with this are dried for pref. less than 12 mins. at ca. 85°C.

(I) are used to feed game in their natural habitat. The coated shapes (I) are moisture- and weather resistant, can be stored for a long time during spells of inclement weather and metabolise slowly which inhibits the animals to bite or strip valuable trees etc. 5.11.71 as 155150 (3pp279)

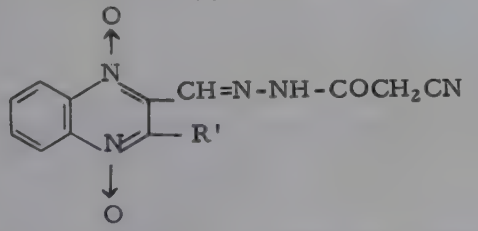
UGIN D13 21538A/12 =DS 2744-352
Compsns. for enriching cellulosic animal feeds - contg. urea phosphate and mineral salts
PROD CHIM UGINE KUH 05.10.76-FR-029890
*C03 (15.02.79) *BE-858-708 A23k-01/22*

Aq. liquid for enriching the nutritional value of cellulosic vegetable feedstuff for animals, esp. ruminants, is claimed, It has a dyestuff content of 750-850 g/l with (by wt.) 13.5-16.5% N as urea, 0-3.5% ammoniacal N, 5.5-7.5 % P, 0-4 % S, 0-0.44 % Zn, 0-0.15 % Mn, 0-60 ppmw Cu, 0-8 ppm I_2, 0-0.6 ppm Co. and per kg soln. 0-10^5 IE vitamin A, 0-2 X 10^4 IE vitamin D_3, and 0-20 IE vitamin E.

The liquid has a density of 1.25-1,3 /cm^3, Brookfield viscosity at 20°C of 9-11 cPs, and crystallisation pt. of -6°C. 1.10.77 as 744352 (5pp913)

SPOF ★ D13 14438B/08 ★DT 2829-580
2-Formyl-quinoxaline-1,4-di:oxide-cyano-acetyl hydrazone derivs. - are antimicrobials with coccidiostatic properties and growth stimulators for domestic animals such as pigs
SPOFA SPOFENE FARM NP 02.08.77-CS-005118
B02 C02 (15.02.79) A23k-01/16 A61k-31/49 C07d-241/52

2-formylquinoxaline-1,4-dioxide cyanoacetyl hydrazone derivs. of formula (I) are new (where R' is H or 1-4C alkyl).



(I)

(I) are antimicrobials effective against numerous gram positive and gram negative microorganisms. (I) also have coccidiostatic properties and are powerful growth stimulatos for domestic animals such as cows and pigs, also having a beneficial influence on the general health of these animals. (I) are less toxic than non-antibiotic growth stimulators. (I) increase the utilisation of mixed foodstuffs by the animals and reduce the occurrence of diarrhoea in piglets. (I), opt. in combination with other veterinary medicines guard against and treat salmonella and dysentry in pigs and other domestic animals.

In an example, a specifically claimed cpd., 2-formylquinoxaline-1,4-dioxide cyanoacetyl hydrazone was obtd. in 85% yield by reacting 15.2 g 2-formylquinoxaline-1,4-dioxide with 7.9g cyanoacetylhydrazine. 5.7.78. as 829580 (19pp1401)

OAKE- ★ D13 14447B/08 ★DT 2832-521
Porous chocolate prodn. using continuous mixer - into which gas is fed under pressure to dissolve in chocolate and form bubbles once pressure is released
OAKES E T LTD 27.07.77-GB-031655
(15.02.79) B01f-03/04

Porous chocolate is manufactured by taking the molten raw material and mixing a gas into it. Bubble formation is subsequently encouraged. The gas is introduced into the liquid under a pressure at which it is soluble or as a liquid. It is uniformly distributed in the chocolate and dissolved in it.

It is then subjected to a sudden reduction in pressure so that the dissolved gas forms bubbles throughout the liquid. The chocolate is cooled to form a solid prod. The liquid is pumped by a pump continuously into an in-line mixer. The pressure reduction is achieved by passage through a throttling valve with a means of adjusting it. The product is subjected to vibration as it leaves.

Process enables continuous prodn. of such chocolate c.f. existing process in one vessel which is time and labour consuming. 25.7.78. as 832521 (16pp1053)

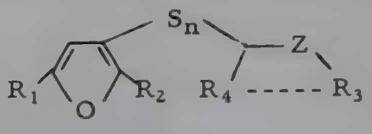
NEST ★ D13 14456B/08 ★DT 2832-843
Vegetable protein extracts - obtd. by sepn. after acidification of the aq. medium within a specified range above the isoelectric pH
SOC PRODS NESTLE 03.08.77-CH-009533
(15.02.79) A23j-01/14

Vegetable protein extract (I) is obtd. from aq. media by first adjusting the latter's pH within the range 150 + 0.5⩽pH ⩽150 + 1.2 (where 150 is the isoelectric pH) and removing (I) in solid form.

(I), an isolate or concentrate, has a low content of phytic acid trypsin inhibitor and oligosaccharide., i.e. (I) is recovered in lower quantitative yield but is of higher quality. 26.7.78. as 832843 (18pp922)

INFL D13 58110X/31 =GB 1541-020
3-Furyl-beta-chalcogen alkyl sulphides - useful as taste/aroma modifiers for foods
INT FLAVORS & FRAGR INC 20.11.75-US-633791 (21.01.75-US-542830)
*C03 E13 (21.02.79) *DT2600-707 A23l-01/22 C07d-307/64 +C07c-49/16*

New 3-furyl-β-chalcogen sulphides contain the structure of formula (I), where n is 1 or 2. Z is -CH(-XH)- or -C(=O)-. X is O or S. R_1 and R_2 are each methyl or H, ⩾1 being methyl. R_3 and R_4 are each lower alkyl or taken together complete a bicycloalkyl ring system or are tetramethylene. When R_3 and R_4 taken together are tetramethylene and when Z is -CH(-XH)-, then X and S are in trans relationship.



(I)

The cpds. are useful as food flavourings and flavour or aroma modifiers. 21.1.76 as 002283 (+ 29.5.75 - US - 581894) (66pp927).

SAKA/ ★ D13 14563B/08 ★GB 1541-135
Dry powder contg. soybeans and unmilled rice - easily dispersed to make synthetic milk or skin tonic
SAKAMOTO K 05.06.75-JA-067077 (02.04.75-JA-039252)
(21.02.79) A23l-02/38

Soybeam-contg. powder is made by first drying raw or defatted soybeans at <100°C and <67mm Hg. The dried beans are then mixed with unmilled rice which has been dried separately from, or pref. together with, the beans, and the mixt. ground.

Opt. ⩾1 plant with medicinal properties which has been dried at <100°C and reduced pressure is also added alternatively a distillate of such plants obtd. at <100°C is used. Specified plants are garlic, aloe, mugwort and cattail.

The powder is easily dispersed in cold or warm water to give a proteinaceous beverage (milk substitute). It has good preservability (improved by incorporating garlic) and is easy to handle. The addition of rice removes the typical soybean smell and by drying at low temp. and pressure the structure, flavour etc of the starting materials are retained. A small amt. of the powder dissolved in water and rubbed into the face acts as a skin tonic. 22.1.76 as 002470 (5pp1251).

CORP D13 15966A/09 =GB 1541-182
Sepg. a corn starch milk into protein and starch - using multistage sepn. and washing using hydrocyclones
CPC INTERNATIONAL INC 22.10.76-US-734683
*+P41 (D17) (21.02.79) *BE-859-954 C13l-01 +C07g-07*

System for treating the mill starch fraction (I) of a corn wet milling process to give a protein-rich prod. and a starch-rich prod. is claimed. System comprises a first sepn. zone contg. ⩾2 protein sepn. stages (A) and a second sepn. zone contg. starch washing stages (B), each stage of (A) and (B) including hydrocyclones which consist of a vortex member, a conical member and an apex member.

(I) is fed under pressure successively through (A) to give a protein-rich stream (discharged through the vortex members) and a starch-enriched stream (discharged through the apex members). The pressure differential between each (A) is maintained at ⩾100 psi. A protein rich prod. is sepd. from the last protein sepn. stage (A). The heavier, faster settling materials discharged from the apex members of the second (A) stage are combined with (I).

The starch-enriched stream discharged from the apex members of the first (A) stage are fed under pressure through (B) to discharge the lighter, slower settling materials (II) through the vortex members and the heavier, faster settling materials through the apex members. (II) from one (B) stage are recirculated to an upstream (B) stage where they are combined with the starch-enriched stream fed to that stage. The lighter, slower settling materials from the second sepn-zone are recirculated and combined with (I). The pressure differential between each (B) is maintained at ⩾80 psi.

A starch rich-prod. is removed from the last (B) stage. Wash water is countercurrently passed through the system and is introduced adjacent the penultimate (B) stage. 21.10.77 as 043985 (16pp992).

BEAF ★ D13 14565B/08 ★GB 2002-217

Natural tasting cheese substitute compsns. - contg. congealed mixt. of milk derived protein, vegetable fat, and water

BEATRICE FOODS CO 12.08.77-US-824214

(21.02.79) A23c-19/12 A23c-23

Cheese substitute compsn. consists of a congealed mixt. of milk derived protein (I), vegetable fat (II), and H_2O. Wt. ratios (I):(II)=1-4:4-1, and H_2O:(I)+(II)=1-4:3-1, while in part at least (I) is proteolytic enzyme clotted milk protein.

The cheese substitute does not have an objectionable casein(ate) taste, but (cooked or uncooked) does have both the texture and background cheesy flavour of natural cheese. In an example, a prod. made from fat (21.2%), rennet casein (28%), H_2O (44.5%), polyphosphate emulsifier (3%), Na citrate (0.5%), 88% lactic acid (1.8%), K sorbate (0.1%), and NaCl (1.4%) was shown on melting to string similarly to mozzarella cheese. 14.8.78 as 033281 (10pp478).

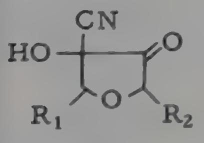
GIVA ★ D13 14604B/08 ★GB 2002-380

4-Cyano-tetra:hydro-furan-3-one(s) and 4-hydroxy derivs. - intermediates for 4-hydroxy-3(2H)-furanone(s) useful as flavouring agents

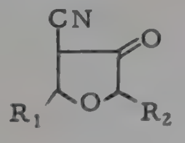
GIVAUDAN L & CIE SA 14.12.77-LU-078691 (11.08.77-LU-077955)

E13 R29 (21.02.79) G07d-307/02

Cyanofuranones of formulae (II) and (III) (where R_1 and R_2 are each H or (m)ethyl are new.



(II)



(III)

(III) and (II) are intermediates in the synthesis of known 2,5-di-R-substd.-4-hydroxy-3(2H)furanones (I) which are useful as flavouring substances. In an example (III; $R_1=R_2=$ Me) was prepd. in 96% yield by addn. of MeCH=CHCN to a refluxing soln. of ethyl lactate and NaH in THF. 10.8.78 as 032936 (6pp478).

NIOF ★ D13 14640B/08 ★J5 4004-906

Hard butter and highly stable liq. oil prepn. - by hydrogenating fatty oil, precipitating, emulsifying, sepg. into two portions and forming prods.

NIPPON OILS & FATS KK 15.06.77-JA-070776

(16.01.79) A23d-05 C11b-07

Fatty oil which is liq. at ordinary temps. is hydrogenated so that the content of trans-acid becomes 50-65%, and crystals are pptd. by tempering. It is emulsified by the addn. of aq. alkali soln. and sepd. in two portions of crystalline matter and non-crystalline matter, and the former is made into hard butter and the latter is made into highly stable liq. oil.

The catalyst for hydrogenation comprises 0.003-0.006 wt.% of methionine and 0.05-0.2 wt.% of ordinary hydrogenation catalyst, or 1-2 wt.% of sulphur-poisioned Ni catalyst is added to fatty oil. Liq. fatty oils contain no satd. triglyceride. Hydrogenation is carried out at 170-220°C under 0-2.5 kg/cm^2 of H_2 pressure.

Hard butter and highly stable liq. oil are prepd. by the sepn. of liq. fatty oil entirely without the use of solvent such as MEK acetone and nitropropane. Hard butter of high quality for the use of chocolate making, and highly stable liq. oil having high resistance to oxidation are prepd. in high yield economically. 15.6.77 as 070776 (8pp)

KANE ★ D13 14728B/08 ★J5 4005-061

Mfr. of instant Shiruko (sweet red bean jam juice) - by mixing red bean jam with e.g. sugar alcohol, concentrating and drying

KANEBO KK 11.06.77-JA-069035

(16.01.79) A23g-03

The method comprises (1) mixing sugar alcohol and/or glycerin with raw red bean jam, (2) heat-concentrating the mixt. to impregnate sugar alcohol and/or glycerin in red bean jam particles and to decrease the moisture content to a prescribed level, (3) drying and powdering the mixt. to obtain dry red bean jam and (4) adding sweetener and opt. viscosity-increasing agent.

Instant 'shiruko' which can be easily restored with cold water or warm water to 'shiruko' excellent in texture and taste and flavour, can be prepd. 11.6.77 as 069035 (6pp5)

KANE ★ D13 14729B/08 ★J5 4005-062

Sugarless chewing gum - contg. starch hydrolysate, flavourant e.g. fruit extract, and chewing gum base

KANEBO KK 11.06.77-JA-069034

(16.01.79) A23g-03/30

Chewing gum is prepd. by kneading a mixt. of (a) a powder obtd. by coating a tasty substance e.g. juice and/or flesh of various fruits, coffee extract, black tea extract, extract of medical herb, etc. with the starch hydrolysate of DE 7-15 and/or its reduced product, (b) an aq. soln. of the starch hydrolysate of DE 7-15 and/or its reduced prod. and (c) chewing gum base as the major components.

Chewing gum shows low sweetness and good texture and is free of stimulative taste, foreign taste and odour. Its taste and flavour are durable and highly preservative. 11.6.77 as 069034 (5pp5)

AJIN ★ D13 14730B/08 ★J5 4005-068

Hygroscopic powdery seasoning prepn. - by hydrolysing potato protein, removing insol. material and drying opt. after refining

AJINOMOTO KK 10.06.77-JA-068643

(16.01.79) A23l-01/22

Seasoning is prepd. by hydrolysing potato protein, removing insolubles from the hydrolysate and opt. refining and drying.

The powdery seasoning prepd. is as tasty as the hydrolysate of soybean protein or of wheat gluten and is superior to them in softness and taste. It is slightly hygroscopic and can be handled conveniently. By combining it in conventional hygroscopic seasoning prods. their hygroscopic property can be improved remarkably. 10.6.77 as 068643 (5pp5)

HAYB ★ D13 14731B/08 ★J5 4005-070

Alpha-glucosyl-stevioside sweetener prepn. - from a glucosyl-contg. sugar and stevioside using glucosyl transfer enzyme

HAYASHIBARA BIOCHEM 13.06.77-JA-069551

B03 E13 (D16) (16.01.79) A23l-01/22 C12d-13

The method comprises adding α-glucosyl-transfer enzyme to an aq. soln. contg. stevioside and a sugar contg. α-glucosyl gp. and reacting them to form α-glucosyl-stevioside.

Examples of α-glucosyl-sugar are maltose, malttriose, malttetraose, partial hydrolysate of starch, sucrose, etc. and examples of α-glucosyl-transferring enzyme are α-glycosidase, α-amylase, cyclodextrin-glucanotransferase, dextransucrase, etc.

The sweetness is good and is free from bitterness and astringency which are observed in stevioside. There is little after taste and the water solubility is remarkably improved. 13.6.77 as 069551 (20pp5)

MARU- ★ D13 14739B/08 ★J5 4005-099

Treating miso to improve handleability - by heating, mixing with aq. agar soln. at 50 degrees C and cooling to coagulate the agar

MARUKOME MISO KK 10.06.77-JA-068543

(06.01.79) A23l-01/20

The properties such as viscosity, form-holding property, etc. of miso prepd. in usual way are improved by heating miso to 50°C, mixing aq. agar soln. (prepd. by dissolving agar in prescribed amt. of water, boiling and cooling to 50°C) with the miso, filling the mixt. in vessel and coagulating the agar by cooling.

The prod. can be easily handled with a spatula. 10.6.77 as 068543 (3pp5)

FARB D13 25481T/16 =J7 9001-699

Pure 2-hydroxydiphenyl prepn. - by fractional distillation followed by recrystallisation

BAYER AG 20.01.71-DT-102476 (10.10.70-DT-049809)

*E14 (27.01.79) *BE-773-687 B01j-23/74 C07c-39/12*

Very pure 2-hydroxybiphenyl (I) is prepd. by vapourphase dehydrogenation of 1 or more wholly and/or partly hydrogenated 2-hydroxybiphenyls, using dehydrogenation catalysts contg. Ni, Cr, Al, Cu and alkali sulphate and/or carbonates, followed by fractional distn. of the mixt. of prods. and crystallisation of the distn. residue.

The catalyst has a long life and is very selective. Water is not needed during the dehydrogenation. The catalyst can be easily regenerated.

(I) produced contains <1 wt.% of impurities. (I) is a preservative for citrus fruits, a carrier for dyestuffs, and an intermediate. 11.10.71 as 080107, (clg. 10.10.70, 20.1.71-DT-049809, 102476) C07c-39/12, B01j-23/74 (27.1.79) FARBENFAB BAYER AG (11pp) (J47011823)

TSUK/ ★ D13 15079B/08 ★J7 9001-777

Compsn. for increasing calcium and iron levels in blood - comprises magnetised mixt. of magnetite and minor amt. of gamma and alpha ferric oxide

TSUKAMOTO K 27.11.67-JA-075789

B06 C03 (29.01.79) A61k-33/26

Magnetic agent for increase of Ca ion and Fe ion levels in blood serum of domestic animal contains a prod. prepd. by magnetising a mixt. of a major portion of Fe_3O_4 and a minor portion of γ-Fe_2O_3 and α-FE_2O_3, for active component.

When the agent is administered to domestic animals permeable Ca ion and Fe ion levels in the blood serum of the animal are remarkably increased and recovery of an injured nerve system of the stomach or intestine may be accelerated. Suitably the mixt. is magnetised using a magnetic field of 6500 gauss and is incorporated in the animal feedstuff. 27.11.67 as 075789, A61k-33/26, (29.1.79) KENKICHI TSUKAMOTO (6pp68)

OKUN- ★ D13 15081B/08 ★J7 9001-779

Storage stable, high calorie and protein, liq. food prepn. - by crushing rice, bread, egg, etc., homogenising, mixing with enzyme and protease, adjusting pH, homogenising and sealing in vessel

OKUNO KK 20.06.72-JA-061017

(29.01.79) A23l-01/34

Rice, bread, egg and other foodstuffs are crushed and homogensied, mixed with enzyme for decomposing starch and then with protease for the determined time. The pH of the resultant is adjusted to a value suitable for liquid, food, homogenised again and heated at 110-120°C, followed by sealing into a vessel. 20.6.72 as 061017, A231-1/34, (29.1.79) OKUNO KK (3pp22) (J49020343)

YOST D13 96829X/52 =J7 9001-780

Vegetable foaming agent for foodstuff - is prepd. by adding proteolytic enzyme to suspension of gliadin wheat protein

YOSHIHARA OIL MILL KK 26.04.75-JA-051825

*(29.01.79) *J51128-447 A23j-03/02 A23l-01 +C09k-03*

Gliadin protein of wheat is suspended in water contg. natural and/or synthetic electrolyte. To the suspension, proteolytic enzyme is added and the gluadin partially hydrolysed. Before drying, process starch and/or gliadin dispersed in water contg. electrolyte is opt. added.

The foaming agent has superior foaming property. The stability and hardness of the foam is very good. The foaming agent is obtd. cheaply as compared with that produced from white casein or soybean starch. The foaming agent is white, odourless, tasteless and harmless. 26.4.75 as 051825, A23 1-1/00, A23j-3/02, C09k-3/00 (29.2.79) YOSHIHARA OIL MILL KK (3pp) (J51128447)

NAKA/ ★ D13 15083B/08 ★J7 9001-782

Flavoured frozen soybean curd prepn. - by swelling with water, mixing with lemon juice, dehydrating, mixing with flavourant contg. soy sauce and mixing with flour paste

NAKATA M 14.05.69-JA-037174

(29.01.79) A23l-01/20

Frozen soybean curd is swollen with water, mixed with lemon juice or organic acid to adjust pH to 2.8-3.2, washed with water to remove the acid dehydrated, mixed with a soln. contg. soy sauce, sugar, table salt, Na glutamate and arrowroot powder, boiled, then the resultant is mixed with paste contg. alubmin and flour, followed by kneading for about 2 hours at 40°C to form a thin layer on the surface of the soybean curd, and finally the resultant is dried under vacuo.

The paste for forming thin layer is prepd. by heating alubmin and flour with water, mixing with water and kneading for about 2 hours. 14.5 69 as 037174 A231-1/20, (29.1.79) NAKATA M (2pp22)

SHMA ★ D13 15084B/08 ★J7 9001-783

Devil's tongue powder prodn. - by crushing Devils tongue in presence of water, centrifuging, sepg. solid and treating it with dehydrating solvent

SHIMIZU MANZO SHOTE 07.07.69-JA-053083

(29.01.79) A23l-01/21

Devil's tongue or its crude powder is crushed in the presence of water to give powder of 1 mm to several mm size, and then the prod. is centrifuged to separate wasted liquid contg. non-mannan component from crude mannan component. The latter is contacted with dehydrating solvent, whereby devil's tongue powder is obtd. The powder has good properties. 7.7.69 as 053083 A231-1/214, (29.1.79) SHIMIZU MANZO SHOTEN KK (4pp22)

FUKO ★ D13 15085B/08 ★J7 9001-784

Cheese-like food prepn. - by subjecting butyric acid ester and natural fat to transesterification, mixing with aq. soln. contg. milk solid, etc.

FUJI OIL KK 01.09.70-JA-075972

E17 (D16) (29.01.79) A23c-19

Butyric acid ester and natural fat are subjected to transesterification go give synthetic fat contg. 1-20 wt.% butyric acid, 0.3-5.0 wt.% caproic acid, 0.3 to 5.0 wt.% caprilic acid and 0.3-7.0 wt.% lauric acid. The resulting synthetic fat is mixed with aq. soln. contg. solid component of milk to give O/W type emulsion, and this is mixed with starter, followed by conventional manner for prepn. of cheese,

Cheese like food quite similar touch and taste to natural cheese can be obtd. at low cost by simple manner. The natural fat includes beef tallow, lard, palm oil, cotton seed oil, soybean oil, etc.

The transesterification reaction is conducted under heating with the use of conventional catalyst. The esterified prod. is mixed with solid component of milk to give emulsion contg. the solid component of milk in an amount of $>1\%$. To the emulsion is added e.g. Streptococcus Lactis, followed by fermentation under heating. 1.9.70 as 075972 A23c-19/00 (29.1.79) FUJI OIL KK (4pp22)

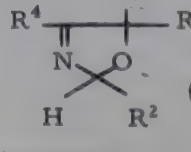
PFIZ D13 75592S/48 =J7 9001-787

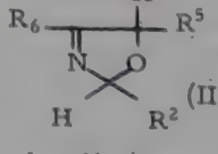
Alkmyl-substd 3-oxazolines used as flavouring agents - prepared from acyloins and aldehydes

PFIZER INC 05.05.70-US-034876

*B03 E13 (D23) (29.01.79) *DT2120-577 +A23l-01/22 A61k-47 C07d-263/12*

Alkyl-substd. 3-oxazolines of formula (I):and (II):


(I)

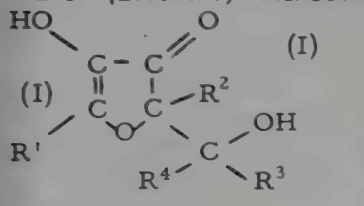

(II)

(where R^1, R^2, R^3 and R^4 are 1-6C alkyl and R^5 and R^6 are 2-6C alkyl) are useful as aroma-giving and flavouring agents for foodstuffs (in 1-100 ppm concn.) and medicinal preparations, for example for coating pills and flavouring elixirs; also as additives to perfumes and cosmetics (in 1-200 ppm. concn). 28.4.71 as 027653 (Clg. 5.5.70-US-034876) A231-1/226; A61k-47/00, C07d-263/12, (29.1.79) PFIZER INC. (9pp) (J46006926)

UNIL D13 70322T/44 = J7 9001-788
Cheese product - with blue cheese aroma contg octene -1-ol-3
UNILEVER NV 08.04.71-LU-062952
*E17 (29.01.79) *NL7204-791 A23c-19 A23l-01/22 +A23c-07*

Food products with the aroma of ripe blue cheese are made by incorporating 0.5-100 mg/kg esp. 5-50 mg/kg) of octene-1-ol-3, pref. together with 5-15C 2-alkanones and 2-12C alkanoic acids and opt. other known blue cheese aroma ingredients. Pref. aroma agents contain a base of 1-8 pts. ocetene-1-ol-3 (opt. as the racemate), 15-30 pts. 2-alanone (e.g. pentanone-2, heptanone-2), octanone-2, nonanone-2 etc.) and 40-60 pts. alkane acid. 7.4.72 as 035040 (clg. 8.4.71-LU-062952) A231-1/226, A23c-7/00, 19/00 (29.1.79) UNILEVER N.V., (6pp) (J48048669)

UNIL D13 08645V/05 = J7 9001-789
Food flavouring agents - consisting of 2,5-dimethyl-4-hydroxy-3-(2H) furanone/carbonyl cpd reaction prods
UNILEVER NV 12.07.72-GB-032653
*E13 (29.01.79) *NL7309-647 A23l-01/22 C07d-307/60*

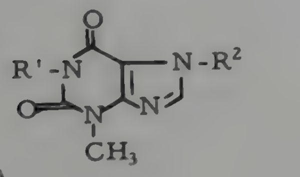

(I)

Food flavouring agents consist of cpds. of formula (I) (where R' and R^2 are each C$_{1-4}$ alkyl; R^3 is H, or CH$_3$, and R^4 is H or an org. group contg. 1-14C atoms, H atoms and 0-20 atoms, R^4 contg. not more than 4C atoms if R^3 is CH$_3$).

Enhance the flavour of food esp. foods heated to temps. >100°C before consumption, e.g. shortenings, fats, dried soups, meat prods. and bakery prods. 12.7.73 as 078901 (clg. 12.7.72-GB-032653) A231-1/22, C07d-307/60 (29.1.79) UNILEVER N.V. (7pp) (J49051263)

FIRM D13 26176W/16 = J7 9001-790
Cocoa aroma flavouring mixt. - contg. aminoacid or oligopeptide, pref. 3 acetamido-1,4-diketo-2,5-pyrrolopiperazine, and a purine deriv
FIRMENICH SA 28.09.73-CH-013957
*B02 C02 E13 +P15 (D15) (29.01.79) *DT2445-674 A23g-01 A23l-01/23*

Active ingredient mixt. of flavouring compsn. contains (A) an aminoacid or an oligopeptide or oligopeptide mixt. and (B) a purine deriv. having the general formula (I): (where R' and R^2 each is Me or one is H and the other is Me).


(I)

Used for improving modifying or strengthening the organoleptic props. of foods, beverages, food supplements, animal foods, pharmaceuticals and tobacco prods. but partic. of cocoa, cocoa prods. and substitutes, using mixt. concns. of 50-5000 ppm. Mixts. accurately reporduce the bitter, astringent notes of cocoa-based foods. 25.9.74 as 110414 (clg. 28.9.73-CH-013957) A231-1/234, A23g-1/00, (29.1.79) FIRMENICH SA (8pp) (J50058271)

IWAT/ ★ D13 15088B/08 ★ J7 9001-791
Improving flavour etc. of Eutrema wasabi - e.g. mixed with mustard and starch, by adding baked flour
IWATA T 17.01.75-JA-008073
(29.01.79) A23l-01/22

Powdered Eutrema wasabi compsn. e.g. one comprising powder of Eutrema wasabi, mustard powder and starch, is mixed with 1-10 % of baked flour. Flavour, taste and dispersibility into water are improved. 17.1.75 as 008073 A231-1/223 (29.1.79) (2pp22) IWATA T (J51082762)

GFOO= ★ D13 15149B/08 ★ SU -600-992
Dried tea cutting machine - has rotor with longitudinal semicircular channels and radial slots into which working edges of cutting knives fit
GEOR FOOD IND RES 12.04.76-SU-347208
(17.04.78) A23f-03

Machine for cutting dried tea, comprising a rotor mounted on a drive shaft. On the surface of the rotor are longitudinal semicircular channels and radial slots, plus knives, the working edges of which are located opposite the radial slots and insert into them.

Cutting effectiveness is increased and conversion of the tea into powder is prevented by immovably mounting the knives above the rotor on two spindles, positioned parallel to the rotor shaft. One of the spindles is fixed by a joint and the other is spring-loaded.

Shvelidze E.K., Kirakosyan E.A., Tsamalaidze R.A., Bul. 13/5.4.78 12.4.76 as 347208 (2pp29)

KBMO= ★ D13 15150B/08 ★ SU -600-993
Animal feed manufacture - based on grain, urea and other additives, by rapidly raising and lowering pressure at known temperature levels
KUIB MOTOR CONS WKS 03.03.76-SU-331393
C03 (17.04.78) A23k-01

Animal feed additives mfr. based on grain and urea, to produce carbamide-type concentrates for ruminant animals. The ingredients are treated under continuously-increasing pressure up to 14-60 atm. with periodical increase to a value relative to its initial value, and instantly reducing the pressure to atmospheric at the end of the treatment process.

The quality of the additives is increased, together with the productivity, by additionally subjecting the feed to cyclically-varying pressure from 1-5 atm. with a frequency of 2-10 Hz. Prior to the end of the process the pressure is previously reduced to 9-20 atm. The periodic increase of the pressure value is carried out for 5-10 sec. at 10-30 atm., over a period of 0.5 to 3 secs.

Apukhtin, B.A. Zinin A.I., Makarov V.I. et al. Bul. 13/5.4.78 3.3.76 as 331393 (3pp29)

CEPA ★ D13 15151B/08 ★ SU -600-994
Animal feed having increased carbohydrate content - obtd. by enzymatic hydrolysis of cellulose raw material from viscose cellulose prodn.
CELLULOSE PAPER IND RES (LEAG=) 29.01.76-SU-319434
A11 C03 (17.04.78) A23k-01/12

Animal feed having increased carbohydrate content is obtd. by enzymatic hydrolysin of cellulose raw material, comprising low molecular fibrous cellulose (length 0.5 mm) obtd. from prodn. of viscose cellulose, at pH 4.5-5.0 and 40-50°C to a glucose content in prod. of 5-35%. The enzyme prepn. used may be ''cellolignovin'', ''cellocandin'' or ''celloviridin'' with activity of 100-150 units taken as 5-20 % dry fibre wt.

De-Millo L.E., Cherepanova A.I., Dmitrochenko A.P. et al. Bul. 13/5.4.78 29.1.76 as 319434 (2pp1347)

AVIC= ★ D13 15152B/08 ★ SU -600-995
Chick growth stimulating compsn. - prepd. by adding to feed calcium peroxide mixed with bone flour to improve storability and safety
AVICULTURE RES INST 24.03.76-SU-354163
C03 (09.03.78) A23k-01/16

Chick growth can be stimulated by adding to the feed a calcium cpd.

This method is improved by using CaO$_2$ in an amt. of 0.25-2.25 wt.% w.r.t. the total feed; CaO$_2$ is preliminarily mixed with an equal quantity of bone flour. By this method not only the chick growth is accelerated, but also their safety is increased. It can be stored for long periods without the loss of its activity.

Krivopishin I.P., Emelyanov B.V., Fisinin V.I. et al. Bul. 13/5.4.78 24.3.76 as 354163 (2pp70)

DENI/ ★ D13 15153B/08 ★ SU -600-996
Preserving bee-bread in honeycombs over winter - under layer of sugar syrup contg. apple juice to prevent moulding and fermentation
DENISOV N A 23.03.71-SU-643590
C03 (17.04.78) A23k-03

Bee-bread surface is covered with a sugar syrup, with apple juice added so that deterioration of the bee-bread at low temps. is avoided, and also moulding and fermentation are prevented because of the acidity of the compsn. (pH 3.8)

The compsn. contains (in wt.%) water 29-35, sugar 62-68, apple juice 2-6.

Denisov N.A., Bul. 13/5.4.78 23.3.71 as 643590 (1pp70)

FASM/ D13 00005A/01 =US 4107-090

Catalyst for hydrogenolysis of dimethyl-dibutyl hydroxybenzylamine - comprises alloy of nickel, aluminium, chromium, molybdenum and palladium

FASMAN A B (KKIR=) 21.06.76-SU-374525

*E14 (15.08.78) *BE-855-861 B01j-23/64 +B01j-21/04*

Catalyst for hydrogenolysis of N,N-dimethyl-3,5-ditert. butyl.4-hydroxybenzylamine which is an alloy of components in wt.%: 39.0-47.7 Ni; 0.3-2.0 Cr; 0.5-4.0 Mb; 0.01-0.20 Pd and the balance Al.

The catalyst makes it possible to reduce the process duration and lower the content of impurities of stilbenequinone in the final product of the hydrogenolysis (agidol). 16.6.77 as 807254 (3pp)

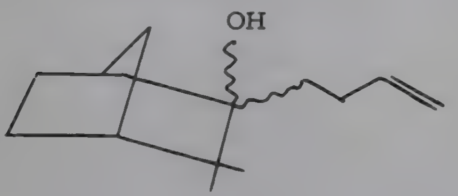
INFL D13 01891A/01 =US 4107-094

(3,3)-Dimethyl-(2)-butenyl norbornanol-(2) - prepd. from camphene oxide and allylic Grignard cpd. and useful as flavour and aroma agent

INT FLAVORS & FRAGR INC 11.11.76-US-740937 (19.09.77-US-834400)

*E15 (D23) (15.08.78) *US4064-184 +C11b-09*

Perfume compsns. comprise a cpd. of formula (I)



(I)

(where the wavy lines represent exo or endo configurations) and ≥1 adjuvant selected from natural and synthetic perfume oils, alchols, aldehydes, ketones, nitriles, esters and lactones.

(I) are added to perfume and colognes to produce sweet, woody, thiyone-like aromas with strong fir-balsam, armoise, cedar leaf, piney, earthy and camphoraceous nuances. The parent patent (01891A/01) claimed a wider group of similar cpds. 19.9.77 as 834400 (13pp976)

INFL D13 68137X/36 =US 4107-184

3-Furyl alkyl disulphide cpds. - useful flavour agents giving meat flavour

INT FLAVORS & FRAGR INC 07.10.75-US-620353 (19.02.75-US-551045)

*C02 E13 (15.08.78) *NL7600-856 C07d-307/64*

New 3-furyl alkyl disulphides chosen from (a) ethyl (2-methyl-3-furyl) disulphide; (b) isoanyl(2-methyl-3-furyl) disulphide; (c) cyclohexyl(2-methyl-3-furyl)disulphide; and (d) isoanyl(2,5-dimethyl-3-furyl) disulphide are claimed.

The disulphides are useful for altering, modifying or enhancing the organoleptic properties of foodstuffs and esp. provide the flavour and aroma of roasted meat prods. 7.10.75 as620353 (15pp910)

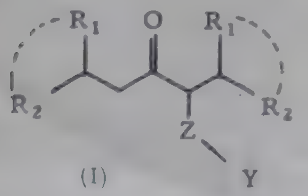
INFL D13 64861Y/36 =US 4107-197

Flavouring and aroma enhancers for foodstuffs and perfumes - comprising heptanonol or thiol ether derivs.

INT FLAVORS & FRAGR INC 07.10.76-US-730538 (31.03.77-US-783495)

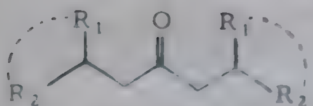
*E17 (D23) (15.08.78) *US4045-491 +C07c-153/09*

Alpha oxo mercaptans, sulphide, hydroxides or ethers of formula (I) are prepd. (where R_1 and R_2 together are phenyl, or separately R_1 is H or Me and R_2 is Me; Z is O or S, Y is H, 1-4C alkyl, 3-4C alkenyl, acetyl, methoxy carbonyl methyl or 1,3-diethyl acetonyl).



(I)

Prepn. is from corresp. ketone of formula (II) by reacting with SO_2Cl_2 at 15-40°C to form an alpha chloro ketone, distilling from reaction mass then admixing with M-Z-Y, (where M is alkali metal), in the presence of an inert solvent at 0-30°C to form prod.



(II)

Compsns. can be used as substitutes for natural materials to enhance the flavour and aroma notes of foodstuffs, esp. berry fruit-, vegetable-, spicey- and citrus fruit-flavoured foodstuffs. 31.3.77 as 783495 Div. ex 404591 (30pp931)

PFIZ D13 28752A/16 =US 4107-334

Functional protein prepd. by precipitating protein then solubilising - with stated amts. of specified enzymes, used in food compsns.

PFIZER INC 13.10.76-US-732018

*(D16) (15.08.78) *BE-859-635 A23j-03*

Functional protein is prepd. by subjecting impure natural protein of whey, microbial or vegetable protein to temp. of 40-150°C in aq. medium until ≥ 50% ultimate protein capable of pptn. occurs% separating the ppte. from the medium; and treating the ppte with proteolytic enzyme at 20-65°C for < 30 mins. to achieve soln.

The enzyme is deactivated, being employed at a level, per gram of sepd. protein on a dry basis, of ≥ 240 HUT where enzyme is microbial and protease, ≥ 300 PC where enzyme is microbial neutral protease, ≥ 2300 Delf units where enzyme is microbial alkaline protease, ≥ 130,000 N.F PU where enzyme is plant protease, and ≥ 150 Pepsin units where enzyme is animal protease. Impure protein is such that in aq. medium a soln. of suspension is formed, suspension being hazy or clear after proteolysis.

Protein is used in a wide variety of food compsns., as a supplement or substitute for non-fat dry milk, sodium caseinate, gelatin and egg albumin. 13.10.76 as 732018 (10pp931)

USSA ★ D13 15662B/08 ★US 4107-335

Freeze-dried salad dressing - contains a high proportion of salad oil and is reconstitutable with water to a spoonable prod.

US SEC OF THE ARMY 08.04.77-US-785804

(15.08.78) A23l-01/24

A freeze-dried salad dressing is produced from a compsn. comprising (by wt.) 20-40.6% vegetable salad oil (I); 0.14-0.16% CMC-modified microcrystalline cellulose powder (II); 4.8-7.9% pregelatinised starch (III); 1-3.1% unmodified food starch (IV); 4.9-7.1% egg yolk solids (V); 1.9-2.1% dry synthetic vinegar (VI); 0.3-0.6% hot water-soluble gum (VII); 9.9-10.1% sugar (IX); 1.9-2.1% salt (X); 0.9-1.1% dry powdery spice (XI); 0.14-0.19% nonionic surfactant (XII) and 33.5-45.5% water.

(III) and (IV) are first mixed to form a dry blend and 80-90% of the water is added to form a slurry. This is then heated to 85-88°C for 10-15 mins. to form a translucent mass while adding water to make up evapn. losses. The remaining 10-20% water is divided into 2 portions, the first of which is added to (II) to form a paste and the second of which is added to (VII) to form a suspension which is then heated for 10 mins. at 100°C to produce a soln.; (IX), (X), (V) and (XI) are then mixed and added to the paste, this is added to the translucent mass and the total is mixed at 85-88°C in a vertical cutter mixer for 2 mins. at a low speed and for 2-3 mins. at a high speed while adding (XII) to (I) so as to form the salad dressing. The latter is spread on trays to a depth of 1-1.5 cms and blast-frozen for 3-4 hrs. It is then freeze-dried for 20-24 hrs. to a moisture content of ≤ 2 %, coarsely ground and then mixed with (VI).

The dressing is available as a free-flowing powder which is easily reconstitutable by the addn. of water into a spoonable compsn., or used as such for sandwich spread. 8.4.77 as 785804 (5pp922)

DYNL D13 27183Y/16 =US 4107-336

Ethyl sulphonate-alkylamine copolymers - as trunks for water-soluble polymeric dyes for foods, drinks, medicaments, textiles, plastics, etc.

DYNAPOL 08.12.75-US-638731 (20.09.77-US-835086)

*A14 B07 E24 (15.08.78) *BE-849-194 A23l-01/27*

Edible material is admixed with 10 ppm-1.0 wt.% of a polymeric colourant comprising a copolymer consisting of ethylsulphonate and 2-6C lower alkylamine kgps. totalling 20-8000 gps. The number of lower alkylamine gps. is 0.4-2.5 times the number of ethylsulphonate gps. Chromophoric gp. units are covalently bonded to the lower alkylamine gps., and they are pref. anthraquinone or azo-gps. Colourant is typically added to food or beverage

Copolymers have high water-solubility and minimal weight. They are not absorbed in the gastrointestinal tract. 20. 9. 77 as 835086 (9pp997)

ANHE ★ D13 15664B/08 ★US 4107-338
Batter mix, e.g. for breading fish - comprises a slurry of a particular starch in water
ANHEUSER BUSCH INC 05.11.76-US-739209
(15.08.78) A21d-10 A23l-01/17

A batter mix is claimed which comprises floury starch derived from a plant of the genetic constitution fl, fl, translocations, inversions, mutants and/or its variants and water.

Its use for coating foods is also claimed.

The starch can be used by itself to produce a batter having excellent adhesive properties (which are further improved with an oxidant), e. g. in the prodn. of breaded fish fillets. 5. 11. 76 as 739209 (4pp922)

GENO ★ D13 15665B/08 ★US 4107-339
Soluble coffee solids powder prodn. - with recovery of selected volatiles giving prod. with nutty green aroma
GENERAL FOODS LTD 29.07.76-GB-031711
(15.08.78) A23f-01/08

Prepn. of soluble coffee powder by dehydration of an aq. extract of ground roasted coffee includes (a) stripping volatile flavour components with 5-15% of the water in the extract in an evapn. zone at an absolute pressure of 16 ins Hg to atmospheric; (b) partially condensing the volatiles mixt. in a condensing zone at absolute pressure of 16 ins Hg to atmospheric, the temp. of the condensate being 33-70°F as it leaves the zone.

Process further comprises (c) concentrating the stripped aq. extract to 37-55 wt. % solids; (d) mixing the concentrate and the condensate; (e) feeding the mixt. to a spray drier at 27-200°F and spray drying to droplet size 100-300 μ microns using a nozzle pressure of 700-2,500 p. s. i. g., air inlet temp. 250-550°F and outlet temp. 180-230°F. 26. 7. 77 as 819088 (6pp955)

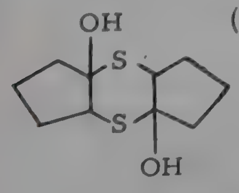
USDA ★ D13 15666B/08 ★US 4107-340
Removing corn from the cob - by longitudinally splitting cob and applying force to rows of kernels
US SEC OF AGRICULTURE 21.07.77-US-817889 (27.04.76-US-680643)
(15.08.78) A23l-01/21

Whole kernels of corn are removed from the cob by first longitudinally splitting the cob without damage to the whole kernels. A force is then applied to the kernels to separate them intact from the split cob. The force is applied to individual rows of kernels of corn commencing with the row adjacent the split and advancing to adjacent rows as the kernels are sepd. from the cob. The cob is pref. split into half but if desired may be split into smaller segments.

The method is used to remove corn from the cob. Neither the kernels nor the hulls of the kernels are broken and there is thus an increased yield from each bushel of corn. 21. 7. 77 as 817889 (3pp295)

QUAK D13 58673A/32 =US 4107-342
1,8-Di:hydroxy-2,9-di:thia-tri:cyclo-tetradecane(s) - useful for imparting a meaty flavour to foodstuffs esp. pet foods
QUAKER OATS CO 17.02.77-US-769520 (26.09.77-US-836775)
*C02 E13 (15.08.78) *US4094-998 A23l-01/23*

The flavour of a foodstuff is altered by addn. of a flavourant 1, 7-dihydroxy-2, 8-dithia-tricyclo$[7.3.0.0^{3,7}]$ dodecane of formula (I) to impart a meat flavour.



(I)

Pref. (I) is added in an amt. up to 2wt. % of a pet food. The parent patent describes the use of 1, 8-dihydroxy 2, 9-dithiacyclo$[8.4.0.0^{3,8}]$ tetradecanes as flavourants. The resulting meaty flavour obtd. is stable and capable of surviving food processing conditions. 26. 9. 77 as 836775 (5pp924)

SCMZ ★ D13 15668B/08 ★US 4107-343
Pourable, whippable emulsion - has a specific emulsifier combination, is used as a food topping and has long-term stability to sepn. and gelation
SCM CORP 23.11.77-US-854088 (23.06.75-US-589497)
(15.08.78) A23g-03

A pourable edible, homogenised emulsion which is whippable at 40-100°F to ≥200% overrun contains 45-60% water, 20-30% fat, 7-20% sweetener, 0.5-2.5% dispersible protein, 0.1-0.75% thickener, 0.1-1.0% buffer and 0.75-2.5% of an emulsifier which comprises 0.5-1.5% propylene glycol monostearate or hexaglycerol distearate, 0.3-0.6% of an ethoxylated sorbitan ester, 0.05-0.25% sorbitan monostearate and ≤ 0.15% lecithin.

The emulsion is used as a food topping. The emulsion has exceptional storage stability (≥1 yr. in aseptic conditions at room temps.). 23. 11. 77 as 854088 (+ 8. 11. 76 - US - 739511)(5pp922)

GENO ★ D13 15669B/08 ★US 4107-344
Cooked dehydrated rice flakes prodn. - with texture of mashed potato on reconstitution
GENERAL FOODS LTD 26.05.75-CA-227742
(15.08.78) A23l-01/18

Rice flakes are prepd. by drum drying a slurry of 70-90 wt. % of finely divided completely gelatinised rice grains and 10-30 wt. % finely divided uncooked rice, and subdividing the dehydrated sheet into flakes.

Pref. white rice is employed. The cooked rice is drained and dried, e. g. using heated air, to 8-10 wt. % moisture. It is then milled to that 100% passes at 40 mesh screen. The uncooked rice is also milled to below 40 mesh 0.01-0.5, pref. 0.25 wt. % of an emulsifier, is pref, added, esp. monoglycerides e. g. glyceryl monostearate. The slurry is dried in a layer of thickness 0.005 -0.015 ins. 26. 5. 76 as 690138 (4pp955)

ASHL ★ D13 15670B/08 ★US 4107-345
Dehydrated potatoes contg. mono:glyceride emulsifier - in combination with polyethoxylated mono:glyceride
ASHLAND OIL INC 23.06.71-US-156120
A97 (15.08.78) A23l-01/12

In the prodn. of dehydrated potatoes, the following additives are added before drying (I) a condensation prod. of 10-95 pts. wt. ethylene oxide with 90-5 pts. wt. of mixed esters of glycerin and 10-24C fatty acids, contg. ≥10 wt. % monoglyceride, the rest being glycerol, di- and triglycerides; and (II) an edible monoglyceride. Pref. the wt. ratio of (II) : (I) is 1.5-4 : 1, and the total amt. of (I) and (II) added is 0.3-0.7 wt. % of the dehydrated potato.

The mixt. is easier to disperse than (II) alone, and grades of (II) which are not commercially acceptable alone can be used, More water can be added on reconstitution without impairment of appearance or eating quality giving improved colour. 23. 6. 71 as 156120 (5pp955)

KRAV/ ★ D13 15671B/08 ★US 4107-346
Dietary salt compsn. - is balanced to the extracellular body fluids minerals content and contains specified trace elements
KRAVITZ H L 02.09.76-US-719913
(15.08.78) A23l-01/23

A dietary salt compsn. contains 92-93.1% Na$^+$, 2.4-3.4% K$^+$ 3.1-3.4% Ca^{++} and 1.2-1.4% Mg^{++} in a base formulation which acts as a carrier for ≥1 trace element (I), the latter being present in amts. sufficient to supply ≥ 20% of the recommended daily allowance per 10 g salt.

The compsn. is a replacement for salt in foods and/or as a mineral supplement. The compsn. has the taste and appearance of ordinary table salt and is balanced so that the 4 major ingredients are present in the same ratio as in body fluids. 2. 9. 76 as 719913 (7pp922)

CADB D13 16409W/10 =US 4107-347
Milk chocolate prodn. with use of milk powder - having taste of product obtained by the crumb process
CADBURY LTD (CADB-) 17.08.73-GB-038960
*(15.08.78) *DT2439-335 A23g-01*

Mfr. of a milk chocolate comprises heating an aq. sugar soln. which may contain up to 5% by weight of glucose, to 250 to 320°F. The heated sugar soln. is then immediately poured into milk powder in a heated melangeur and the resultant mixt. is processed to form milk chocolate. Anhydrous butter fat, cocoa mass and/or cocoa powder may be present with the milk powder when the heated sugar soln. is added. 16. 8. 74 as 498137 (3pp)

USDA ★ D13 15697B/08 ★US 4107-425

Anomerically pure 1-alpha and 1-beta-D-glucosyl ester(s) - are prepd. by metallating, acylating and then hydrogenating 2,3,4,6-tetra-O-benzyl-D-glucopyranose

US SEC OF AGRICULTURE 15.02.77-US-768916

B07 C02 E13 (B03 D22 D25) (15.08.78) C07h-13/02

Anomerically pure 1-α- and 1-β-D-glucosyl esters are prepd. by treating 2,3,4,6-tetra-O-benzyl-D-glucopyranose (I) with n-BuLi in THF or anhydrous benzene; acylating the resulting Li salt with an acyl chloride; and hydrogenating the resulting acylglucopyranose.

High yields of anomerically pure esters are obtd.; acylation can be controlled selectively. D-Glucosyl esters are known plant growth regulators; sugar esters are known additives to detergents, and are antispattering emulsifiers in foods, and they are used in confectionary coatings, in lubricating oils and in germicides. Other uses are as sludge inhibitors, pour point depressants, tablet coatings, plasticisers and food antioxidants. 15. 2. 77 as 768916 (5pp1248)

DWEE/ ★ D13 15739B/08 ★US 4138-937

Corn popper with annular trough collecting popcorn - surrounding cooking pot with floating lid

DE WEESE R M 24.02.77-US-771761

(13.02.79) A23l-01/18

A corn popper includes a heated pot with a stirrer and a flexible lid. Initially the lid is closed but popping corn raises the lid and allows the corn to fall into an annular trough. The inner walls of the trough are formed by an annular shroud which is beneath the pot and includes apertures through which air is blown. An open topped storage bin fits over the trough and has an apertured lid for removing moisture laden air during popping.

The apparatus pops corn which is collected in the trough. After cooking, the trough and storage bin are lifted from the appts. together with the cooking pan and are inverted. Popped corn is held in the storage bin until required. Salt may be added to the corn while in the storage bin. 24. 2. 77 as 771761 (7pp295)

QPPP D13 08607A/05 =US 4138-940

Strawberry dressing machine - with buoyancy pressing floating fruit up against inclined contra-rotating plucking rolls (NL 17.1.78)

KEWPIE KK (KEWP-) 29.10.76-JA-129383 (15.07.76-JA-083494)

*+P28 (13.02.79) *DT2729-366 A23n-15/02 +A47j-21*

Appts. for removing calyxes from fruit comprises a tank containing water to which the fruit is fed and directed down-wards by a conveyor before being released to float upwards to impinge on the lower end of an inclined system of rollers. This roller system consists of several pairs of rollers with metal core shafts covered with soft outers (e.g. sponge rubber) and disposed parallel and in contact; the system is inclined upward within the tank away from the fruit supply station.

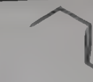
Each pair of rolls is driven to rotate in opposite directions so that their contact surfaces move upwards. The calyxes of the berries are caught between pairs of rolls, clamped and plucked off. Appts. achieves high yield. 24. 6. 77 as 809932 (19pp1364)

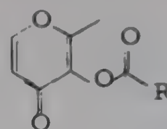
INFL ★ D13 ✓ 15870B/08 ★US 4139-541

Maltol 2-methyl-pentenoate(s) - useful for augmenting flavour and aroma of foodstuffs, chewing gum, medicinal prods. etc.

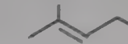
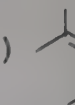
INT FLAVORS & FRAGR INC 08.03.78-US-884382

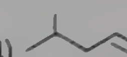
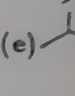
B07 E13 (B03) (13.02.79) C07d-309/22

Esters of formula (I) are new: (R is (a) ,



(I)

(b) , (c) ,

(d) , or (e) ).

Used for augmenting or enhancing the flavours or aroma of foodstuffs, chewing gum compsns., flavouring compsns. for chewing gum, medicinal prods. or ingredients for medicinal prods. Used at 0.01-50 ppm. (I) may be combined with a variety of adjuvants e.g. geranoil.

In an example maltyl 2-methyl-cis-penetenoate was obtd. by reacting maltol with the acid chloride. 8. 3. 78 as 884382 (18pp1248)

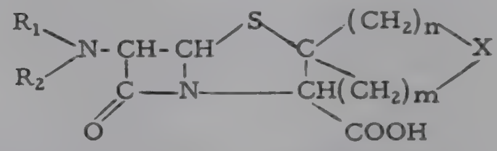
UNIO D13 53860A/30 =US 4139-628

Spiro-thiopyran or-pyran penicillin derivs. - useful as antibiotics and feed additives esp. against Gram-negative strains producing lactamase

UCB SA 18.01.77-GB-001906

*B02 C02 (13.02.79) *DT2801-850 A61k-31/43 C07d-499/44*

Amino-spiro oxa(or thia)cycloalkane-penam -carboxylic acid derivatives of formula (I) and their salts are: new



(I)

In (I) X is a S or O or sulfinyl, n is 1 or 2, m is 1 or 2, R_1 is H, R_2 is 2-phenylacetyl, 2-amino-2-phenylacetyl, 5-methyl-3-phenyl-4-isoxazolecarbonyl or 2,6-dimethoxybenzoyl, or R_1 and R_2 together are bivalent radiacal R_3, pref. (hexahydro-1H-azepin-1-yl)methylene.

These cpds. have valuable antibacterial properties and are useful as therapeutic agents in the treatment of infectious diseases caused by Gram-positive and Gram-negative bacteria. 16. 1. 78 as 869860 (13pp)

GENO ★ D13 ✓ 15909B/08 ★US 4139-639

High temp.-stable chewing gum compsn. - in which the aspartyl phenylalanine ester sweetener is fixed in an encapsulating agent to prevent hydrolysis or cyclisation

GENERAL FOODS CORP 28.10.77-US-847390 (24.01.77-US-761836)

A97 E14 (13.02.79) A23g-03/30

A chewing gum compsn. comprises a gum base, a flavouring agent, a bulking agent (I) and L-aspartyl-L-phenylalanine methyl ester (II) which is fixed in an encapsulating agent compsn (III). The ratio of (III):(II) is 10-2:1 and (III) itself comprises gum arabic and the reaction product of a cpd. contg. a polyvalent metallic ion with an ungelatinised starch acid ester of a substd. dicarboxylic acid: starch-$O_2C-R(R_1)-CO_2H$ (where R is di-/tri-methylene and R_1 is alk(en)yl or aralk(en)yl) the latter having been produced by reacting an ungelatinised starch with $R_1-R{<}\genfrac{}{}{0pt}{}{CO}{CO}{>}O$ in alkaline media.

The conversion of (II) to diketopiperazine is reduced, thereby improving the chewing gum's storage stability at raised temps.

(I) is a sugar (substitute) e.g. sucrose, dextrose, and/or corn syrup solids, mannitol, sorbitol and/or xylitol. (II) is a commercially available sweetener (e.g. EQUA 200, G. D. Searle) and (III) is also commercially available (e.g. capsul, Nat. Starch & Chem. Corp). (III):(II) is esp. 5-3:1 and the (II) fixation pref. accomplished by spray-drying (together with (III)) prior to incorporation into the chewing gum. 28. 10. 77 as 847390 (5pp922)

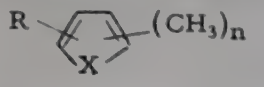
BADI D13 25183A/14 =US 4139-641

Preservation agents for fodder and silage - comprises furan or thiophene aldehyde, nitrile and carboxylic acid derivs. and their vinyl analogues

BASF AG 09.10.76-DT-645715

*C03 E13 (13.02.79) *BE-859-049 +A23k-01/22*

Agents for preserving and ensiling animal feedstuffs contain one or several furan or thiophene derivatives of form ula (I) where X denotes O or S, R denotes the radicals -CHO, -CN or $-COOR^3$, or the vinylogous radicals -CH=CH-CHO, -CH=CH-C≡N or $-CH=CH-COOR^3$, R^3 denoting H, a cation equivalent or 1-4C alkyl and n denotes an integer 0-3. 19.9.77 as 834419 (4pp)


(I)

MERE D13 14041A/08 =US 4139-642

Dietetic granular albumin food prod. - prepd. by mixing curdled milk casein granulating and drying

MERCK PATENT GMBH 20.08.76-DT-637426

*(13.02.79) *BE-857-948 A23j-01/20 +A23c-19*

A granular dietetic foodstuff is produced by incorporating 2-5 parts of casein into 6 parts moist milk curds, allowing mixt. to stand for time sufficient to bind the excess water in curds by swelling of casein, whereby formation of granulated and dried prod. is facilitated compared to milk curds alone.

Pref. starting curds have moisture content of 65-85%. Granular mixt. of curds and casein is dried to moisture content of 12-20% in first step, then to 3-8% in second step. Curd and casein mixt. is granulated to cylindrically shaped particles with size 0.5-5 mm, or dia. 0.5-2 mm and length 1.5-5 mm. Dried granules are coated with digestible protective coating. Curds to casein ratio in dried prod. are 1:1-5.

Granulated particles are esp. compact and firm, lowering rate of decomposition in digestive tract, slowing resorption and prolonging feeling of satiation. 12.8.77 as 824194 (3pp931)

STEP/ ★ D13 15911B/08 ★US 4139-644

Edible cookie held on stick - is prepd. by placing flat stick between two moist dough patties prior to baking

STEPHENSON E S 12.12.77-US-859339

*(13.02.79) A23l-01/**

The edible cookie item is prepd. by positioning a porous wettable holding stick within the centre of a moist cookie dough with the end of the stick protruding out from the dough. The dough is allowed to set the stick and then the prepn. is baked.

The dough becomes fixed to the stick. It becomes wetted by adsorption of moisture and expands very slightly thus enlarging its pores into which the dough expands as it is baked. Pref. the stick is placed between two flat sheets of the dough prepn. The sheets are pressed together and unite on baking to trap the stick. 12.12.77 as 859339 (4pp295)

STER ★ D13 15912B/08 ★US 4139-645

Stable, red colourant compsn. for acidic foods - e.g. (carbonated) beverages comprises a solid soln. of erythrosine in gelatin

STERLING DRUG INC 11.08.77-US-823801

E24 (13.02.79) A23l-01/27

Edible acidic materials are coloured red by adding a stabilised solid soln. of 0.1-40 wt.% FD&C Red No. 3 (I) (and opt. FD&C Blue No. 1 or 2 and/or FD&C Yellow No. 5 or 6) and 60-99.9 wt.% edible gelatin (II).

The solid soln. itself is produced by dissolving (II) in water, dissolving (I) (plut the other optional colourants) in the aq. gelatin soln., evaporating the water from the soln. and comminuting the residual solid soln. to the desired particle size.

The (I) - (II) combination is used in mixts. of pH $\leqslant$ 4.2 (e.g. gleatin desserts and (non-)carbonated, fruit-flavoured beverages) where it exhibits strong tinctorial strength of great stability. 11.8.77 as 823801 (7pp922)

GAST- D13 34443A/19 =US 4139-646

Cotton seed treatment

GASTROCK PROTEIN (GAST/) 08.09.76-US-721203

*C03 +P41 (13.02.79) *J53034-937 A23j-01/14*

Cottonseed meats are treated to separate intact the pigment glands and to produce a protein-rich flour concentrate.

The process comprises (i) dry disintegration of unextracted dry meats; (ii) forming a slurry in a non-polar solvent; (iii) comminuting; (iv) feeding the slurry through $\geqslant$ 3 cyclonic separations to obtain an overflow and an underflow from each separation; (v) recovering the protein-rich flour concentrate from the first overflow; (vi) recovering the first underflow contg. solids comprising coarse cottonseed meats; (vii) returning the coarse meats to the first separation; (viii) returning the overflow of each subsequent separation to the immediately prceeding separation; (ix) directing the underflow from each separation, except the last to the next separation and (x) directing the underflow from the last separation to a high gossypol content meal recovery operation. 8.9.76 as 721203 (10pp974)

SELE- ★ D13 15913B/08 ★US 4139-647

Fruit or vegetable puree prodn. under anhydrous conditions - where the peel is only removed after enzyme inactivation and maceration of the comminuted prod.

SELECTIVE LICENSING 04.10.77-US-839199 (29.10.76-US-736879)

(13.02.79) A23l-01/20

Fruit/vegetable puree is produced by continuously passing a dry inert gas at 280-300°F through a chamber, introducing an unpeeled fruit/vegetable into the chamber, hot slicing with knives preheated and maintained at 250-400°F to pieces having a min. dimension of $^1/_8$ - $^3/_{16}$'' to a max. dimension of $\frac{1}{2}$-$1\frac{1}{2}$'', maintaining the sliced prod. in the chamber for sufficient time at > 180°F to inactivate enzymes in it, macerating it and finally separating the puree from the peel and fibre.

By slicing to relatively large pieces, peel removal is facilitated in the final stage. By not removing the peel initially, enzyme activity is not initiated prior to introduction of the fruit/vegetable into the chamber system. This gives a puree of improved colour and freer of flavour deterioration. The peel/fibrous by-products may be incorporated into natural foods. 4.10.77 as 839199 (4pp922)

CAMP ★ D13 15914B/08 ★US 4139-648

Dense, textured protein prod. mfr. - by extruding protein dough as sheet below texturing temp., then heating surface, pref. in steam, before cutting

CAMPBELL & SONS LTD 31.10.77-US-846823

(13.02.79) A23j-03

The dense textured protein prod. is formed, with an unidirectional laminated surface structure, from a protein dough with a 60-73% solids content which is extruded as a sheet at a temp. below the point at which texturisation takes place. While it is being extruded both surfaces of the sheet are heated to texture them.

Extruded dough enters a treating chamber where a hot gas stream buoys up the sheet while it is further textured. On exit from the treatment chamber the sheet is cut into segments and these are fed to a second treatment chamber where the remainder of the prod. is textured. Finally the prod. is discharged from the second chamber against a controlled back pressure. 31.10.77 as 846823 (15pp295)

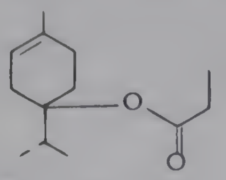
INFL ★ D13 15915B/08 ★US 4139-649

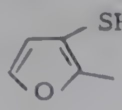
Mixt. of 4-terpinenol propionate and 2-methyl-3 furan-thiol - for imparting roast beef flavour and aroma

INT FLAVORS & FRAGR INC 07.03.78-US-884348

E15 (E13) (13.02.79) A23l-01/23

Mixts. of 4-terpinenol propionate (I) and 2-methyl-3-furanthiol (II) in ratio 1:1-1:2 pref. 1:1 are new. A roast beef flavour modifying compsn. contains 0.1-15 wt.% of


(I)


(II)

this mixt. the balance being $\geqslant$ 1 adjuvant.

The mixt. enhances or augments the roast beef flavour of foods when added at 0.05-100 ppm. Claimed adjuvants include oil of cubeb; phellandrene; oil of coriander; oil of pimento leaf; oil of patchouli and α- or β-pinene. 7.3.78 as 884348 (12pp1251)

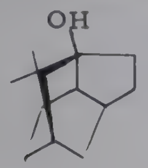
INFL ★ D13 15916B/08 ★US 4139-650

8,8-Di:methyl-octa:hydro-1,5-methano-1h-indenol - used to augment a walnut flavour in a cola beverage

INT FLAVORS & FRAGR INC 05.05.76-US-683310 (03.07.74-US-485554)

E15 (13.02.79) A23l-01/22

A cpd. of formula (I), is added to a foodstuff to augment its walnut flavour. (A cola beverage contg. 0.3 ppm (I) is claimed.



(I)

(I) is described as having a strong patchouli-like, slightly minty, sweet, warm, earthy, camphoric note and an earthy, patchouli, nutty and woody taste. 5.5.76 as 683310 (12pp922)

TOXO D13 11063A/06 =US 4139-651

Removing the membrane which covers orange segments - by treating the segments with hot water or steam, alkaline soln. and washing

TOYO SEIKAN KAISHA (HOTE-) 15.06.76-JA-069347

*(13.02.79) *J52154-548 A23l-01/21*

Citrus-fruit pulp-segment membranes are removed by heating pulp-segments of peeled citrus-fruits, immersing in soln. of mixt. of alkali and phosphate, and rinsing the soln-immersed segments. Alkali is present in amt. to facilitate removal of membranes without reacting with pulp segments. Phosphate is present to 0.1-3 wt.%.

Pref. citrus fruits are mandarin oranges, oranges and grapefruits. Heating step uses hot water, steam or steam atmosphere at ≥ 70°C, pref. ≥ 85°C. Membrane removal is at same temp. Alkali is present to 0.1-1.5 wt.%.

Membranes are removed, esp. on citrus fruit for canning. Number of processes used and time involved are minimised together with floor space. Need for equipment subject to corrosion by used of acids is eliminated, since change from acid to alkali solns. is not required. 8.6.77 as 804513 (2pp931)

PHIP ★ D13 15925B/08 ★US 4139-666

Powdered milk as anti-tack agent - for rubber tubing or elastomeric articles used in storage and handling of foods, esp. milk

PHILLIPS PETROLEUM CO 13.02.76-US-657823

A88 P73 Q67 (A12) (13.02.79) B32b-25/04 F16l-11/04

Rubber tubing or elastomeric flexible articles used for handling and storage of foodstuffs are coated on interior surfaces with powdered milk as anti-tack agent to prevent sticking of the inner walls. The amt. of powdered milk is 0.1 mg - 10 kg per sq. m. of surface area and the tubing or article is free of residual solids prior to coating with the powdered milk. The rubber is pref. formed from polymerised acyclic conjugated diene cpds.and monovinyl substd. aromatic cpds., esp. a radial teleblock copolymer of butadiene and styrene.

Sticking of the tubing after release of clamps is obviated and any powdered milk, carried away by milk liquid redisperses and does not act as contaminant. 13.2.76 as 657823 (4pp966)

GENA D13 00475B/01 =US 4139-688

Prepn. of insoluble PVP homopolymers or copolymers - by reacting the soluble polymer with an acid chloride

GAF CORP 24.06.77-US-809943

*A14 B04 (A96 A97) (13.02.79) *GB2000-156 C08f-08/18*

Insoluble (co)polymers of vinyl pyrrolidone (I) are prepd. by refluxing uncrosslinked (I) (copolymer with thionyl chloride, PCl_3 or PCl_5 in liq. medium (II) at 75-140(90-120)°C to give a crosslinked prod. (II) is pref. solvent for acid chloride and (I)-(co)polymer.

Prods. are useful in pharmaceuticals and beverages industry. Process is convenient and prods. of controlled crosslinked density may be obtd. In an example PVP (30.0 g) and 100 ml dry heptane was treated with 32.1 g thionyl chloride. After refluxing dried prod. washed 33.2 g and contained 10.73% chlorine. 24.6.77 as 809943 (3pp963)

See Also

D16 BE 871171
D16 J5 4005090
D16 US 4106988
D23 J7 9001481
D16 DT 2827474
D16 J5 4005092
D17 DS 2545112
D23 US 4107093
D16 GB 1540879
D16 SU 601307
D23 GB 1541017
D23 US 4107209

D14: FOODSTUFF MACHINERY

HOOP- D14 08747Y/05 =DS 2546-975

Rotating drum mixer and spreader for e.g. animal feed - for accurately dispensing mixtures which tend to bridge

HOOPMAN ONDERZOEK 21.10.75-DT-546975 (09.07.75-DT-530553)

*J02 P14 +P12 (15.02.79) *NL7607-053 A01f-25/16 A01k-05*

The fodder mixing and distribution truck has a cylindrical vessel rotating on a horizontal axis in the chassis and accommodating the various ingredients, together with a conveyor discharging the mixed fodder to one side. At one end of the vessel at least is a sliding cover forming an annular gap with the vessel edge.

The cover has guides at the periphery, sliding on bars fixed to the vessel drum, together with a central piston enclosed by a cylinder attached to the ends of radial links. The other ends of these links hinge on the bars, and the links pivot on mountings on the cover. 21.10.75 as 546975 Add to 2530553 (5pp160)

VART ★ D14 14327B/08 ★DT 2734-756

Knife for cutting deep frozen food - has battery in handle heating cutting edge by current passage

VARTA BATTERIE AG 02.08.77-DT-734756

(15.02.79) A23g-09/28

An electrical knife for cutting up deep frozen food with a high water content consists of a metal plate which is subdivided by a slot into a narrow conductor along the cutting edge. The passage of an electrical current from a powerful battery in the handle heats this conductor enough to perform a neat cut.

This wastes less substance than use of a saw. Deep frozen food can be divided into clean cut portions without having to wait for unfreezing. 2.8.77. as 734756 (10pp39)

MMMM- ★ D14 14396B/08 ★DT 2736-088

Bottled soln. sterilisation plant - with tight sliding doors between stages actuated in synchronism with conveyors

MMM MUNCHEN MEDIZIN 10.08.77-DT-736088

P34 (15.02.79) A23l-03 A61l-03

A multistage sterilisaton plant for soln. in bottles and tins is fitted with locks in the form of sliding doors between each stage, at the charge and at the discharge end. With a door between two adjacent stages open, the stages are still sealed pressure and steam-tight against the environment. The door motion is controlled in synchronism with the intermittent movement from stage to stage.

This plant has a simple design and combines the smallest possible overall dimensions with a min. of heat losses. 10.8.77. as 736088 (24pp39)

JEAN/ ★ D14 14513B/08 ★FR 2390-993

Manually operated salad mixer for household use - has bottom component forming salad bowl for serving at table

JEANSOULIN R 16.05.77-FR-015009

P28 (19.01.79) A47j-43/04 B01f-07/02

The device has two main parts which fit into each other; the salad bowl being of "Pyrex" (RTM). The cover is of rigid transparent plastic material, and has at its top a knob for holding whilst the handle is turned. The mixing mechanism consists of an arm which rotates on horizontal journals each of which has a pinion engaging with two crown wheels where the mixer halves join each other. The teeth of one crown wheel face those of the other and the motion is imparted by a pinion on the end of the cranked handle.

The mixt. obtd. is uniform and the device can be used by anyone without risk of scattering the cuttings about and increasing the work. Also prepn. of the salads occupies less time. 16.5.77 as 015009 (6pp1014)

PAPC/ ★ D14 15155B/08 ★SU-600-998

Electrical plasmolyser for vegetable raw materials - has dielectric tubular body with disc and point electrodes to which three-phase pulsing AC is supplied

PAPCHENKO A YA 14.11.75-SU-189579

(17.04.78) A23n-01

Electroplasmolyser, for the electrical treatment of vegetable raw materials in the food industry. It consists of a tubular dielectric body with two circular electrodes arranged inside it, and connected to a curent source. Plasmolysis effectiveness is increased by adding point electrodes between the circular in a plane at right angles to the longitudinal axis of the body and at an angle of 120° to one another.

Papchenko A. Ya., Bul. 13/5.4.78 14.11.75 as 189579 (2pp29)

NCAU= ★ D14 15156B/08 ★SU-600-999

Seeds separation from fruit - by crushing, separating from flesh and skin, and filtering through pre-sized slits in cone

NORTH CAUCASUS VINI (KDFR=) 09.12.75-SU-197396

(17.04.78) A23n-04

Device used in the seed-growing industry, comprising a crusher, feeder, and filtering rotor, inside which is a cone rigidly connected to the rotor. Seed sepn. effectiveness is increased, by providing the cone with a collector, comprising a circular seed receiver with a tangentially-arranged channel to take the seeds away, and a conical hopper for the pulpy flesh.

The lower part of the cone has longitudinal slits arranged at an angle to the line of the cone and disposed underneath them are circular horizontal projections, placed alternately with the slits. The top part of the cone is made with flanges to gather the pulp into a conical hopper and provided with flexible radial plates to remove the seeds from the circular receiver. The slits in the cone are cleaned free of clogging material by immovably mounting flexible scrapers and guides on the feeder adjoining the internal surface of the cone.

Chudakov G.M., Medvedev V.A., Shefer A.F., Bul. 13/5.4.78 9.12.75 as 197396 (2pp29)

NDON= ★ D14 15181B/08 ★SU-601-036

Lower power consumption planetary mixer - with inclined worms connected by angularly offset horizontal arms to central shaft

NORTH DONETS CHEM 24.07.75-SU-164213

J02 (04.04.78) B01f-07/30

A mixer, e.g. for the chemical or food inds., comprises worms in a housing and connected to a central shaft by upper and lower arms. To improve mixing and reduce power consumption, the arms are in a horizontal plane and are angularly offset one relative to the other.

The worms are rotated about their own axes and their radial-tangential inclination causes them to rotate in a plantary manner together with the arms and central shaft about the housing axis. The contents are mixed in several intersecting flows over the whole volume of the housing.

Dolgoborodov N.A., Kostyuk O.A., Bul. 13/5.4.78 24.7.75 as 164213 (3pp1358)

AGRI= ★ D14 15184B/08 ★SU-601-039

Feeding free-flowing materials into pressurised appts. - using inlet with cylindrical walls of two different radii and rotor with hinge-mounted, contoured vanes

AGRIC ELEC RES 06.09.76-SU-401169

J04 (04.04.78) B01j-03/02

Improved efficiency of the feeding mechanism supplying free-flowing materials into the apparatus with overpressure, as used in chemical, food, agricultural, etc. prodn. processes, is ensured. The side walls of the inlet chamber consist of cylindrical surfaces concentric to the rotor placed at various radial distances from the rotor's axis. The rotor contains vanes hinge-mounted and spring supported in the rotor, and having the shape of segments fitting its surface.

Demin A.V., Milman I.E., Ivanov S.F., et al. Bul. 13/5.4.78 6.9.76 as 401169 (3pp135)

DAGE= ★ D14 15396B/08 ★SU-601-542

Paste-like material dryer - with electricity conducting strings connected to electric circuit moving contacts situated outside drying chamber

DAGESTAN POLY 23.06.76-SU-375179

J08 Q76 (21.03.78) F26b-03/34 F26b-17/04

The dryer described in Parent Cert. No. 557244 can be used in food, chemical and pharmaceutical industries, e.g for prodn. of dried milk and egg powder. The dryer contains loading and unloading units, gas distribution grid with strings placed above the grid. To increase the efficiency and output the strings are connected to the electric circuit using moving contacts. The contacts are situated on both sides of the drying chamber beyond its limits. Thus the dryer output is increased by 1.5-2 times, the energy consumption is reduced and the drying material quality is increased.

Aminov M.O., Aminov D.S., Bul. 13/5.4.78 23.6.76 as 375179 Add to 557244 (3pp110)

PLAN/ ★ D14 15397B/08 ★SU-601-543

Pneumatic dryer for dispersing material - has spiral provided with rotating baffles made as pairs of opposing sections

PLANOVSKII A N 02.08.76-SU-389251

J08 Q76 (21.03.78) F26b-17/10

The dryer can be used in chemical, food and pharmaceutical industries. It contains a spiral which forms a rectangular cross section channel for the gas suspension. The channel outer coil is connected to the loader. The channel central coils which are provided with a rotating baffle are connected to the unloader. To improve the drying quality and increase the heat-mass transfer, the baffle is made as two pairs of sections placed opposite each other. One pair of sections radius is smaller than the last complete coil radius by three channel width. The other pair section is situated along the line connecting two circumferences which are between this coil and the first pair.

Planovskii A.N., Mushtaev V.I., Timonin A.S. et al. Bul. 13/5.4.78 2.8.76 as 389251 (3pp110)

PROV/ ★ D14 15398B/08 ★SU-601-544

Liquid materials drying and agglomeration - using chamber with liquid atomisers whose nozzles are directed upwards

PROVISIONS EQUIP 03.11.76-SU-416582

J08 Q76 (21.03.78) F26b-03/12 F26b-17/10

The drying and aglomeration unit can be used in food, chemical and pharmaceutical industries for e.g. drying of milk. The unit contains a chamber with gas removal pipe and unloading arrangement, a vibrating gas supply box with gas distribution grid. The chamber contains atomisers with atomising nozzles for drying material. To reduce polydispersion and increase the drying quality, the atomiser nozzles are directed upwards. A cyclone is connected to the gas removal pipe. The cyclone unloading chute is connected to the chamber at the grid zone. An additional atomiser whose nozzle is directed downwards is placed above the unloading chute connection point.

Lyalin V.A., Kontorovich K.L., Risin A.P. et al. Bul. 13/5.4.78 3.11.76 as 416582 (3pp110)

BUCM D14 77794Y/44 =US 4106-404

Fruit juice extractor with rotatable receptacle - with hood-like bellows sepg. pressure and extn. chambers

BUCHERGUYER MASCH 07.04.76-CH-004359

*P71 (15.08.78) *DT2714-184 B30b-09/12 +B30b-05/02*

Appts. for sepg. liq. and solid materials from one another, e.g. for the extn. of fruit juice, comprises a rotatably mounted press container which is subdivided by a hood-shaped squeezing diaphragm into a pressure compartment and a squeezing compartment. A pressurised fluid is delivered to the pressure compartment and the juice is removed through an outlet in the squeezing compartment.

Prod. residue-ejection elements are arranged in the region of the squeezing diaphragm. The ejection elements are formed of a flexible material protruding into the squeezing compartment and extending along helical paths. 31. 3. 77 as 783266 (6pp1363)

INNO- D14 49895V/27 =US 4107-511
Automatic pressure cooking system - separate electrically controlled steam generator operating only on demand and suffers less furring up
INNOVATIVE PATENT 15.05.72-US-253409 (18.01.74-US-434506)
*P28 +Q72 R59 (15.08.78) *US3818-819 +F22b-01/30 H05b-03/60*

An electroytic steam generator, used in a pressure cooking system, has a steam compartment housing a series of electrodes immersed in water and a control system including a normally closed solenoid operated water inlet valve. A time delay relay has a set of normally open contacts which are closed by an operating coil at a predetermined time after the time delay relay is energised.

A current relay has a set of normally closed contacts operated by a pick up coil and the normally closed contacts and the normally open contacts are connected in series with the solenoid across a voltage source. The operating coil is connected in series with the normally closed contacts so that, when the current supplied to the electrodes exceeds a predetermined value, the pick up coil opens the normally closed contacts.

The opening of the water inlet valve is delayed for a predetermined time following the time when the current supplied to the electrodes falls below a predetermined value. 6. 11. 75 as 069592 Div. ex 3818819 (+ 18. 1. 74 - US - 434506)(5pp1363)

YAMA- D14 25744A/14 =US 4139-092
Unit load chain conveyor partic. for continuous food steriliser - uses transverse carriers pivoted between single chains
YAMATO SCALE CO 22.06.76-JA-U82293
*Q35 (13.02.79) *FR2355-741 B65g-17/18*

Chain conveyor system carries pivotally mounted carriages suspended between the chains; the carriages are normally maintained in horizontal positions. A pair of horizontal rollers and a pair of vertical rollers fixed to the carriage sides engage fixed guides at suitable points to maintain the carriages horizontal whether travelling through horizontal, vertical or inclined paths. Pref. a revolving guide roller is pivoted to an arm attached to one of the supporting axles on the outside of the chain and engages a notch in a revolving guide wheel to maintain the carriage horizontal as it travels around a drive chain wheel.

The low cost chain conveyor system ensures that the carriages are maintained horizontal throughout. It is esp. useful in a continuous food sterilisation system in which airtightly packed foods are to be kept in a predetermined position during treatment. 4. 1. 77 as 756645 (8pp1364)

D15: WATER TREATMENT

CHUR- ★ D15 14192B/08 ★BE -869-847
Inhibiting lead corrosion in drinking water systems - by adding soluble carbonate and maintaining pH at specified level
CHURCH & DWIGHT INC 18.05.78-US-907280
E34 M14 (19.02.79) C02b C23f

The process comprises adding to the water a source of water soluble carbonate in an amt. necessary to assure the passivation of the pipes comprising lead contg. elements. The pH of the water is maintained at 7.5-9. Pref. the carbonate content, expressed as $CaCO_2$ is maintained at a minimal amt. of about 20mg/l. The water pH is maintained at 0. 5-9 in a manner to form a layer of lead carbonate to assure the passivation of the lead.

The process is partic. applied to drinking water, usually of lower pH and low carbonate content, which is corrosive to lead resulting in too high a lead content in the water (normal environmental limit 0. 05mg/l). The method is very effective whereas previous processes such as pH adjustment or adding orthophosphate are limitedly effective and ineffective respectively. 18. 8. 78 as 869847 (24pp597)

GOIS/ ★ D15 14194B/08 ★BE -870-466
PVC tank contg. filter to purify rain water for storage - uses charcoal filter bed suspended in removable basket
GOIS J F 14.09.78-BE-870466
A92 (02.01.79) C02b

A filter tank for the purificn. of surface water etc. collected from roof gutters for cistern storage. Made of PVC and contains a filter bed, e. g. of plastic foam and/or charcoal. The filter bed, esp. that of charcoal is pref. contained in a perforated basket which is removably suspended inside the tank. The basket is interchangeable with a replacement contg. a fresh filter bed. The tank is pref. fitted with a dosing device to inject bactericide fluid into the water passing through the filter. 14. 9. 78 as 870466 (6pp)

GROT/ ★ D15 14204B/08 ★BE -871-091
Motorised rotary agitator to aerate liq. manure etc. - has blade passage outlets drawing air from atmos. via tubular drive shaft
GROTZ W 10.10.77-DT-745538
J02 (01.02.79) B01f

The blades operate below liq. surface level and each has a air outlet orifice in the trailing edge, near the outer tip of the blade. During rotation air is drawn to and through the orifice from atmos. via a pipe extending parallel to the axis of rotation of the shaft.

The agitator is pref. used for aerating liq. manure in which case the pipe passes up the inside of a tubular drive shaft. The blades are pivoted to collapse back against the shaft so that the rotor assembly can be passed through a sump top hole of small dia. blade collapse and erection are actuated via a mechanical linkage from the bell-cranked, inner end of each blade to the lower end of the pipe, by axial movement of the pipe controlled from above the surface.

The rotor can take the form of propellor for a boat. Air is drawn in by rotation of blades so no pump is required. Aeration speeds up the formation of aerobic bacteria so reduces the mfg. time of liq. manure. The process is simultaneously kept free of objectionable odours. 9. 10. 78 as 871091 (15pp448)

NIKL/ D15 60447U/41 =DS 2214-756
Town water clarifying - by flocculating impurities with calcium hydroxide and opt foaming wetting agents
NIKLAS H (NIK /) 25.03.72-DT-214756
*E33 (15.02.79) *DT2214-756 +C02c-01/40 C05f-07*

Town waste water is treated with sufficient $Ca(OH)_2$ to adjust the pH of the waste water to >11.0 esp. 11.0-12.5 The flocculated impurities are removed to obtain clarifie waste water. The clarified water is blown with air, pref. contg. CO_2 in an amt. such that the effluent has a pH $\leqslant 8$, e.g. 7.5-8.0. The foam formed by this treatment is removed.

-Instead of $Ca(OH)_2$ a mixt. of $Ca(OH)_2$ and $Mg(OH)_2$ ma be used. The mixt. may be obtd. by calcining and hydrating natural limestone and/or dolomite. 25. 3. 72 as 214756 (4pp068)

SUGA= D15 67035X/36 #DS 2525-306
Automatic metering of liq. or powder - obtg precise vol. proportional to weight of a second substance
SUGAR BEET RES INST 22.05.75-DL-186190 (06.06.75-DT-525306)
*J04 R13 R16 (D17) (15.02.79) *DL-121-397 G01g-13/28 G01g-15 +G01g-07/02*

The automatic metering appts. for fluid and free-flowing materials, has a weighing scales whose feeler acts on a balance emitter. The latter is electrically connected to an electromagnet counteracting disturbing influences on the state of balance, and whose core is rigidly coupled to the feeler.

The electromagnet is supplied via a controlling resistance, whose sliding contact is moved by a detuning signal from the emitter. The material is accommodated in an oblong vessel with an outlet valve, on which a sliding level indicator is mounted, rigidly coupled to the sliding contact. 6. 6. 75 as 525306 (8pp160)

RUHN/ D15 59617Y/34 =DS 2605-924
Difficult or corrosive sludge or sewage sludge removed - by jetting with water recycled from sludge filtering
RUHNKE S 14.02.76-DT-605924
*(15.02.79) *DT2605-924 C02c-03*

The system removes sludge from industrial and domestic drains, water being first extracted from the sludge by filtration after removal from the drain.

The water filtered out is re-used in a circuit preparing solidified sludge, and in a further stage the sludge recovered after filtration is initially dried to a solid state in which it can be formed into heaps. It is then further dried in the heaps by aeration from inside and outside. 14. 2. 76. as 605924 (8pp160)

FARB D15 12445A/07 =DS 2634-846
Toxic load control of sewage plant - by measuring oxygen demand difference between standard and actual mixture
BAYER AG 03.08.76-DT-634846
*R16 (15.02.79) *DT2634-846 C02c-01/06 G01n-33/18*

The process detects substances in sewage which hinder biological breakdown in a treatment works. The oxygen absorption of activated sludge from the works is measured with (a) a standard nutrient soln. and (b) with the sewage to be examined.

At regular time intervals, the oxygen absorption rates are measured of (a) a first mixt. of the activated sludge, synthetic sewage as standard nutrient soln. and drinking water, and of (b) a second mixt. of the same constitution as the first as regards sludge and soln. but with the drinking water replaced by the same quantity of sewage to be examined. The results are then compared. 3. 8. 76 as 634846 (6pp160)

NALC D15 50618Y/29 =DS 2647-341
Ozonisation catalyst for treating waste water - comprises ferric oxide deposited on active alumina
NALCO CHEMICAL CO 12.01.76-US-648133
*J04 (15.02.79) *DT2647-341 B01j-23/74 C02c-05/04*

An ironoxide ozonising catalyst is prepd. by impregnating gamma-aluminium oxide with an aq. soln. of a soluble ferric salt, drying at 104-177° C and then calcining at 510-566° C. The catalyst contains 1-20 wt. % ferric oxide and is useful to remove impurities, such as phenol and other organic impurities, from waste water.

The catalyst is efficient and retains its activity after use. 18. 10. 76 as 647341 (4pp068)

BATT ★ D15 14369B/08 ★DT 2735-301
Decontaminating waste waters contg. cyanide - by oxidn. to cyanate using solid, insol. redox system, e.g. a quinoid cpd
BATTELLE-INSTITUT EV 05.08.77-DT-735301
P35 (15.02.79) A62d-03

Cyanide-contg. waste water is decontaminated continuously or intermittently. In a 1st step, the cyanide is oxidised to cyanate with a solid, insol. redox system which is converted to the reduced form. In a 2nd step, the redox system is re-oxidised with air-O_2 and recycled to 1st step. Pref. redox system contains solid, insol. reversibly reducible quinoid organic cpds., (I), which are mixed with or absorbed on an active C having a large surface. An organic, polymeric binder for (I) can be used.

Addn. of chemicals is reduced. Salting of waste waters is prevented. High oxidn. capacity of (I) maintains a high reaction velocity also at low cyanide concns. Use of a solid, insol. system obviates need for control and measuring devices. The active C acts as re-oxidn. catalyst for (I) and provides a large reaction zone. 5. 8. 77. as 735301 (9pp200)

WOTS/ ★ D15 14374B/08 ★DT 2735-327
Caravan kitchen waste disposal - using buried cylinder contg. strainer and adsorbent cartridge before seepage to ground
WOTSCHKE M 05.08.77-DT-735327
(15.02.79) C02c-01

Kitchen sink waste from caravans is disposed of by a simple combination of sepn. and adsorption. The sink outflow is passed by a pipe into a water trap inside a buried cylinder. A detachable strainer retains food remnants and other coarse particles. The section below holds a throwaway cartridge with an adsorbent which extracts fats and detergents. The underflow is allowed to seep into the soil. A well sealing lid covers the cylindrical shaft and excludes smells. 5. 8. 77. as 735327 (4pp39)

KRUN ★ D15 14399B/08 ★DT 2736-256
Radioactive liquid effluent disposal by evaporation - in cooling tower esp. after preliminary treatment used esp. for regions with limited water
KRAFTWERK UNION AG 11.08.77-DT-736256
K07 (15.02.79) G21f-09/04

A method of disposing of radioactive waste water in a nuclear power plant equipped with a cooling tower consists of evaporating the waste water in the cooling tower. Pref. the water is first pretreated by one or more evaporation stages before it is evaporated in the tower.

The method is partic. applicable where a dry cooling tower is used, the evaporation of the waste water taking place intermittently, with intervening periods in which an activity-free flushing agent is injected into the discharge line.

In particular for a nuclear power plant in a region with a very limited water supply, e. g. a desert region. 11. 8. 77. as 736256 (6pp236)

WOLF ★ D15 14411B/08 ★DT 2736-651
Water-soluble basic polymer with polyethylene glycol units - used as retention aid and draining accelerator in paper mfr., waste liquor and sludge treatment
WOLFF WALSRODE AG 13.08.77-DT-736651
A97 F09 (A23) (15.02.79) C08g-59/10 C08g-69/48 D21f-01/70 D21h-03/02

The additive consists of a reaction prod. (C) obtd. by reacting an aliphatic polyethylene glycol (PEG) ether amine (A) with a basic polyaminoamide (B) and reacting the intermediate (AB) with polyfunctional cpds., pref. epichlorhydrin. (A) is formed by the action of aliphatic polyamine with the reaction prod. of a PEG with epichlorohydrin. (B) consists of polyalkyiene-polyamine(s) and/or aminocarboxylic acid(s) and/or their lactam(s) and/or hexamethylene-diammonium adipate. (AB) is formed by the elimination of H halide from the halogen gps. of (A) and the NH gps. of (B).

Additive is used for improving the retention of floatable solids, accelerating the draining of suspensions and treating industrial (waste) liquors and sludges more rapidly by adding aq. solns. of basic polymers.

It is esp. for use in the paper mfg. industry and is more efficient than usual, in spite of the presence of PEG units, and qualitative and quantitative variations in the structure can be used to suit the prod. to the intended application. 13. 8. 77. as 736651 (38pp016)

VARO- ★ D15 14435B/08 ★DT 2828-361
Biological surface water purificn. - by spreading and passing through water plant stock
VAROSEPITESI TUDOMA 04.08.77-HU-VA1507
(15.02.79) C02c-01/02 C02c-05

A purificn. system for surface water to remove diffuse contamination from fertilisers, detergents or other substances which encourage a eutrophisation of the effluent is based on biological principles. The surface water is spread out and the impurities dissolved in it are absorbed by water plants.

This prevents an accelerated eutrophisation of the water reaching the disposal system. The costs for installation and operation are low and require only unskilled labour. 26.6.78. as 828361 (16pp39)

GRIS/ ★ D15 14512B/08 ★FR 2390-992

Aerator for treating liquids - comprises turbo-agitator connected to air compressor giving air injection at turbine level, maximising efficiency with min. air consumption

GRISEY R J 18.05.77-FR-015415

J02 (19.01.79) B01f-05/16

A device for aerating liquids, partic. aq., comprises a turbo-agitator and a compressor. The compressor is connected to the turbo-agitator so that air is injected into the liq. at the level of the turbine. The device can operate intermittently, the time being a function of the characteristics of the turbo-agitator, the rate of air and the vol. to be aerated, or it can operate continuously.

Problems associated with existing appts. in which the air is introduced through a perforated plate, are avoided. These include large air consumption, lack of adaptability to vessels of different kinds and the risk of blockages. The appts. ensures intimate mixing of air and liq., giving optimum aeration with min. consumption of air. It can be adapted to any vessel and there is no risk of blocking with solids. 18.5.77 as 015415 (5pp1192)

MARL/ ★ D15 14522B/08 ★FR 2391-161

Tank for waste water purificn. by flotation and coagulation - with electrolytic or air-injection assistance; can be site constructed from prefabricated sections

MARLIERE Y G P 16.05.77-FR-017479

(19.01.79) C02b-01/82 C02c-01/26 C02c-05/12

The surface of the waste water is pref. skimmed by rotating, horizontal, radial blades which convey floating scum to a drain outlet. The tank is pref. constructed of prefabricated sections which can be assembled on site. Access panels or doors are pref. provided to facilitate replacement, servicing or cleaning of the electrolysis electrodes.

The tank is constructed on site from prefabricated sections as follows, sump truncated, pyramidical settlement funnel with scum drain inlet section with siphon and top frame with cross beams. Suitably an inlet pipe, electrodes a motor-driven skimmer and an outlet for purified water. 16.5.77 as 017479 (6pp448)

SADO/ ★ D15 14523B/08 ★FR 2391-162

Outlet valve from settling tank for waste water - uses remote controlled inflatable diaphragm to plug upward facing valve inlet

SADOULET M A A 18.05.77-FR-016067

(19.01.79) B01d-21/24 C02c-01/06

The valve comprises a discharge pipe with open end facing upwards beneath the water surface and spaced from the tank wall. A vertical, cylindrical, valve support, rigidly fixed to the tank, is suspended coaxially to extend partly into the open end of the pipe, leaving an annular valve passage between cylinder and pipe. A flexible diaphragm sleeve is end-clamped around the cylinder so that it can be inflated to plug the valve passage and deflated to re-open the passage.

Below the upper section of the pipe, which accepts the sleeved cylinder, the pipe dia. is pref. stepped down to less than the outside dia. of the cylinder. This means that vertical adjustment of the cylinder alters the effective cross-section of the valve passage to preset a max. flow-rate. The sleeve inflation is pref. remote controlled by supply pneumatic or hydraulic fluid via a tube passing down the inside of the cylinder.

Used partic in tanks in which waste water is purified first by activated sludge treatment and then sedimentation. The valve can be remote controlled to be fully sealed during treatment and settlement and then fully open for discharge. No sludge is retained in the pipe entry during value closure. The valve passage cross-section is adjustable. The valve creates no upflow which might disturb and entrain sludge. 18.5.77 as 016067 (8pp448)

SADO/ ★ D15 14524B/08 ★FR 2391-163

Air entrainment liq. jet aerator for purifying waste water - has angles and grooves in nozzle bore to intensify air liq. contacting

SADOULET M A A 17.05.77-FR-016047 (02.10.75-FR-030874)

(19.01.79) C02c-01/10

The jet is delivered from a nozzle above the surface of the water, the nozzle axis being inclined at an acute angle to the surface. Air is entrained into liq. passing through the nozzle via an open-ended pipe extending coaxially from the nozzle outlet, through the nozzle bore to atmos. The nozzle delivers an annular jet of liq. with entrained air which both agitates and aerates the waste water.

In this addn. the nozzle bore has a convergent zone which in longitudinal cross-section has a profile presenting a sharp, angular change of direction, partic. A re-entrant angle. The re-entrant angle is pref. formed at the intersection of a frusto-conical bore with a cylindrical outlet. The interior of the bore, partic. the cylindrical outlet, is pref. longitudinally grooved or channeled. Pref. the exterior of the air pipe is also longitudinally grooved or channeled.

The sharp angle and grooves in the bore create intense contacting of air and liq. aeration efficiency is increased. 17.5.77 as 016047 Add to 2.10.75-030874 (6pp448)

PASE D15 23977Y/14 =GB 1541-050

Filter press plate with interplate buffer lug - with top washer fixed to retain filter sheet clamping ring

PASSAVANTW MICHELBACHER 28.06.75-DT-U20639

*J01 (21.02.79) *FR2315-303 B01d-25/12*

A filter plate for a plate filter press comprises a filter cake chamber on each side, each discharging filtrate from the bottom.

The chambers are formed by recesses surrounded by rims each rim supporting the filter plate against the rim of an adjacent plate. Filter cloth is provided on each side of the plate to cover the filtrate discharge, having openings to receive cams needed for spacing the plates. Each cam is surrounded by a clamping ring which sealingly clamps the filter cloth against the chamber bottom, from the bottom of which the chamber projects.

The plate may be used in presses for dewatering sewage sludges, and has an easier construction and more effective sealing, with the cams supported against each other. 27.5.76 as 022157 (4pp1379).

LIOY D15 22217Y/13 =GB 1541-130

Treatment of waste water contg. nonionic surfactant - by foam sepn. and press.-heat treatment

LION FAT & OIL KK 17.09.75-JA-112417

*A97 (21.02.79) *DT2641-690 +C02b-01/23*

Treatment of waste water contg. a nonionic surfactant (I) is claimed. (I) is a polyoxyethylenealkyl ether of formula $RO(CH_2CH_2O)_nH$; a polyoxyethylenealkylphenyl ether of formula $p\text{-}R\text{-}Ph\text{-}O(CH_2CH_2O)_nH$ or a fatty ester of polyethylene glycol of formula $R\text{-}COO(CH_2CH_2O)_nH$. In the formulae, R is 6-24C alk(en)yl and n is 2-40.

Method comprises (a) sepg. by foam sepn., a low concn. waste water contg. < 500 ppm (I) into a conc. water contg. > 500 ppm (I) and a treated water contg. < 3 ppm (I), (b) adding Na_2SO_4, K_2SO_4, $Al_2(SO_4)_3$, $Fe_2(SO_4)_3$, NaCl, KCl, $CaCl_2$, $MgCl_2$, $FeCl_2$, $FeCl_3$ or $AlCl_3$ to the conc. water in an amt. to give a concn. of the electrolyte of $\geqslant 50$ (50-500)ppm, (c) heating the conc. water at 100-200(120-150)°C under 2-5 kg/cm^2 to separate it into a high concn. (I) soln. and sepd. water and (d) recylcing the water to (a). Pref. the electrolyte is Na_2SO_3, $CaCl_2$ or $AlCl_3$.

Process is used to treat waste water from e.g. the textile, agrochemical and dye industries. 14.9.76 as 038040 (7pp992).

CENT- D15 53913Y/30 =GB 1541-164
Aerobic bacterial sewage treatment plant - is designed esp. for small scale use and includes auxiliary digester
CENTROX CORP (PEAS/) 04.08.76-US-711762
*(21.02.79) *US4036-754 C02c-01/02*

Apparatus for treating sewage by bacterial digestion is characterised by circulation of sewage in the treatment tank to prevent solids from settling while digestion is in progress and to facilitate removal of clarified effluent without recontamination by newly arriving solids.

The apparatus comprises a clarification compartment within the main treatment tank, an auxiliary digester compartment separated from the main tank by a weir, a device for periodically backflushing the contents of the clarification compartment into the main tank, and a device operative between each periodic backflushing to aerate and circulate the contents of the digester. The aerating device when not operating allows solids to settle leaving a supernatant liq. in the digester which is transferred to the main tank. 7.7.77 as 028482 (7pp1379).

ICIL ★ D15 14574B/08 ★GB 2002-248
Coalescing appts. for removing oil from oil-water emulsion - has rectangular coalescing plate movable so that emulsion flows in different directions through plate
IMPERIAL CHEM INDS LTD 05.07.78-GB-028888 (15.08.77-GB-034157)
H03 J01 (21.02.79) B01d-21/10 B01d-29/02

Appts. comprises a vessel through which the emulsion is passed upwardly and a drain at the bottom of the vessel. A rectangular oil coalescer located in the vessel is movable between two positions so that first one rectangular face and then the other rectangular face is at the underside.

Upward flow of emulsion through the coalescer is periodically interrupted to drain the vessel and cause a temporary flow reversal which removes solids from the coalescer. In addn. the coalescer is moved between its two positions so that its two rectangular faces are alternately on the underside.

Retained solids are periodically removed from the coalescer to prevent build up of hydrostatic pressure across it. This enables the hydrostatic pressure differential to be maintained at 3-10 psi so that the coalescer can be housed in an inexpensive vessel, e.g. of plastics. 5.7.78 as 028888 (6pp67).

UNIV ★ D15 14575B/08 ★GB 2002-250
Granular bed fluid filter - with upper fixed bed portion above lower fluidised bed portion of variable size, for hot gas cleaning and filtering municipal water
KANSAS STATE UNIV R 15.08.77-US-824840
J01 (21.02.79) B01d-46/38

Fine particulates are filtered from a fluid using a granular bed supported above a fluid inlet. A perforated plate movable to selected elevations is mounted above the bed to restrain the upper surface. A fluid to be filtered is passed upwardly through the bed at a velocity at least twice the min. fluidisation velocity of the unrestrained bed. A cake of particulates is collected in the bottom of the bed while maintaining the remaining upper part of the bed as a fixed non-fluidising bed.

The plate is raised progressively to form a fluidised bed portion of gradually increasing size below an upper fixed bed portion while continuing to pass the fluid through the bed. The collected particulates are retained as a cake in the fixed bed portion and as circulating solids in the fluidised bed portion. At the conclusion of the filtration process the plate is raised above the bed to provide a freeboard space and a purging fluid is passed through the bed to fluidise it and sweep the particulate from it.

Most of the filtered particulates are retained in the fluidised bed portion and a uniform pressure drop can be maintained across the fixed bed portion. 11.8.78 as 033040 (9pp67).

MITB ★ D15 14576B/08 ★GB 2002-251
Water filter basin bottom duct - with intercommunicating longitudinal passageways for inward filtrate and outward backwash and purge air flows
MITSUI SHIPBUILDING ENGG 12.08.77-JA-U07841
J01 (21.02.79) B01d-23/20 B01d-35

A duct for location under gravel and filter layers in a water purificn. bed comprises a longitudinal partition forming two passageways which intercommunicate via one or more apertures in the partition and each communicate with the exterior through wall openings, with all water exiting the openings flowing in the same direction.

There is pref. an upwardly converging central and two symmetrical side passageways in a rectangular section duct. Filtered water pref. enters the duct top to flow along all passageways, while for back-washing water is supplied to the central passageway and passes upwards into the bed after entering the side passageways. For air scouring of the bed, air is fed to the central passageway and exits its top. The duct is pref. of porcelain or plastics. 11.8.78 as 033093 (6pp1358).

ZANA- ★ D15 B/08 ★IL --49-839
Continuous water purificn. process - comprising electrodialysis and electrolysis stages
ZAN-AL MANAGE SERV 20.06.76-IL-049839
J03 (31.01.79) C02b-01/82 C02c-05/12

AGEN ★ D15 14638B/08 ★J5 4004-903
Cellulosic oil recovery from condensed water - formed by thermal decomposition of human waste, by neutralising with alkali and filtering
AGENCY OF IND SCI TECH 14.06.77-JA-069459
A35 J09 (16.01.79) C10g-19/02

Cellulosic oil, which is dissolved in acidic condensed water formed by the thermal decompsn. of urban waste, is recovered by neutralisation of the condensed water with alkali and filtration of pptd. cellulosic oil.

The process is economic. The solubility of the cellulosic oil in water varies with the pH value of the water and is smallest when neutral. 14.6.77 as 069459 (5pp170)

JAPS ★ D15 14691B/08 ★J5 4004-986
Ultrahigh molecular polyacrylate prodn. - by emulsion polymerising acrylic acid ester and opt. vinyl-substd. aromatic cpd. and conjugated di:olefin, and hydrolysing with alkali
JAPAN SYNTHETIC RUBBER 15.06.77-JA-070019
A14 (A91) (16.01.79) B01d-21/ C08f-08/12*

The process comprises emulsion-polymerising $\geqslant$ 1 ester of acrylic acid opt. with vinyl substd. aromatic cpd. and conjugated diolefin and hydrolysing the resulting ultra-high molecular polymer with alkali.

The prod. is used as flocculant for waste water treatment or as a viscosity increasing agent. The prod. has an ultra-high mol. wt. in a narrow range. The emulsion polymerisation is initiated by (a) a peroxide selected from dialkylperoxide and peroxydiester and (b) a reducing agent selected from alkylamine, polyalkyleneimin, alkylamino-alcohol, etc. 15.6.77 as 070019 (7pp46)

MITO ★ D15 14741B/08 ★J5 4005-200
Concentrating liquid waste, e.g. radioactive waste - in an appts. which vaporises the water under vacuum and adds hardener to harden the conc. waste
MITSUBISHI HEAVY IND KK 15.06.77-JA-069956
A88 K07 (16.01.79) C02b-09 C02c-05 G21f-09

Liq. waste e.g. a radioactive waste soln., is stored in a reservoir. The liq. waste is fed through a vinyl pipe by a pump to a round bottom flask heated by a mantle heater. Steam is vaporised from the round bottom flask and fed through a valve to a cooler of glass cooled by cooling water. The steam is condensed by the cooler and introduced into a reservoir. The reservoir is connected to a vacuum pump and slightly exhausted thereby. The exhausted gas passes through a demister to remove the moisture content therefrom.

The concentrated liq. waste is left in the flask. Connectors are detached from glass pipes of an insertion plug and the insertion plug is then removed from the flask. A hardening agent is thrown into the flask to harden the concentrated liq. waste. The flask thus obtd. is discharged.

Thereafter, a new flask is placed on the heater. 15.6.77 as 069956 (4pp86)

NISH/ ★ D15 14826B/08 ★J5 4005-868

Solar-powered device for treating heavy metal contg. water - uses the solar energy and wind to evaporate the water

NISHI T 15.06.77-JA-071816

(17.01.79) C02c-05

Solar energy is collected through a heat collector to heat the waste liq. until water is evaporated, while a natural wind is blown to the evaporator surface to accelerate the evaporation. Heat pipes, each filled with an operating medium such as oil, are disposed below a heat collector plate and connected to a heat radiator pipe fixed to the bottom of a tank contg. the waste liq.

The structure of the device is simple and operating costs are reduced. 15.6.77 as 071816 (3pp26)

HITG ★ D15 14828B/08 ★J5 4005-871

Multiple-effect evaporator for desalinating sea water - with brine flow rate in spray nozzle controlled using structure with tapered end

BABCOCK-HITACHI KK 16.06.77-JA-070521

(17.01.79) B01d-01/26

Appts. for producing water from the sea water comprises brine spray nozzles for atomising brine in a horizontal heat pipe type multiple-effect evaporator. A structure is provided for changing the aperture area of the nozzle and disposed outside the evaporator. The nozzle has a first and second spray holes. A tapered end of the structure, e.g. brine flow rate controller, is inserted into the first spray hole so that the insertion length of the tapered end can be adjusted by moving the other end outside the evaporator. 16.6.77 as 070521 (5pp26)

KIEF/ ★ D15 B/08 ★J5 4005-875

Rotational reverse osmosis process and appts.

KIEFER B G 15.06.77-US-806704

J01 (17.01.79)

15.6.78 as 071559.

TOKU ★ D15 14832B/08 ★J5 4005-876

Filter press-type electrodialyser frame - allowing the liq. to be fed and drained without using piping

TOKUYAMA SODA KK 17.06.77-JA-071024

J01 (17.01.79) B01d-13/02

The structure comprises frames clamped face to face through gaskets and ion exchange membranes stretched across openings of the frames and gaskets. The frames and gaskets are arranged so that the openings of each frame align with notches for electrical conduction of each gasket, and the notches communicate with liq. feed and drain holes bored through the gasket to distribute the liq. in the frame openings.

The structure used in a filter press-type electrodialysers for concn., desalination etc. of sea water, or removing electrolytes from soln. 17.6.77 as 071024 (5pp26)

NICH- ★ D15 14971B/08 ★J5 4006-346

Removal of scale-forming solids from water e.g. in boiler - by adding heat resistant enzyme then passing water through bundle of small porous pipes to remove solids formed

NICHIZO KK 16.06.77-JA-071399

(18.01.79) C02b-01/82 C02b-05/06 C02c-05/02 C23f-14/02

Heat-resistant enzyme is added to the water in a proportion of 0.5-5% as much as service water, and the service water is, while being used in the appts., passed through one or more porous small pipe bundles with a linear velocity near the upper limit of laminar flow in order to separate floating solids formed by means of the heat-resistant enzyme. The purified heat-resistant enzyme-contg. water obtd. is used as service water.

The porous small pipe is 6-13 mm dia. and 1-5.5 m long stainless pipe of sintered anticorrosive alloy powders of 0.1-1 µ bore size and the number of the pipe bundled is 1-61.

The method allows the treated water to be reused for service and is effectively applicable to the treatment of service water of all types without environmental pollution by discharged sludge. 16.6.77 as 071399 (5pp117)

YOKO- ★ D15 14972B/08 ★J5 4006-348

Water purificn. to remove and recover impurities - by precipitating impurities with iron hydroxide, adsorbing ppte. on magnetic iron oxide particles and subjecting water to vapour phase sepn.

YOKO YAKKA KOGYOSHO (NIES) 14.06.77-JA-070891

J01 (18.01.79) C02b-01/23 C02c-05/02

Removal and recovery of harmful substances e.g. arsenic, hydrogen, sulphide, silicic acid, etc. from water, comprises (a) adding a ferrous salt to water followed by an alkali to cause coprecipitation of the harmful substances with iron hydroxide, (b) adsorbing the coprecipitate with magnetic iron oxide particles for removal, (c) adding a mineral acid to the sepd. ppte. to dissolve iron hydroxide and silicic acid present, (d) subjecting arsenic, hydrogen sulphide, etc. present in the water to a vapour-phase sepn. process, and (e) where finally obtd. water contains silicic acid, removing the silicic acid by pptn.

The method can continuously, effectively and rapidly treat water in great quantities using a closed system at a low running cost. The treated water can be reused for agriculture, industry, drinking and other purposes. The iron hydroxide can be easily removed from the magnetic iron oxide particles for reuse, and the arsenic and hydrogen sulphide can be recycled by using adsorbers. 14.6.77 as 070891 (6pp117)

TAKG ★ D15 14973B/08 ★J5 4006-349

Water treating agent for fluorine-contg. waste water - comprises aluminium or basic salts of mono:basic acid contg. phosphoric acid and calcium

TAKI KAGAKU KK 15.06.77-JA-071275

A97 E33 (18.01.79) C02b-01/23 C02c-05/02

The agent comprises the aluminium salts or basic salts of a monobasic acid contg. phosphoric acid and calcium in the Al/PO_4 molar ratio of 2 to 5 and a Ca/PO_4 molar ratio of 2 to 5.

Pref. the Al salts used include aluminium chloride or aluminium nitrate, and the basic salts used include basic aluminium chloride or basic aluminium nitrate. The pref. amt. of water-treating agent used is 10-5000 ppm on the basis of Al_2O_3. To enhance settling of sludge, other coagulants, e.g., polyacrylamide, aluminium sulphate, lime, organic high polymer coagulants, etc. can he used.

The agent simplifies maintenance and the use of a much smaller settling tank due to the higher precipitations action of the flock formed in the water treatment and lowers operational cost due to a redn. in sludge formation by 1/3 to 2/3 compared with conventional methods. 15.6.77 as 071275 (4pp117)

CHIY ★ D15 14974B/08 ★J5 4006-351

Denitrification of waste water - using microorganisms and neutralising alkaline substances formed with carbon di:oxide or waste gas contg. it

CHIYODA CHEM ENG CO 15.06.77-JA-069980

(18.01.79) C02c-01/02

In the denitrification in which nitrates and nitrites in the waste water are reduced to nitrogen gas using microorganisms the alkaline substances formed are neutralised by injection of CO_2(-contg. waste gas) inorder to maintain microbial activity unaffected. Injection of CO_2(-contg. waste gas) is to a pH of 7 to 10.

In a test using artificial waste water contg. approx. 3,000 ppm nitrate nitrogen was treated by blowing in CO_2 at a rate of 8 l/hr. in the presence of approx. 10,000 ppm MLV SS of microorganisms at pH 7.5 to 8.0 and a water temp. of 30°C, the nitrate nitrogen was removed at an average rate of 0.33 kg-N/kg-MLV SS/D until a level of 1 to 2 ppm was attained.

The method is highly efficient, safe and pollution-free and is esp. for waste water produced in the treatment of flue gas. 15.6.77 as 069980 (3pp117)

TEIJ ★ D15 14975B/08 ★J5 4006-353

Treating waste water contg. emulsified oil - using an agent contg. 10-30 C fatty acid

TEIJIN KK 16.06.77-JA-070442

H05 J01 (18.01.79) B01d-15 C02c-05/02

In the treatment of waste water contg. emulsified oils formed by cationic surfactants, e.g. discharged from machine shops, chemical, petroleum, iron and steel making, food, paint and textile industries, etc. as agent contg. a 10 to 30C fatty acid is used.

Pref. 10 to 30-carbon fatty acids includes aliphatic saturated monocarboxylic acids, e.g., capric acid, lauric acid, palmitic acid, stearic acid, etc., aliphatic unsatd. monocarboxylic acids, e.g., elaidic acid, erucic acid, etc., and aliphatic dicarboxylic acids, e.g., sebacic acid, etc.

The method reduces the oil concn. to below 5 ppm, or to an extent such that even the n-hexane extn. method fails to detect it. 16. 6. 77 as 070442 (6pp117)

KAWJ ★ D15 14976B/08 ★J5 4006-354
Treating waste water contg. suspended solids - by flotation sepn. using coagulant, and blowing in carbon di:oxide
KAWASAKI HEAVY IND KK 16.06.77-JA-070491
(18.01.79) C02c-05

Carbon dioxide gas is blown into a blow-in tank in which the upper supernatant liquor from a aeration-flotation sepn. tank is housed. Suspended solids and emulsified suspensions are sepd. from the accompanying coagulant and then concentrated to buoy up, which is sepd. as a dehydrated recovery liquor. The remaining waste water contg. coagulant and CO_2 is sent to a coagulant-dissolving tank, where the waste water is supplementarily supplied to a coagulant and mixed with remaining waste water. The resulting waste water is then sent to the aeration-flotation sepn. tank, where the dissolved CO_2 is released by aeration to separate the upper supernatant liquor contg. suspended solids and emulsified suspensions with coagulant and the lower treated waste water, the lower treated waste water is discharged to outside as it is. The upper supernatent liquor is sent to the CO_2 blow-in tank. The dehydrated recovery liquor is sent from the CO_2 gas blow-in tank to a natural flotation sepn. tank for treatment.

The method has a great power to enhance coagulating effect and flotation sepn. effect in virtue of CO_2. Specifically, coagulant used as 3 ppm of $(AlCOH)_3Cl_3$ and 5 ppm of an anionic high polymer. 16. 6. 77 as 070491 (3pp117)

NIIG ★ D15 14977B/08 ★J5 4006-355
Compact appts. for treating waste water - uses nonwoven, synthetic fabric or foamed synthetic resin plate with a three/dimensional network structure, which holds microorganisms
NIIGATA ENG KK 15.06.77-JA-070660
A88 (18.01.79) C02c-01/02

A synthetic resin fibre-nonwoven fabric plate or a synthetic resin foam plate, having a three-dimensional network structure and a thickness of > 10 mm, is placed at a 25-100 mm spacing in an aeration tank, and aerobic, anaerobic or facultative microorganisms are held on the plate. Aeration is performed by blowing ≥ 95% pure O_2 or a mixt. of a high purity O_2 and air into the aeration tank.

The process uses a miniaturised appts. having a high capacity using a considerably reduced amt. of O_2-enriched gas at low cost, and exhibits good effect in the treatment of waste water contg. a high concn. (4000-5000 ppm) of BOD and COD. It can be used for human waste and industrial effluents of high or low concn.

The synthetic resin fibre is 100-4000 denier of nylon, or vinyl(idene)chloride fibre, and the non-woven fabric plate has a three dimensional structure of porosity > 80%. 15. 6. 77 as 070660 (6pp117)

MITS D15 01268Y/01 =J7 9001-666
Treatment of aq. soln. contg. metal salt - by mixing with oily fuel, forming fine droplets, firing and recovering the salt as metal and oxide
MITSUBISHI PRECISIO 19.05.75-JA-058682
*M25 +Q73 (27.01.79) *J51134-374 +C02c-05/04 F23g-07/04*

A metal-salt-contg. aq. soln. and oily fuel are finely dispersed to form fine droplets. The droplets are fired to evaporate water and at the same time to recover the metal salt as metal and metal oxide.

Solid metal can be sepd. and recovered from metal salt soln. by combustion. Organic lustering agent or chelating agent, which cause diffeculty in neutralising precipitating method, contained in plating waste liquid is completely decomposed into carbonic acid gas. Every metal salt solns. can be treated by the method. It is also possible to burn solution of acid or alkali containing no metal salts. 19. 5. 75 as 058682, C02c-5/04, F23g-7/04 (27. 1. 79) MITSUBISHI PRECISIO (3pp) (J51134374)

GNZE D15 16991Y/10 =J7 9001-672
Semipermeable membrane for back-permeation - comprises a covered core with an outer coating of synthetic polymer
GUNZE KK 10.07.75-JA-085114
*A88 J01 (27.01.79) *J52008-986 B01d-13*

The semipermeable membrane is obtd. by bundling a synthetic fibre filament of 100-3,000 denier to form a core; covering the core with a compressible synthetic fibre filament to form a supporting body; and coating a synthetic polymer film onto the body. 10. 7. 75 as 085114, B01d-13/00 (27. 1. 79) GUNZE LTD (9pp) (J52008986)

MATU D15 62120Y/35 =J7 9001-673
Reverse osmosis membrane - comprising membrane of e.g. acetyl cellulose combined with metal chelate cpds.
MATSUSHITA ELEC IND KK 16.01.76-JA-004252
*A88 J01 (27.01.79) *J52086-981 B01d-13*

Membrane (I) is for reverse osmosis and contains metal chelate cpds. (II). (I) has comparatively high permeating flux of solvent and more sharp cutting-off characteristics for solute. (I) can be used for prepn. of plain-water from sea water and for cleaning industrial waste water.

(I) is prepd. from a copolymer soln., mixed with (II) The materials for (I) are asymmetric- or ultra-thin reverse osmosis membranes, such as acetyl cellulose, cross-linked acetyl cellulose methacrylate, styrene-graft acetyl cellulose, acetyl cellulose butylate, nylon-6, 6 and -6, polyamide and others. Examples of ligands for (II) are aliphatic mono-, di- or poly-carboxylic acids (such as isobutyric acid, valeric acid, malonic acid and tricarbyl acid), aliphatic oxy- or keto-carboxylic acids and their thio derivs., aromatic carboxylic acids, aromatic aldehyde, amines (derivs.), aminopolycarboxylic acids, amino acids, peptides, proteins and others. As metal ions used for (II), Ba^{+2}, Ca^{+2}, Cu^{+2}, Fe^{+3}, Sr^{+2}, Zn^{+2}, Cd^{+2}, Mg^{+2} etc. may be used. 16. 1. 76 as 004252, B01d-13/00 (27. 1. 79) MATSUSHITA ELEC IND KK (4pp42) (J52086981)

ASAG D15 27771A/15 =J7 9001-674
Filter press electrodialyser - used for concn. of brine to produce common salt for industry and for desalting brine to produce plain water
ASAHI GLASS KK 13.08.76-JA-096083
*A88 J01 (27.01.79) *J53022-165 B01d-13/02*

A number of cation and anion exchange membranes are alternately arranged in parallel through frames between both electrodes and clamped to form a number of concentrating and diluting chambers. Duct and slots are formed through the chambers to feed and drain liq. to be electrodialysed. The novelty comprises an insulator film e. g. chloroprene rubber film being formed over a cut face of each slot notched through the cation exchange membrane, the face facing the duct.

A specified portion of an anion exchange membrane is prevented from discolouration or degradation. 13. 8. 76 as 096083, B01d-13/02, (27. 1. 79) ASAHI GLASS KK (7pp) (J53022165)

KAOS D15 74573Y/42 =J7 9001-768
Inorganic peroxide mixts. with e.g. (N)-acetyl phthalimide - which are algicides, nontoxic to humans, fish and molluscs
KAO SOAP KK 05.03.74-JA-025547
*C03 +P14 (C01 C02) (29.01.79) *J50121-423 +A01k-61 A01n-11 A01n-17 A01n-23*

Inorganic peroxide mixts. with cpds. selected from N-acetylphthalimide, Na p-acetoxybenzenesulphonate, N,N'-diacetylpyromellitimide, N-acetylsaccharin, N-acetylcaprolactam, N,N-diacetylaniline, and acetylated monosaccharides are algicides, nontoxic to humans, fish, and molluscs.

In an example, seawater contg. combinations of 0.05% Na percarbonate or Na perborate with 0.5% of the above agents completely controlled algae such as Hydrodictyon reticulatum. 5. 3. 74 as 025547, A01n-11/00, 17/00, 23/00 AO1k-61/00 (29. 1. 79) KAO SOAP KK (3pp) (J50121423)

KUIV/ ★ D15 B/08 ★SF 7701-691
Separation of solids from flowing liquids
KUIVELA K 26.05.77-SF-001691
(31.01.79) C02c

PUHR/ ★ D15 B/08 ★SF 7801-511
Separating water from organic viscous effluent
PUHRINGER J 18.05.77-SW-005525
(31.01.79) C02b 12.5.78 as 001511

UCOA= ★ D15 15168B/08 ★SU -601-023
Water clarification sludge thickener - with conical air chamber in base of settling hopper, to facilitate sludge discharge
UKR COAL ENRICH BRI 14.05.74-SU-022784
J01 (18.05.78) B01d-21/02

Appts. for thickening sludge obtd. from clarification of water e.g. in processing ores or coal, comprises a funnel shaped vessel with a conical chamber in its lower part communicating with atmosphere via a tube extending up through the vessel. To increase product density and discharge rate, the chamber has an open bottom and the tube has a non-return valve.

Korneiko G.I., Leonov V.V., Bul. 13/5.4.78 14.5.74 as 022784 (3pp1358)

BAKU= ★ D15 15169B/08 ★SU -601-024
Water clarification appts. - with water jet screen formed above sludge during washing, to isolate from overlying clarified water
BAKU WATER SUPPLY 17.11.76-SU-420286
(18.05.78) B01d-21/08 C02c-01/26

The appts. comprises a rectangular reservoir transversely partitioned into a floc forming chamber with a corrugated base and water distributors, sludge offtakes, a settling chamber with a clarified water offtake, and a water collector.

To improve purification and output, the settling chamber has a perforated tube with nozzles along the chamber at 1/4 - 1/3 height, and a central offtake tube with apertures along the same axis as the nozzles and opposed to these.

Tenengolts S.M., Dzhafarov S.M., Bul. 13/5.4.78 17.11.76 as 420286 (2pp1358)

UKVO= ★ D15 15170B/08 ★SU -601-025
Cylindrical gravitation liquid settler distributor - with perforated base radial trough flow dividers, in stack decreasing in length upwardly
UKRVODOKANALPROEKT 18.07.75-SU-158268
J01 (04.04.78) B01d-21/24 C02c-01/26

A distributor for a cylindrical gravitational settler, particularly for water, comprises a liq. feed unit, a cylindrical guide housing and flow dividers adjacent to the housing. To provide uniform distribution the dividers comprise radial troughs with perforated bases arranged one above the other and of length decreasing with height.

Asaulenko I.A., Drazhner V.M., Elyasberg E.S. et al. Bul. 13/5.4.78 18.7.75 as 158268 (2pp1358)

COMM= ★ D15 15247B/08 ★SU -601-227
Aerator for biochemical purification of effluents - with inner and outer vanes in aeration zone and pipes which draw up activated sludge from settling zone
ACAD COMMUN AFFAIRS 29.04.75-SU-129559
(22.05.78) C02c-01/10

Aerator has a unit to return the active sludge from the settling zone to the aeration zone. It is equipped with two rows of concentrically-arranged vanes and a cylindrical guiding pipe mounted underneath the aerator. The aeration effect is increased and the sludge is simultaneously removed from the sludge chamber of the secondary sedimentation tank and delivered to the aerating tank by installing a bowl coaxial to the mechanical aerator.

The bowl has the pipes for returning the sludge at an angle to its outer surface in its lower part.

Bedimogov S.N., Bul. 13/5.4.78 29.4.75 as 129559 (3pp 29)

MILY/ ★ D15 15248B/08 ★SU -601-228
Sediment loosener for effluent sediments in containers - with sheath divided by diaphragm and with holes through which jets of loosening medium emerge
MILYAKH G V 29.11.76-SU-424438
(22.05.78) C02c-01/36

Sediment loosener for mechanical cleaning of containers, removes the solids which precipitate from effluents. It is an elastic sheath, the walls of which contain holes, and is divided by a partition into two cavities. Specific power-consumption during the loosening is reduced and accumulation of loosened sediment in the inner spaces in the loosener is prevented by making the partition as a corrugated perforated diaphraghm, the unfolded width of which equals the length of one half of the circumference of the sheath.

Milyakh, G.V. Bul. 13/5.4.78 29.11.76 as 424438 (2pp29)

OSTR/ ★ D15 15357B/08 ★SU -601-342
Test paper for micro-determn. of metals in waste water etc. - prepd. by treating mono:aldehyde cellulose based paper with alkali pretreated amino-di:hydro benzoxazinone and with diazotised amine
OSTROVSKAYA V M 21.09.76-SU-409051
J04 R16 (10.05.78) D21h-03/02 G01n-31/22

Reactive paper strips for rapid determn. of harmful metal ions (Zn, Cd, Hg, Cr, Cu etc.) in small concn. in aq. effluents and natural waters are prepd. by successively treating a monoaldehyde cellulose filter paper with an aromatic nitrogen-contg. cpd. and a diazotised amine. The metal-indicating, iono-selective properties of these paper strips are improved by using as an aromatic nitrogen-contg. cpd. 2-amino-2,3-dihydro-1, 4-benzoxazin-3-one. This cpd. is preliminarily treated with an alkali and then neutralised to pH 4-6.

Ostrovskaya, B.M., Lomakina L.V., Dziomko V.M. et al Bul. 13/5.4.78 21.9.76 as 409051 (2pp70)

BETZ D15 86407Y/48 =US RE29-908
Clarification of waste water contg. oil - by treatment with polymeric reaction prod. of epihalohydrin and aliphatic diamine
BETZ LABS INC 18.03.77-US-779193 (25.08.72-US-283889)
*A91 (A26) (13.02.79) *US4059-515 B01d-17/02*

Sepn. of oil from waste water comprises treating the water with a water-sol. cationic polymer consisting of the polymerisation prod. of an epihalohydrin (I) with an alkylene polyamine of formula (II) $R_1R_2N\text{-}R\text{-}NH_2$ (II) (where R is 2-6 C alkylene and R_1 and R_2 are 1-6C alkyl).

Pref. the ratio of (I) to (II) is 0.60:1 - 2.7:1. Pref. (I) is epichlorohydrin and (II) is di(M)ethylaminopropylamine or N, N-di(M)ethylaminoethylamine.

Process overcomes the drawbacks of the acid-alum process. The Parent Patent claims the method per se.
22.2.78 as 879981 Reissue of 4059515 C.i.p. 3915904 (+25.8.72, 19.7.73, 26.8.75, 18.3.77-US-283889, 380640, 607863, 779193) (6pp393)

DOWO D15 33681Y/19 =US 4107-000
Solar heat using distillator
DOW CORNING CORP 29.09.75-US-617555
*J01 (15.08.78) *J52041-167 +B01d-01 B01d-03*

A solar still for producing supplies of fresh water by distn. comprises a pair of juxtaposed corrugated sheets, pref. positioned at right angles to one another, so that an upper sheet rests on raised portions of the lower sheet.

A solar energy transmitting panel rests on the uppermost part of the corrugated upper sheet, the latter having a series of vent holes provided in its raised portions whereby water evaporated from the channels in the corrugations can pass through the sheet to the spaces between the channels. The water evaporated in this way passes through the vent holes, is condensed and drained from the system.

Pref. a second solar energy transmitting panel overlies and is spaced from the first panel to provide thermal insulation against ambient air. 29.9.75 as 617555 (3pp1363)

OKAZ- D15 44238A/25 #US 4107-021

Electrolytic cell for ionised water - with three/way valve for draining water from anode or cathode chamber

OKAZAKI MFG KK 11.12.76-DT-656224 (24.11.76-US-744706)

_J03 +R46 (15.08.78) *DT2656-224 +C25b-11 C25b-13 C25b-15_

A water pot with an electrolysing device is provided with a handle and the pot body includes an electrolysing vessel having a removable hollow, porous partition member mounted on support surfaces in the vessel.

The partition member is insertable into the vessel through a top opening in the water pot and is mountable in the vessel in water-proof relationship at the support surfaces to divide the vessel into two chambers.

One of the chambers contains a negative electrode, the other chamber a positive electrode, and water is removed from the positive electrode chamber after an electrolysing operation.

The opening in the water pot has a detachably mounted cover which includes two flow paths communicating respectively with the two chambers. Water is removed from the positive electrode chamber through a three-way valve for selectively communicating the two flow paths with a nozzle in the pot body which is in communication with the negative electrode chamber. 24. 11. 76 as 744706 (12pp 1363)

CONO ★ D15 15552B/08 ★US 4107-037

Controlling filtrate quality from filter - by passing side-stream of filtrate through monitoring filter

CONTINENTAL OIL CO 28.09.77-US-837117

_J01 (15.08.78) B01d-23/24_

The quality of filtrate from a filter is controlled by removing a sidestream from the filtrate which has passed through the main filter and passing it at a constant flow rate through a backwashable monitoring filter of appropriate pore size. The pressure drop over the monitoring filter is determined to provide an indication of the quality of the filtrate stream and the main filter is replaced or regenerated when the pressure drop reaches an unacceptable level.

Used for filtering swimming pool water and drinking water.

High accuracy is achieved. Only previously filtered material is monitored and the pressure drop is not subject to fluctuations liable to occur in streams of large vol. 28. 9. 77 as 837117 (5pp67)

UNTC ★ D15 15553B/08 ★US 4107-038

Appts. for grit sepn. from liquid sewage - by creating toroidal flow with propeller and baffle

ECODYNE CORP 12.08.77-US-824183

_P41 (15.08.78) B03b-05/48_

An apparatus for separating grit from liquid sewage while retaining organic solids in the liquid comprises a settling chamber and a grit chamber. The grit chamber is located beneath the circular settling chamber having a central aperture through which the grit passes. Sewage enters the settling chamber tangentially via a trough having a flume portion. A ramp interconnects the flume and settling chamber.

A propeller with adjustable blades rotates above the floor of the settling chamber and acts with a baffle to induce a torroidal flow of liquid within the settling chamber. Grit-free liquid is removed from a radially extending conduit.

The apparatus removes grit of size 50-100 mesh from domestic sewage. 12. 8. 77 as 824183 (5pp295)

SCHR- D15 65175Y/37 #US 4107-040

Cleaning rake arrangement for a drain channel grid - is of low, stable construction and suitable for grids with straight bars

SCHREIBER-KLARANLAG 03.03.76-DT-608774 (24.05.77-US-799920)

_+Q42 (15.08.78) *DT2608-774 +B01d-33 B01d-35/16_

A device for clearing a screen located in a water conduit (e. g. a sewer) includes a screen comb mounted at one end of an arm of a screen rake which can be moved from an intermediate position above the water level in the conduit to a position in engagement with the screen. The rake is moved to a position above a collecting bin where the screen comb is tilted about a horizontal axis to dump its carried screenings. A drive mechanism is connected to the rake arm for pivoting the arm and moving it in a vertical plane downstream of the screen.

The drive mechanism includes a continuous chain which runs over stationarily mounted deflection chain wheels, the chain comprising an endless chain of connected rollers movable over a stationary curved guide path positioned above and outside of the conduit. The rake arm comprises a two-armed lever having a pivot axle connected to the continuous chain and the rake arm is connected at one end through a swing bearing.

The screen rake is pivotably connected at the end opposite to the screen comb to one end of a hinged support which is pivoted around a stationary bearing and has a counterweight provided at the other end. 24. 5. 77 as 799920 (8pp1363)

EPIC- ★ D15 15556B/08 ★US 4107-044

Removing radioactive solid materials from fluid - by demineralisation and filtration using disposable structure in radiation shielding casing

EPICOR INC 25.08.76-US-717583

_J01 K07 (15.08.78) G21f-09/04_

Dissolved and undissolved radioactive solids are removed from a fluid by appts. including a fluid tight vessel contg. a bed of demineralisation material. An inlet manifold disperses contaminated fluid evenly over the bed for removal of dissolved solids. Undissolved solids are then removed by a filter. The vessel is surrounded by a radiation shield forming a casing. The whole structure, is disposable when the demineralisation material is exhausted.

The appts. may be used for treating water from a nuclear power plant. The demineralisation material is fully and efficiently used. Handling of radioactive appts. is avoided by dumping and burying the whole structure. 25. 8. 76 as 717583 (7pp1312)

TDCO ★ D15 15558B/08 ★US 4107-046

Water purifying filter cartridge with by/pass - has conduit penetrating cartridge and selected by valves mating with cartridge

TELEDYNE INDUSTRIES 04.04.77-US-784420 (10.09.75-US-617449)

_(15.08.78) B01d-27/02_

A water purifier includes a filter cartridge enclosed within a housing which is supplied with water. The housing includes two valves which respectively deliver water to the filter element within the cartridge or to a bypass conduit. Water which has flowed through the filter or bypass is collected in a common manifold and discharged from a single aperture. The bypass conduit is integral with the filter cartridge and passes through the filter medium while remaining in liquid isolation. The upstream end of the cartridge has seats which mate with the flow-selecting valves.

The appts. filters domestic water. Operation of the valves directs the unfiltered water to the discharge aperture when filtered water is not required. This prolongs the life of the filter. 4. 4. 77 as 784420 (16pp295)

TURE/ ★ D15 15559B/08 ★US 4107-047

Water filtering and purifying cartridge - with separately replaceable axial flow purifier packed tube in radial flow tubular filter

TURETSKY I 24.02.77-US-771777

_J01 (15.08.78) B01d-27_

A cartridge comprises a tube-holding purifying medium with a perforated disc held in an externally flanged enlarged outlet end by a porous disc and sealing ring. The tube is inserted into a tubular filter with the flange sealing one filter end and the circumferentially perforated other end of the tube is spaced from the filter by a flanged threaded hollow stepped plug inserted into the internally threaded filter end.

The medium is held between disc and plug and the side perforations connect the annular and central cavities to give radial flow through the filter and axial flow through the tube. The arrangement allows separate replacement of purifier and filter and recharging of the medium. 24. 2. 77 as 771777 (4pp1358)

ATLP D15 80572T/51 =US 4107-240
Oxygen-enrichment of water - in stationary waters with superimposed layers of different temp
ATLAS COPCO AB 28.01.72-SW-000972 (01.06.71-SW-007002)
*(15.08.78) *DT2225-976 B01f-03/04*

Appts. for oxygenating a thermally stratified body of water, such as lakes having a depth exceeding 8-10 metres, includes means for air treatment of the lower and colder hypolimnion layer without causing destratification. The appts. includes an air-entrapping bell-shaped housing having inner and outer shells moored to the bottom of the water to maintain the shells buoyantly at a predetermined distance above the bottom of the water.

The inner shell is open-ended and is surrounded by the outer shell having a closed upper end, both shells being wholly located in the hypolimnion. Compressed O_2-contg. gas is introduced into the lower end of the inner shell to effect oxygenation of the water by venting entrapped undissolved gas to the atmos. at a controlled rate to maintain a gas cushion at a predetermined pressure and volume. This produces undisturbed downward flow of the O_2-enriched hypolimnetic water within an outlet zone to inhibit flow of entrapped gas bubbles. 11. 2. 77 as 767882 C.i.p. 4060574 (+ 1. 6. 72, 21. 1. 75 - US - 258546, 551930)(10pp 1363)

KRUN D15 70930Y/40 =US 4139-420
Radioactive effluent treated with acid and basic washes - in single column for evaporation of both wash liquids
KRAFTWERK UNION AG 24.03.76-DT-612510
*K07 (13.02.79) *DT2612-510 +B01d-03/14*

Radioactive contaminated aq. liq. is treated to remove volatile radioactive substances by maintaining a body of liq. in a still zone at pH $<$7, heating to generate vapours and volatilise radioactive substances, and passing the vapours and volatilised substance upwardly in a column contg. $\geqslant$2 spaced plates where they make intimate contact with reflux condensate on plates resulting from partial condensation of vapours on the column.

Liq. is withdrawn from the lower plate of intermediate gp. of $\geqslant$2 successive plates and recirculated to the upper plate, maintaining recirculating liq. alkaline at pH different to main liq. body at $\geqslant$ 2 pH units to enhance the retention of volatile substances passing up through intermediate plates in contact with the liq. at different pH on plates. Vapour purified by radioactive substances is released from top of column.

Costs are reduced since complicated methods using two stills and bubble-cap columns are simplified. 22. 2. 77 as 770378 (3pp931)

DOWA D15 06548Y/04 =US 4139-456
Low pH value waste water ferrous ion oxidn. - using iron oxidising bacteria on antiacid porous granules with air agitation, settling, recycling
DOWA MINING KK 30.04.75-JA-052308
*(13.02.79) *J51142-860 C02c-01/04*

Ferrous ions contained in mine or other factory effluents are oxidised with iron bacteria at pH $\leqslant$ 2.0, to provide pptn. of basic salts. Method comprises passing a stream of waste water at low pH to be treated to an oxidn. and culture zone contg. a bed of particulate material contg. acid-resistant, porous and particulate diatomaceous earth having specific surface area 14,000-370,000 cm^2/g for iron bacteria.

Ferrous ions are oxidised by agitating and blowing air into the waste water contg. suspended particles to culture iron bacteria utilising ferrous ions as the energy source and to lower the ferrous ion content. The treated suspension is transferred from the oxidn. culture zone to a sedimentation zone; ferric ion-contg. oxidised waste water is recovered by pptn. to separate particles from the treated suspension and the sepd. particles are returned to the oxidn. culture zone.

High oxidn. rate is achieved esp. for large amts. water, action is at temps. $<$ 20°C and separate culture equipment is unnecessary. 15. 7. 77 as 816137 (+14. 11. 75-US-631903) (4pp931)

AGRO- D15 20376Y/12 =US 4139-457
Water treatment plant - with automatic circulation between aerator reactor and separator with floating flocculated layer NL070377)
AGROTECHNIKA NP 03.09.75-CS-005998
*(13.02.79) *DT2639-836 B01d-21/26 +C02b-03/06*

Appts. for waste water purification by fluid filtration in sepg. zone ensures that the dropback by gravity of a portion of the suspension from the separating zone through the inlet aperture is completely avoided. The cross-sectional area of the inlet is less than 10% of the maximum cross-sectional area of either the separating or reaction zones.

A recirculation conduit extends from the upper separating zone, below the clear water discharge, to empty into the transversely swirling waste water in the reaction zone. The relatively high fluid flow at the recirculation outlet in comparison with the slow flow of waste water to the separating zone, and other conditions in the zone, cause the fluid pressure between the separating zone inlet and the recirculation outlet to drop. The suspension is automatically fed back to the reaction chamber via the recirculation conduit and the floating flocular bed remains undisturbed.

Optimum filtration action in a relatively small reaction vessel is provided. 22. 12. 77 as 863427 (3. 9. 76-US-720510) (9pp1364)

STOP- D15 61449Y/35 =US 4139-460
Detoxication of residue obtd. in working chrome ores - using wet treatment with sulphur to form insoluble chromic oxide
STOPPANI L 24.02.76-IT-020516
*E34 M25 P35 (13.02.79) *DT2704-775 +C02b-01/20*

In the decontamination of the waste residue of water leaching of roasted Cr mineral contg. water-sol. Cr^{6+} cpds., the residue is wet ground and classified to a granular distribution such that 5-10% of the particles have an average size of $>$0.4 mm, and 40-60% of the particles have an average size $<$0.8 mm.

The particles are wet treated under vigorous stirring at ca. 100°C with S, in aq. emulsion of alkali(ne earth) sulphide for 1-4 hours. The amt. of solids in the reactor is 1-60, pref. 30-35 wt.%. The reacted slurry is thickened and filtered to provide decontaminated or restored earth and an effluent, which is partly recycled to grinding or to reaction.

Process is economic and can be carried out (semi)continuously or by batch processing. 18. 2. 77 as 770040 (7pp393)

STER ★ D15 15832B/08 ★US 4139-461
Removing unwanted slurried solids from reactor - oxidising sludge by pressurised wet process using heat exchanger
STERLING DRUG INC 27.12.77-US-864497
(13.02.79) C02b-01/34

A wet oxidn. system oxidises sludge which is pumped through a reactor together with pressurised air. A heat exchanger recovers heat from the reactor to preheat the sludge but after prolonged use an accumulation of slurries solids builds up within the reactor. The accumulated solids are removed from the reactor by substituting fresh water for the sludge inlet and directing this stream to the discharge conduit of the reactor but allowing the water to flow through the heat exchanger.

While this bypass is effective to back pressure on the discharge conduit is lowered while a drain conduit at the base of the reactor is opened. This drain conduit leads to the downstream side of the heat exchanger to mix slurried solids from the reactor with clean water to form a diluted cool effluent.

The plant is shut down for only a short period during removal of the solids. 27. 12. 77 as 864497 (4pp295)

RACO- D15 69213A/39 =US 4139-463
Oil water sepn. - using prefilter, separator, coalescer and fine filter
RACOR IND INC 14.03.77-US-777131
*J01 Q24 (13.02.79) *DT2810-227 +B01d-23 B01d-37*

Appts. for separation of oily water comprises a pump to draw water from a ship's bilge through a filter and separator. Fluid flow is slowed by the specially configured baffle separator and allows the majority of the inter-mixed oil to separate from the water by gravity before reaching the pump. The suction pump draws the relatively oil-free water from the lower portion of the separator and pumps it through two additional filter stages. The pump is reversible to force accumulated oil floating on the water from the separator housing to the holding tank.

System for oil water separation suitable for small boats, ships or shore installations produces environmentally acceptable effluent. 14.5.77 as 777131 (14pp1364)

OILS- ★ D15 15839B/08 ★US 4139-470
Removal of floating contaminant from open body of water - using channelling apron to direct surface liq. to floating separator
OIL SPILL RECOVERY 21.03.77-US-779675
J01 Q42 (13.02.79) E02b-15/04

Contaminants are removed from the surface of a body of water using a device which includes an open-ended channeling apron impervious to the contaminants. The apron channels the contaminant to a collecting device which includes a scoop for skimming the channeled contaminant from the water surface. The collecting device also includes a contaminant separator from where the sepd. contaminant may be removed from the system.

The collecting device comprises a cylinder having an open top and bottom and having the scoop pivotally attached to the forward side of the cylinder adjacent an entry port. The cylinder includes floats to stabilize it at the required position in the water. The cylinder also has adjacent its top an outwardly flanged reservoir for increased storage capacity of the sepd. contaminant material.

Device removes petroleum or other types of floating refuse including vegetation or refuse, from the surface of a body of water. 21.3.77 as 779675 (13pp295)

FOTI/ ★ D15 15840B/08 ★US 4139-471
Sewage treatment tank with three chambers - in two of which alternate aerobic and anaerobic decomposition occurs
FOTI D 09.01.78-US-867780 (07.09.76-US-720756)
(13.02.79) C02c-01/08

A sewage treatment plant includes a rectangular container divided by two partitions into prim. and sec. chambers and a holding chamber. Overflow pipes interconnect the prim. and sec. chambers and the sec. chamber and holding tank. The first partition has corrugated surfaces to break up solid particles of sewage. Air bubbles are periodically introduced into both the first and second chambers to induce a rolling flow and also during these periods to encourage aerobic disintegration of the sewage. During the quiescent periods anaerobic decomposition occurs.

The sec. chamber includes an arcuate wier baffle to define a settling tank at its downstream end. A skimmer positioned in the top of the sec. chamber minimises entrance of solids into the settling chamber.

The plant may be used for an individual dwelling not connected to the municipal sewage facilities. The resultant effluent is colourless and odourless and may safely be delivered to surrounding ground. 9.1.78 as 867780 (6pp295)

ALLD/ ★ D15 15841B/08 ★US 4139-473
Graded sand filter with reusable imperforate diaphragm - which is pressed against filter media during filtering and released during washing
ALLDREDGE R L 12.09.77-US-832221
J01 (13.02.79) B01d-23/24

An upflow, upwash filter includes a granular filter medium and a reuseable, imperforate diaphragm which is movable between a position for compressing and holding the medium in place during filtering, and a released position during washing. A fluid inlet is located above the diaphragm for supplying pressurised fluid to the upper side during the filter stage. A liquid overflow is provided in the housing of the filter above the granular filter medium to permit the removal of liq. flowing through the medium during the wash stage.

Used as sand filter for filtering water and other liquids. The filter housing is flared upwardly and outwardly at selected portions to reduce the velocity of upflowing liq. during the wash stage for improved grading of the filter media. A layer of fine, dense filter media may be used to increase the size range of media particles in the filter. The dirt holding capacity of the filter is increased. The diaphragm does not require stretching and can be released easily for wash operations. 12.9.77 as 832221 (9pp1044)

ICIL D15 06866Y/04 =US 4139-499
Amphoteric polymer prepn. - by suspending ion exchange resin particles in monomer and polymerising and crosslinking, esp. used for removal of minerals from water
ICI AUSTRALIA LTD (DIAS) 28.05.76-AU-006093 (01.07.75-AU-002189)
*A91 (13.02.79) *NL7607-168 B01j-01/08 C02b-01/14*

A thermally reversible amphoteric ion exchange resin having a salt uptake ≥ 0.169 meq/ml from 1000 ppm NaCl is prepd. by dispersing in a suitable suspension medium a mixt. of weakly basic ion exchange resin particles of size 0.1-5 μ of cpd. contg. N,N-diallylamine or N,N-diallylaminomethyl moiety, crosslinked polymers of N-lower alkyl ethyleneimines and the N,N-di-lower alkylaminoethyl (or -methyl) esters of (meth)acrylic acid.

Resin further contains ≥ 1 monomer contg. an acidic ionogenic gp. or organic precursor; a crosslinking agent contg. ≥ 2 vinylic or allylic gps.; a porogen of inert solvent in which the monomer is soluble, but polymer not. Monomers are polymerised to yield beads of size 250-1000 microns contg. particles embedded in macroporous crosslinked polymer matrix. Polymer is treated to convert organic precursors to ionogenic gps. to form amphoteric polymeric compsn. with molar ratio of basic to acid gps. 10:90-90:10.

Resins are used in water-demineralisation process, esp. in desalination of water. 18.6.76 as 697741 (5pp931)

BLUM/ D15 55880Y/32 #US 4139-579
Sewage aeration system - introducing air at adjustable pressure and flow rate to fluid side stream for aerator
BLUM A 21.01.76-DT-602119 (15.07.77-US-816025)
*(13.02.79) *DT2602-119 +B01f-03/04*

Appts. for introducing air into liquids, such as waste water, comprises a liquid pump mounted within a submerged aerator pressure chamber. The compressed air generator is fed through an air filter and conduit to force air through the aerator chamber to emerge from catching nozzles with the pumped liquid. Liquid under pressure is drawn into the pump chamber and expelled through peripheral jet nozzles aligned with the outer catching nozzles and thus entrains compressed air from the aerator. The drive of both pump and compressed air generator is variable.

Easy regulation of the amt. of air entrained is provided. 15.7.77 as 816025 (4pp1364)

PETL ★ D15 15948B/08 ★US 4139-718
Polyvinyl quat. amine(s) prepn. for corrosion inhibitors etc. - by reacting tert. amine(s) with an ethylene di:halide
PETROLITE CORP 14.02.74-US-442317
A14 M14 (D22) (13.02.79) A01n-09/20 C07c-85/02

Prepn. of polyvinyl quat. amines comprises reacting a tert. amine with an ethylene dihalide in mole ratio 2:1 at ≥ 100 (120-180)°C. The tert. amine is a dimethyl aliphatic hydrocarbon amine in which the aliphatic hydrocarbon group is 6-30C, pref. 12-18C.

The structure of the tert. amine is such that under the reaction conditions it is capable of (1) both adding to one end of the ethylene dihalide and causing dehydrohalogenation to yield a vinyl quat. amine, and then (2) continuing the reaction to give the polyvinyl quat. amine. The pref. ethylene dihalide is ethylene dichloride.

Used as corrosion inhibitors, flocculants, microbiocides. 14.2.74 as 442317 (3pp1390)

ELMQ/ ★ D15 15958B/08 ★WP 7900-068
Heat exchanger flow elements comprising plastics foils - intermittently joined to form channels for cooling water in sea water distn. operation
ELMQVIST O 27.07.77-SW-008597
A88 Q78 (22.02.79) C02b-01/06 F28f-03

D/S: (FR) E, (CH, DT, GB, LU) N, BR, SU, US.

A heat exchanger, esp. for cooling water in the recovery of fresh water by distillation of sea water in an evaporation chamber, comprises parallel flow elements each formed of longitudinally jointed foils. The joints are intermittent so that each flow element includes longitudinal gaps for water transport.

The flow elements are attached at one end to inlets for warm fresh water from the evaporation chamber and at the other end to outlets for cooled water to the chamber. The elements are arranged in a basin having inlets for cold sea water and outlets for warm sea water.

The foils are pref. made of plastics and have low weight and do not cause corrosion problems. Very large heat exchanging surfaces are obtained at low material consumption which renders the heat exchanger cheap.

17.7.78 as SW0021 (10pp1044).
ISR: SW387927; US4010733; US3438432; DT1517530; DT2113389; GB1333316; GB1285155; FR2308892.

ELMQ/ ★ D15 15959B/08 ★WP 7900-069
Heat exchanger elements utilising solar energy - comprise horizontal plastics foils having intermittent welds, for simultaneous recovery of fresh water and salt
ELMQVIST O 27.07.77-SW-008598
A88 Q74 (22.02.79) C02b-01/06 F24j-03/02

D/S: (FR) E, (CH, DT, GB, LU) N, BR, SU, US.

Appts. for simultaneously recovering fresh water and salt or concd. saline soln. by direct collection of solar energy utilises heat exchanger elements each comprising two horizontally arranged foils. The foils are longitudinally jointed, e.g. by intermittent welding, to provide a plurality of longitudinal gaps for sea water transport.

Each element is attached mechanically at one end to inlets for sea water and at the other end to inlets for an evaporation chamber for recovering fresh water.

The foils are pref. made of a black plastics material which provides a high energy absorption capacity, low weight, cheapness and absence of corrosion problems. Large surfaces for solar radiation are obtained with little material consumption. The plastics material may be covered by a foil of transparent plastics material in order to reduce convection losses between the elements and ambient air.

17.7.78 as SW0022 (9pp1044).
ISR: US4010733; FR2308892; DT1517530.

See Also

D12 DS 2745851 D13 J7 9001790 D16 BE 871171
D16 J7 9001792 D22 DT 2736646

D16: FERMENTATION INDUSTRY

UYMA- ★ D16 14223B/08 ★BE -871-171
Biological purificn. of waste water, fermentation of yeasts etc. - in reaction bed which controls effective vol. of biomass
UNIV MANCHESTER INT (SMHL) 20.10.77-GB-043615 (20.10.77-GB-043613)
B04 (D13 D15) (01.02.79) C12b

Installation is of the type in which a biological material is developed on a supply of suitable nutrients. The nutrients and any other necessary materials are passed through a porous bed in a reaction vessel. The bed comprises column type packing elements. Each element contains biological material in a cavity which has extensive openings to the surface of the element.

As the biological material grows in each element it is not allowed to extend beyond the surface of the element. This limitation of volumetric growth can be carried out continuously or periodically pref. by agitation and inter-element friction produced by liq. flow through the bed, e.g. flow of inutrient etc.

Used for purificn. of waste water and industrial effluent by the activated sludge process; biological fermentation processes for the prodn. of single cell protein, such as yeasts, e.g. for the beer brewing industry; and the prodn. of pharmaceuticals. The volume of the biomass in the reaction vessel can be precisely controlled. The concn. of biomass can be kept at optimum level. The elements can be taken from the vessel, cleaned and re-used. 11.10.78 as 871171 (17pp448)

FORT- D16 56679T/36 =DS 2106-597
Green malting plant - with electrically controlled extraction system
KOMB FORTSCHRITT LA (FOR -) 12.02.71-DT-106597
*(15.02.79) *DT2106-597 C12c-01*

The switchgear for a green malt discharge manipulator, is described in which when discharging the finished green malt from the germination box the stationary manipulating augers or other loosening devices act as discharge members.

A switch lever is coupled to one of the auger shafts so as to rotate in synchronism with it, and is adjustable to the most suitable auger position for the discharge operation A normally-closed switch is situated in the path of the lever, and is connected during the discharge operation in parallel with the control switch for the auger motor relay via a further switch connected to this relay. 12.2.71 as 106597 (5pp160)

JUNG- D16 75035S/47 =DS 2125-131
Citric acid by submerged fermentation
JUNGBUNZJAUER SPIRI (JUN -) 01.06.70-OE-004893
*E17 (15.02.79) *BE-767-569 C12d-01/04*

Citric acid is prepd. by submerged fermentation of Aspergillus niger in a medium contg. (partly) purified carbohydrate. To the nutrient medium is added $K_4[Fe(CN)_6].3H_2O$ in a total amt. of 0.05-10 TpM to guide the cellular metabolism in the direction of increased citric acid prodn. The cyanide is added portionwise, pref. first when the nutrient medium is inoculated. The sugar is pref. purified by ion exchange treatment. 21.5.71 as 125131 (3pp068)

HOMM/ D16 29562T/19 =DS 2152-112
Antitumour and vaccine prepns - from cell-wall protein of pseudomonas aeruginosa
HOMMA Y (EISA) 20.10.70-JA-091656
*B04 (15.02.79) *DT2152-112 A61k-39/02*

Inocculation agents (I) against Pseudomonas aeruginosae infections contain an amt. of cellwall protein component (CWP) which has been isolated from a strain of P. aeruginosa. The pref. strain of P. aeruginosa used in N10 (ATCC 21726). 3-5 injections of (I) at 1-100 μg/day for 2-3 days is sufficient for prophylaxis.

(I) may be used in the therapy or prophylaxis of P. aeruginosa infections. (I) is an excellent antigen to P. aeruginosa and are practically not type-specific. They give high activity independent of the sero-type of the bacterium. (I) have very low toxicity which is only ca. 10% of the usually administered agents. 19.10.71 as 152112 (3pp279)

BAXT D16 47180V/26 =DS 2406-833
Enzymatic glucose conversion to fructose - using glucose isomerase stabilised by reaction with a diazotised primary aromatic diamine
BAXTER TRAVENOL LAB 15.02.73-US-332937
*E13 (15.02.79) *BE-810-890 C07g-07/02 C07h-03/02*

An immobilise glucose isomerase prepn. is obtd. by reacting whole microbial cells contg. glucose isomerase with a diazotised aromatic primary diamino cpd. esp. 2,6-diaminopyridine, 2,4-diamino-6-hydroxypyrimidine, 3,6-diaminoacridine or acriflavine. Pref. microbial cells of Streptomyces phaeochromogenes are used.

The immobilised glucose isomerase prepn. is stable, insoluble in water and used to convert D-glucose into D-fructose. 13.2.74 as 406833 (6pp068)

LKBP D16 48381X/26 =DS 2556-072
Calorimetric monitor for micro-organic activity in fermentation - uses two metering points close together to present identical ambient temperature
LKB PRODUKTER AB 12.12.74-SW-015590
_J04 R16 +R14 (15.02.79) *DT2556-072 C12k-01/04 G01n-25/20_

The calorimetric probe is immersed in a heat-generating fluid, having a test tube open at both ends for the fluid enclosed by a casing thermally insulated from it. The output signal from a thermo-element is a measurement of the heat generated in the fluid in the tube.

The test tube has two thermo-elements spaced apart, whose datum solder points are thermally coupled to the casing. 12.12.75 as 556072 (4pp160)

BIOT- D16 78841Y/44 =DS 2639-129
Enzymes sepn. from cells after solubilisation - by partition in multiphase systems contg. polymers
GES BIOTECH FORSCHU 31.08.76-DT-639129
_A97 (15.02.79) *NL7704-046 C07g-07/02_

Enzymes, e.g. pullulanase, are obtd. from cells or cell fragments contg. them by solvent extraction with an aq. multiphase system. The multiphase system contains (a) ≥ 1 high molecular polyalcohol, polyether, polyester, polyvinylpyrrolidone or polysaccharide or their derivs. and ≥1 inorganic salt or (b) ≥ 2 high molecular polyalcohol polyether, polyester polyvinylpyrrolidone or polysaccharide or their derivs.

The phases are sepd. and the enzyme is sepd. from the high polymer and then pref. purified. The system pref. contains (substd.) polyalcohol or polyether of molecular wt. ~ 4000. The inorganic salt is pref. a phosphate. 31.8.76 as 639129 (36pp068)

OLYU D16 85107Y/48 =DS 2722-586
Pipette for culturing liquids - includes perforated attachment to ensure mixing of culture liquid
OLYMPUS OPTICAL KK 19.05.76-JA-U63457
_J04 (15.02.79) *DT2722-586 C12k-01/10_

The pipette for tissue and cell culture fluids has in the end a number of small openings. This gives effective mixing and improved distribution when a fluid is repeatedly drawn into the pipette and released from it again. 18.5.77 as 722586 (4pp160)

TATL D16 68908Y/39 =DS 2723-166
Alginate-type polysaccharides by culture of Azotobacter vinelandii - with saccharide concn. limiting bacterial development
TATE & LYLE LTD 28.05.76-GB-022319
_A11 (15.02.79) *BE-855-083 C12d-13/04_

An alginate-like polysaccharide comprises a partly acetylated, variable, block-copolymer of 1-4 bound D-mannuronic acid and L-guluronic acid residues. The polysaccharide is prepd. by culturing Azotobacter vinelandii under anaerobic conditions in an aq. nutrient medium of pH 6-8.2. The nutrient medium contains sources of phosphate, molybdenum, iron, magnesium, potassium, sodium calcium and sulphate and a source of nitrogen or it is aerated with a N-contg. gas.

The carbon source is a mono- or di-saccharide and is present in a limited amt. necessary for the growth of the bacteria. Similarly the amt. of oxygen may be limited e.g. to 5-20 mMol $O_2/h/g$. cells to that necessary for optimum growth. These limitations increase the prodn. of polysaccharide and make its recovery easier. The polysaccharides may be used, as alginates from seaweed, as emulsifiers, stabilisers and thickeners. 25.5.77 as 723166 (5pp068)

TATL D16 68909Y/39 =DS 2723-165
Alginate type polysaccharides by culture of Azotobacter vinelandii - continuously using phosphate concentration of above one millimole
TATE & LYLE LTD 28.05.76-GB-022318
_A11 (15.02.79) *BE-855-084 C12d-13/04_

An alginate-like polysaccharide comprises a partly acetylated, variable, block-copolymer of 1-4 bound D-mannuronic acid and L-guluronic acid residues. The polysaccharide is prepd. by culturing Azotobacter vinelandii, esp. strain NC1B 9068, 8789 or 8669, under aerobic conditions in an aq. nutrient medium of pH 6-8.2.

The nutrient medium contains a mono or disaccharide as carbon source and all normal requirements but the concn. of phosphate is limited by the concn. of the bacteria and is concn. ≥ 1 mMole, e.g. 2-3 mMole. The concn. of oxygen and mono or disaccharide is also pref. limited.

The polysaccharides are obtd. in good yields and may be used as emulsifiers, stabilisers and thickeners. 23.5.77 as 723165 (5pp068)

RIET/ ★ D16 14305B/08 ★DT 2734-050
Rotting silo charging system - with reversible scraper distributor conveyors under feeder trough conveyor
RIETZ E 28.07.77-DT-734050
_(15.02.79) C05f-09/02_

A charging system for rotting silos includes an endless trough-type feeder conveyor above several distributor conveyors at right angles to it. The distributor conveyors fill the silo from the centre towards the sides at one half. Their direction of motion is reversed when one half of the silo is full.

This charging system requires a minimum of energy and ensures that all layers of rotting material have the same density. Spaces over which there are no distributor conveyors can be utilised for staircases or lifts. 28.7.77 as 734050 (9pp39)

CALP- ★ D16 14419B/08 ★DT 2819-035
Antibacterial protein C-3603 - from Streptomyces mutans C-3603 for preventing oral infections esp. dental caries
CALPIS FOOD IND 28.07.77-JA-089790
_B04 (15.02.79) A61k-07/26 C07g-17 C12d-13/02_

New antimicrobial substance C-3603 (I) is produced by cultivating a certain species of the genus Streptococcus in a medium and isolating C-3603 from the resulting culture medium.

(I) has specified physical and chemical properties 6000-10000 (SDS polyacrylamide gel plate electrophoresis); (b) decomposition point 190-195°C; (c) UV absorption maxima at 280 nm ($E_1^1 = 33$); (d) IR absorption bands at 3290, 1650, 1535, 1240, 1105 and 733 cm^{-1}; (e) slightly soluble in aqueous acid (pH 3.0), practically insoluble in water, insoluble in MeOH, EtOH, acetone, ether, ethyl acetate, $CHCl_3$, n-hexane and benzene; and (f) positive colour reactions with ninhydrin, biuret; xanthoprotein and Adamkiewicz reagent.

C-3603 has high antibacterial activity against a number of gram-positive bacteria, esp. cariogenic bacteria in oral cavities. It is therefore useful for inhibiting oral infections, esp. dental caries. MIC's of C-3603 are 6.25 mcg/ml against Streptococcus sanguis ATCC 10557, 50 mcg/ml against Lactobacillus brevis AHU, 6.25 mcg/ml against Bacillus subtilis ATCC 6633, 6.25 mcg/ml against Staphylococcus aureus IAM 307, and>100 mcg/ml against E. coli. 29.4.78. as 819035 (32pp280)

AIRP ★ D16 14434B/08 ★DT 2827-474
Biomass with high phosphorus and nitrogen content - for use as fertiliser, animal feedstuff and as high-energy biomass for the fermentation industry
AIR PRODUCTS & CHEM INC 25.07.77-US-818786
_C03 (C04 D13) (15.02.79) A23k-01 C05f-07 C12d-03 C12d-13_

Biomass with high nitrogen and phosphorus content is produced by (a) forming a mixed liquid by mixing activated biomass with nitrogen-, phosphorus- and BOD-contg. feed under anaerobic conditions so that it is essentially free from NO_x^- and has a dissolved oxygen content of < 0.7 ppm, by which means there is effected a selective production of non-filamentous microorganisms which are capable of sorbing BOD under anaerobic conditions.

Process further comprises (b) oxidising BOD in the mixed liquid by contacting with O_2-contg. gas under conditions such that a dissolved oxygen content of ≮1 ppm is maintained; (c) allowing the oxidised mixed liquid to settle in order to separate a supernatant liq. from a denser biomass; (d) using a part of the separated biomass as activated biomass for mixing with further BOD-contg. feed; and (e) recovery of the remainder of the settled and sepd. biomass as the prod.

The biomass produced can be used as fertiliser, as an animal feedstuff, or as a high-energy biomass for the fermentation industry. When used as a fertiliser, the biomass is particularly advantageous, since both the phosphorus and the fixed nitrogen content are available to plants; since the nitrogen is mainly in the form of protein and the phosphorus is largely in the form of polyphosphate, the prod. has slow-release properties. 22.6.78. as 827474 (31pp280)

RAMO- ★ D16 14479B/08 ★DT 2833-902
Isocyanide derivs. of poly:hydroxy polymers - for coupling to biologically active proteins, esp. enzymes
RAMOT UNIV AUTH APP 04.08.77-IL-052652
A96 B04 (A11 A14) (15.02.79) C08b-15/06 C08b-37 C08f-08/30

Isocyano derivs. of polyhydroxy, linear or cross-linked, natural or synthetic polymers, of formula P-O-Q-N=C (I) are new. In (I), P is the basic polymer residue and the O atom is derived from OH gps.; Q is $(CH_2)n$ or aralkyl; esp. $(CH_2)n$, n is 3-20. n' = 3-12.

Pref. starting polymers are cellulose or starch (or their derivs.); linear or cross-linked dextran or agarose; PVA; modified polysaccharides; and N-(2-hydroxyethyl) derivs. of polyacrylic polymers. They are made by treating the OH-contg. polymer with base, then reacting with X-Q.NC (where X is leaving gp.).

The isocyano gp. can be used to couple biologically active protein, esp. enzymes but also antibodies and antigens. These gps. are attached by stable ether linkages and the coupled proteins retain a high proportion of their original biological activity. 2.8.78. as 833902 (25pp1251)

ANVR ★ D16 14529B/08 ★FR 2391-254
Prepn. of biochemically active films and coatings - from gelatin, biochemical agent and crosslinking agent
AGENCE NAT VALORISATION 20.05.77-FR-015616
A96 B04 G02 R16 (19.01.79) C07g-07 C09d-03/04 G01n-01/28 G01n-31/14

Biochemically active films and coatings are prepd. by (a) dissolving gelatine in water, (b) cooling to ambient temp. forming a still fluid sol., (c) adding a biochemical substance (I) in aqs. soln. (d) opt. homogenising; (e) pouring or spraying the soln. onto a support, (f) drying to form an anisotropic gelatine filme (g) crosslinking by spraying or impregnation with a multifunctional agent (II); and opt. (h) stripping the film from the support.

(I) is e.g. an enzyme, antibody, agglutinin, enzyme, inhibitor, antigen etc. and these may be used in a variety of biochemical processes. The films have good mechanical strength and the coatings better adherence to a variety of substrates than do conventional materials. 20.5.77 as 015616 (20pp520)

ANVR ★ D16 14543B/08 ★FR 2391-467
Enzymatic membrane micro:titration cell partic. for urine etc. - clamps membrane between ferromagnetic ring and magnetic core at end of electrode
AGENCE NAT VALORISATION 20.05.77-FR-015615
A89 J04 R16 (19.01.79) G01n-27/28 G01n-33/16

The cell comprises a cavity formed in a block of chemically inert material, or having the cavity surface coated with inert material. The cavity leads into the block as a cylindrical bore which is stepped down to a smaller dia. forming the major dia. of a conically convergent or hemispherical measuring chamber. A ferromagnetic ring fits coaxially inside the bore, seated on the shoulder at the top of the chamber. A circular, enzymatic membrane fits coaxially inside the bore, covering the top of the ferromagnetic ring. The membrane is clamped against the ring by an annular, magnetic core fitting closely in the bore. The core fits coaxially on the end of a measuring electrode which extends out of the block.

The block measuring chamber has inlet and outlet passages of which the axes are tangential to the plane of the enzymatic membrane. The cell pref. includes poly(m)ethyl (meth)acrylate.

Selective titration of the constituents of complex liqs. partic. selective microfiltration of constituents in biochemical fluids such as serum, urine etc. The analysis compartment can have a vol. of < 20 microlitres.

The measuring electrode is easily fitted without danger of damage to the membrane. Reliability of operation is improved. 20.5.77 as 015615 (11pp448)

DSOH- D16 94585X/51 =GB 1540-879
Mycelium culture growth of polyporus species - on carbohydrate nutrient medium enriched with nitrogen and phosphorus
DSO HRANMASH (DSOP) 22.05.75-BG-030055
*+P13 (D13) (21.02.79) *DT2621-876 C05f-11 C07g-07 C12d-13/06*

Mycelium of the Polyporus genus is obtd. by submerged cultivation of strain PS-64-103, strain PS-24-44 or strain PB-23-48 of a fungus of the Polyporus genus in a carbohydrate nutrient medium contg. N and P. Pref. cultivation is at 22-50°C, pH 4.5-7.5 and in air at 0.6-1.2m^3 m^{-3} nutrient medium per min..

Pref. cultivation is in several stages, in each of which a portion of the mycelium-contg. nutrient medium formed is removed and fresh nutrient medium is introduced for subsequent cultivation.

Prod. is used as a source of synthetic meat, as an additive for processed and smoked cheeses, as an enriche for tinned vegetables, as a component of dehydrated meat or vegetable soups and as an ingredient in the prepn. of bread and other dough prods.. 5.5.76 as 018500 (7pp992).

YAMA/ ★ D16 14567B/08 ★GB 2002-229
Antitumour compsn. - comprises microbial cell wall skeleton, oily vehicle, suspending agent and dispersing agent
YAMAMURA Y 09.08.77-JA-095871
A96 B04 (21.02.79) A61k-35/66

Solidified compsn. comprises microbial cell wall skeleton (CWS), an oily vehicle (I), a suspending agent (II) and a dispersing agent (III). The CWS is pref. obtd. from the genus Nocardia; (I) is pref. Drakeol 6VR (RTM), squalene squalone, miglyol or vitamin A palmitate; (II) is pref. a polyalcohol ester, esp. a polyoxyethylene sorbitan ester; and (III) is pref. a sugar or sugar alcohol such as mannitol, sorbitol or glucose.

The compsn. has adjuvant and antitumour activity and is used for treating human tumours. It can be preserved for a long period of time, and retains not only its physical stability but also its potency. A good quality compsn. can be produced on a large scale thus permitting the practical use of CWS in hospitals. 3.8.78 as 032134 (10pp954).

MILE ★ D16 14632B/08 ★GB 2002-516
Device for liq. control soln. prepn. - comprises matrix impregnated with solvent releasable compsn.
MILES LABORATORIES INC 15.08.77-US-824399
B04 J04 R16 (21.02.79) G01n-33/16

Device comprises an insoluble carrier matrix impregnated with a composition which is released when a suitabl amount of solvent is added.

As standards in tests on body fluids and industrial liquids such as urine, serum, swimming pool water, cutting oils, fermentation liquids and antifreeze. The compositions give standard solutions which are free of contamination. 11.8.78 as 033097 (7pp916).

VINE ★ D16 B/08 ★IL --46-18
Colour coded poultry vaccine - stained with a dye which does no harm the viability of viruses
VINELAND LAB LTD 05.12.74-IL-046189
B04 C03 (31.01.79) A61k-39/12

HAYA/ ★ D16 14732B/08 ★J5 4005-09
Prepn. of fermentation prod. having deodorising effect - by mixing activated sludge from food prodn. with bran, brown coal and water fermenting etc.
HAYASHI M 13.06.77-JA-068869
C03 (D13) (16.01.79) A23k-01 A23l-01/22 C12b-01

Prepn. of fermentation prod. having deodorising effect or deodorised fermentation prod. comprises (a) mixing the activated sludge obtd. in the food producing factory with rice bran or wheat bran, brown coal and water; (b) fermenting the mixt. at ≥ 50°C under conditions of solid cultivation while permitting the evapn. of water; (c) mixing the obtd. prod. with rice bran or wheat bran, brown coal and water; (d) heating the mixt. at > 50°C; and then (e) fermenting the mixt. under the conditions of solid cultivation while keeping the temp. at > 50°C and permitting the evapn. of water.

The prod. is used as flavour, nutrient or feed-stuff. Pref. the use of water is 1/4-2 times the wt. of a mixt. of brown coal and rice bran or wheat bran. 13.6.77 as 068869 (8pp108)

MIYA- ★ D16 14733B/08 ★ J5 4005-092

Odourless preparation of living microorganisms - by mixing microorganisms with cyclic dextrin under wet conditions and drying

MIYAIRISAN KK 14.06.77-JA-070265

(D13) (16.01.79) A23l-01/34 A61k-35/74 C12c-11/26 C12k-01

Prepn. of an odourless prepn. of living microorganisms (including spores) such as butyric acid bacteria, lactic acid bacteria and yeasts, comprises mixing 1 pt. wt. of the microorganisms with 0.3-3 pts. wt. of a cyclic dextrin under wet conditions and drying the mixt. obtd.

The prepns. obtd. are suitable for oral admin. 14.6.77 as 070265 (3pp16)

TANB ★ D16 14734B/08 ★ J5 4005-094

Urokinase prepn. from disinfected human urine - by treating urine with thimerosal or chlorhexidine gluconate then chromatographing

TOKYO TANABE KK 09.06.77-JA-068267

B04 (16.01.79) A61k-35/22 C07g-07/02

The method comprises treating a collected human urine with thimerosal or chlorhexidine gluconate at a concn. of ~ 0.002-0.005 w/v% and then subjecting the thus disinfected urine to chromatography in conventional manner.

Thimerosal and chlorohexidine gluconate have excellent disinfectious activity and do not affect the enzymatic activity of urokinase. The urokinase obtd. is pyrogen-free. 9.6.77 as 068267 (14pp16)

TOYM ★ D16 14735B/08 ★ J5 4005-095

Fixed glucose-isomerase prepn. - by aggregating suitable microorganisms with chitosan, a silica cpd. e.g. silicate being added in process

TOYOBO KK 09.06.77-JA-068722

(D17) (16.01.79) C07g-07/02 C12k-01

Prepn. of fixed glucoseisomerase (I) comprises aggregating the (I) producing microorganisms bodies with chitosan where silica cpd. is combined with the fixed (I) at an opt. stage during its prepn.

Fixed (I) which is hard and only slightly swellable and is hardly disintegrated, can be prepd. Further it is easily sedimentable and strong. It can be adapted to industrial processes using a packed column.

Silica cpds. are partic. water insoluble silicate (e.g. calcium silicate, magnesium silicate, cobalt silicate, etc.). The glucoseisomerase-producible microbe used (e.g. from Streptomyces, Bacillus, Arthrobacter, etc.) is cultured and the microbial body is pref. dispersed in the buffer soln. of pH 5-7 in a concn. 0.5-40 wt.%. Then the dispersion is combined with chitosan soln. obtd. by dissolving chitosan 0.1-10 wt.% in aq. acidic soln. 9.6.77 as 068722 (4pp5)

NITO ★ D16 14736B/08 ★ J5 4005-096

Fixing enzyme or microbial body with betaine polymer - giving a gelled prod. without fall in enzymic activity, for use with almost all kinds of enzyme

NITTO BOSEKI KK 14.06.77-JA-070214

A96 B04 (16.01.79) C07g-07/02 C12k-01

The method comprises radical polymerising betaine-type crosslinking monomer (I) $(CH_2=CR-CH_2)_3-N^+-(CH_2)_nX^-$ in aq. medium contg. enzyme or microbial body, or by radical copolymerising (I) with ≥ 1 monomer selected from betaine-type noncrosslinking monomer $(CH_2=CR-CH_2)_2-N^+(R')-(CH_2)_mX^-$ and nonionic water-soluble non-crosslinking vinyl monomer in an aq. medium contg. enzyme or microbial body. In the formulae, each R is H or Me; R' is 1-20C alkyl or aralkyl; X is $-SO_3$ or -COO; n = 1-200; and m = 1-20.

The enzyme or microbial body is included in a gel composed of a polymer which shows strong affinity for the enzyme; the fixed enzyme keeps its enzymic activity stably for long periods and can be obtd. without fall in enzymic activity. The method can be used for almost all kinds of enzymes, e.g. catalase, glucoseoxidase, D-aminoacid-oxidase, L-aminoacid-oxidase, α-amylase, β-amylase, arginase, cholinesterase, β-glucuromidase, invertase, lipase, pepsin, peroxidase, ribonuclease, tripsin, urease, etc. 14.6.77 as 070214 (13pp5)

TOYM ★ D16 14737B/08 ★ J5 4005-097

Fixed glucose-isomerase prepn. - by aggregating suitable microorganism with chitosan, a water-insol. phosphate being added in the process

TOYOBO KK 13.06.77-JA-070356

(D17) (16.01.79) C07g-07/02 C12k-01

Prepn. of fixed glucoseisomerase (I) comprises aggregating (I) producing microorganisms bodies with chitosan, where a phosphate which is difficultly soluble in water or aq. alkali is combined with the fixed (I) at an optional stage.

By adding the phosphate, the pH drop of the isomerised soln. at the initial or final stage can be prevented and being kept at optimum pH range, the fixed (I) can maintain high activity throughout the isomerising process.

Suitable microorganisms are from Streptomyces, Bacillus, Arthrobacter, Pseudomonas, etc. and they are dispersed in buffer soln. of pH 5-7 to 0.5-40 wt.% concn. The dispersion is mixed with the chitosan soln. which is obtd. by dissolving 0.1-1.0 wt.% chitosan in aq. acidic soln. As the phosphate, magnesium hydrogen phosphate, calcium metaphosphate, magnesium pyrophosphate, etc. can be used in amts. of 1-20 wt.% w.r.t. solids of the microbial body. 13.6.77 as 070356 (4pp5)

TOYM ★ D16 14738B/08 ★ J5 4005-098

Fixed glucose-isomerase prepn. - by aggregating suitable microorganisms with chitosan, a water-insol. carbonate being added in the process

TOYOBO KK 13.06.77-JA-070357

(D17) (16.01.79) C07g-07/02 C12k-01

Prepn. of fixed glucoseisomerase (I) comprises aggregating the (I) producing microorganism bodies with chitosan where a carbonate which is insoluble or difficultly soluble in water or aq. alkali is combined with the fixed (I) at optional stage.

By adding carbonate, pH drop of the isomerised soln. at initial or final stage can be prevented and by being kept at optimum pH range, the fixed (I) can maintain high activity throughout the isomerising process.

For the object glucoseisomerase-producible microbial body of Streptomyces, Bacillus, Arthrobacter, Pseudomonas, etc. can be applied and they are dispersed in the buffer soln. of pH 5-7 in 0.5-40 wt.% concn. The dispersion is mixed with the chitosan soln. which is obtd. by dissolving 0.1-1.0 wt.% chitosan in aq. acidic soln. As the carbonate, magnesium carbonate, barium carbonate, calcium carbonate, cobalt carbonate, etc. can be applied in parts of 1-20 wt.% on solids of the microbial body. 13.6.77 as 070357 (6pp5)

MEIJ ★ D16 14850B/08 ★ J5 4005-901

Antibiotic SF-2002 used to treat mycoplasma infections - is prepd. by culturing Actinomadura sp. SF-2002 under aerobic conditions

MEIJI KK 14.06.77-JA-070337

B04 (17.01.79) A61k-35/66 C07g-11 C12d-09/14

An antibiotic, SF-2002, is white powdery substance melting at 121-123°C has an $[\alpha]_D^{25}$ = -108° (1% in chloroform); has analysis of C, 57.11; H, 8.07; N, 10.19; 0, 24.63(wt. %); has molecular wt. of 850-900; has a no absorption in the range from 210 to 400 mu; has specified IR and NMR is hardly soluble in water, hexane and ether, soluble in ethyl acetate, methanol, ethanol and acetone, very soluble in chloroform and DMF; is positive to KM_nO_4 and Ehrlich, negative to ninhydrin.

The antibiotic is useful as a medicine for treating mycoplasma infections. The antibiotic is produced by culturing Actinomadura sp. SF-2002 (Ferm-P 4033) in a nutrient medium at 25-37°C for 2-6 days under aerobic conditions. 14.6.77 as 070337 (7pp16)

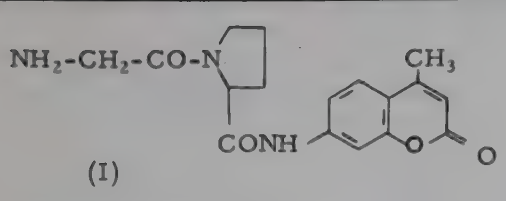
AJIN ★ D16 14881B/08 ★ J5 4005-976

7-Glycyl:propylamino-4-methyl:coumarin - useful as fluorescent material (intermediate) for measuring enzyme activity

AJINOMOTO KK 16.06.77-JA-071469

B04 E13 R16 (B02) (17.01.79) C07d-405/12 G01n-31/14

7-Glycylpropylamino-4-methylcoumarin is of formula (I). (I) is useful as


(I)

fluorescent substrate (intermediate) for measurement of enzyme activity and with the use of (I), highly sensitive measurement of enzyme activity is possible. (I) is prepd. by reacting N-protected-glycyl proline with 7-amino-4-methyl coumarin in the presence of organic base such as amine and condensation agent with the use of a solvent such as DMF, etc., followed by removing the protecting gp.

In an example, N-carbobenzoxyglycyl-L-proline and triethylamine in THF are added to chloroisobutyl formate and 7-amino-4-methyl courmarin then added. The resultant is distilled, washed and chromatographed to give 7-(N-carbobenzoxyglycyl-L-prolyl)amino-4-methyl courmarin. Catalytic reduction with Pd-C and H_2 gas gives (I). 16.6.77 as 071469 (5pp22)

SORI D16 41550F/00 = J7 9001-766

Enzyme polyalcohol aerosol compns

SOC RECH IND SORI 31.10.68-FR-172352

*B05 (29.01.79) *BE-732-170*

SEKI D16 67660X/36 = J7 9001-792

Enzymatic decompsn. of dimethyl-formamide and hydrolysis prods. - using enzymes from culture of micrococcus microorganisms

SEKISUI CHEMI IND KK 00.00.75-JA-140681 (10.11.71-JA-090190)

*E16 (D15) (29.01.79) *J51082-781 C02c-01/02 C12k-01 C12k-03 +C02c-05/10*

Bacterial enzymes, obtd. by culturing micrococcus micro-organisms, having the power of degradation against DMF, dimethylamine, methylamine and formic acid is contacted with ⩾ 1 of the organic cpds. to cause degradation of the cpd.(s). Bacteria used has been sepd. from special activated sludge.

Enzyme taken out of bacteria obtd. by cultivation of the bacteria has power of degrading not only DMF, but also dimethylamine and formic acid resulting from hydrolysis of DMF, and also methylamine, the demethylated prod. of dimethylamine. DMF is converted to simple cpds. such as CO_2NH_3, H_2O etc. and is conductive to reduce BOD in industrial waste water. 10.11.71 as 140681/75 Div. ex 90190/71 C12k-1/00, 3/00 C02c-1/02, 5/10 (29.1.79) SEKISUI CHEMICAL KK (4pp) (J51082781)

ASAH D16 78224V/45 = J7 9001-793

Aerobic microbe cultivation in fermentor - comprising micromixing turbine of wire wings and high speed aerator

ASAHI CHEMICAL IND KK 13.11.72-JA-113680

*(29.01.79) *J49071-184 C12b-01/14 C12c-11/08 C12d-13/06*

An aerobic microbe is cultured in a fermentor which combines a micromixing turnine (I) which causes only local turbulence disturbing and cutting the rising bubbles, and a high speed aerator (linear flow of > 120 m/hr. in an empty tower. The ratio of the circular flow to the local turbulence is adjusted to an optimum value. (I) consists of wire wings of a dia. ⩽ the dia. of the bubbles arranged vertically or horizontally or of wire nets of the same dia.

In an example, Candida petrophilum was cultured in 10. 1. n-hexadecane in a 20 1. fermentor equipped with (I) 9 wire wings of 250 mm. dia.) and an aerator of 184 m/hr. rotating (I) at 600 rpm. at pH 4-5 and 30-33° for 18 hr. The max. sp. growth rate (μ) attained was 0.19 (hr^{-1}) and power consumption was 0.5 kW/m^3. Using a conventional fermentor with normal turbines of 6 wings (800 rpm) and an aerator of 60 m/hr. μ was 0.18 (hr^{-1}) and power consumption was 12kW/m^3. 13.11.72 as 113680, C12b-1/14, C12c-11/08, C12d-13/06, (29.1.79) ASAHI CHEM IND CO LTD (6pp) (J49071184)

TOXN D16 20304V/11 = J7 9001-794

Fermentative prodn of mannitol - using Candida aliphatica and a medium contg iso butyric acid, yeast extract, corn steepliquor etc

TOYO BREWING KK (TOYO) 09.03.72-JA-024512

*E17 (29.01.79) *J48096-787 +C12d-13*

Mannitol (I) is produced by a new isolate designated as Candida aliphatica (II, FERM-P1381) cultured in a medium contg. iso-butyric acid (III) as main C source. I is extd. from the grown cells with H_2O or org. solvent.

II was aerobically cultured in a medium (pH 7.0) contg. III 40, urea 2, KH_2PO_4 1.5, $MgSO_4$ $7H_2O$ 1.0, $FeSO_47H_2O$ 0.05, NaCl 0.5 corn steep liquor 0.5, and yeast ext. 0.5 g/l. at 30° for 72 hrs. I was extd. from the cells with MeOH overnight. The ext. was concd. and lipids in it was extd. with Et_2O. The ext. was treated with Amberlite IR-120 (H type) and active C and concd. to a syrup state. MeOH was added to the syrup and the ppt. appeared was removed. Cryst. of I was obtd. from the conc. by addn. of MeOH and EtO_2. 9.3.72 as 024512, C12d-13/00, (29.1.79) TOYO JOZO CO LTD (4pp) (J48096787)

MITN D16 54678Y/31 = J7 9001-796

(2,2)-Bis-hydroxymethyl-hydroacrylic acid prepn. - by oxidn. of pentaerythritol using bacterial enzyme at specified temp. and hydrogen ion concn.

MITSUBISHI GAS CHEM IND 11.12.75-JA-147615

*E17 (29.01.79) *J52072-882 C12d-01/02*

2,2-bis(hydroxymethyl)hydroacrylic acid, is prepd. by oxidising pentaerythritol with Corynebacterium and Arthrobacter (e.g. Corynebacterium soboxidans, Corynebacterium oxidans and Arthrobacter cruciphagus). Sugars and alcohols and nitrates, ammonium salts, amino acids, alkylamines and yeast extracts are used for culturing.

The pH of culture medium is pref. 6,7-7.3 for Corynebacterium suboyidans and Corynebacterium oxidans, and 7.5-8.3 for Arthrobacter cruciphagus. The culturing temp. is pref. 25-30°C, 0.1-7 wt.%, (pref. 1-2 wt.%) of pentaerythrito is used in culture medium or it is mixed with mycellium in the presence of oxygen, at 10-50°C (pref. 20-35'C), and pH 4-9, (pref. 5.5-7.5). 11.12.75 as 147615 C12d-1/02, (29.1.79) MITSUBISHI GAS CHEM IND (8pp) (J52072882)

NAKA- ★ D16 15089B/08 ★J7 9001-798

Vinegar prodn. from mixt. of alcohol and white rice-bran liquid - obtd. from rice-bran having very low ash content, giving vinegar free from turbidity

NAKANO SU-MISE KK 15.03.73-JA-029497

(29.01.79) C12j-01/04

In prepn. of vinegar by mixing saccharified white rice-bran liquid, which is obtd. by heating white rice-bran with water and allowing enzyme to act upon it, with alcohol and then conducting acetic acid fermentation, use is made of white rice-bran having ash content of ⩽ 1.1 wt.%. By using this kind of white rice-bran, vinegar having no turbidity can be obtd. 15.3.73 as 029497, C12j-1/04 (29.1.79) NAKANO SU-MISE KK (4pp22) (J49117696)

NAKA- ★ D16 15090B/08 ★J7 9001-799

Non-turbid vinegar prodn. - by mixing vinegar obtd. by acetic acid fermentation with saccharified liq. of white rice-bran, filtering and sterilising

NAKANO SU-MISE KK 16.03.73-JA-030075

(29.01.79) C12j-01/04

Vinegar obtd. by acetic acid fermentation is mixed with a saccharified liq. of white-rice-bran having ash content of ⩽ 1.1 wt.% or less, and the resultant is subjected to filtration and sterilised to give vinegar having no turbidity. 16.3.73 as 030075, C12j-1/04 (29.1.79) NAKANO SU-MISE KK (4pp22) (J49117697)

BABE/ ★ D16 15144B/08 ★SU-600-595

Malignant tumour prodn. in experimental animal - by applying suspension of tetra:chloro-phthalic anhydride in olive oil onto or under skin as carcinogenic agent

BABENKO G A 17.11.76-SU-422709

B04 R32 (03.04.78) G09b-23

The growth of tumour is accelerated and metastasis is promoted by using as a cancerogenic agent a 20% suspension of tetrachlorophthalic anhydride in olive oil, which is applied onto the skin or used as a subcutaneous injection.

Babenko G.A., Gudyvok Ya.S Zbirak N.P. et al. Bul. 12/30.3.78 17.11.76 as 422709 (2pp70)

LENI ★ D16 15183B/08 ★SU-601-038
Sorbent for removal of trypsin from soln. - comprises silica gel and titanium di:oxide in specified quantities
LENINGRAD LENSOVET TECH 27.03.75-SU-117250
(13.03.78) B01j-01/22

A sorbent for removal of trypsin from solns. comprising 78-81 wt.% silica gel and 19-22% TiO_2. The sorbent is obtd. by laternately treating silica gel with $TiCl_4$ vapour and steam at 140-180°C.

Volkova A. N., Postnov V. N., Koltsov S. I. et al. Bul. 13/5.4.78 27.3.75 as 117250 (2pp1347)

FERM= ★ D16 15302B/08 ★SU-601-286
Immobilisation of glucoamylase on insoluble polymeric matrix - by condensing enzyme on crosslinked maleic anhydride and hydrophilic monomer copolymer
FERMENT PROD RES (HETO) 26.04.76-SU-351921
A97 (A14) (20.04.78) C07g-07/02

Glucoamylase used in prodn. of glucose from starch-contg. material and in beer and alcohol prodn. is immobilised on an insoluble polymeric matrix by condensation of the enzyme on a cross-linked copolymer of maleic anhydride and a hydrophilic co-monomer, the copolymer being placed in an ultra-concn. culture liq. of End. bispora. As hydrophilic co-monomer may be used N-vinylpyrrolidone, acrylic acid, methacrylic acid, acrylamide or N-vinylpyridine. Cross-linking agent (used as 2-10 mol.%) may be 4,4-diaminodiphenyloxide or ethyl ether of lysine. The copolymer may be in the form of granules or plate reinforced with synthetic fabric, metallic mesh or inert granules.

Yarovenko V. L., Ovcharov A. K., Golubeva N. V. et al. Bul. 13/5.4.78 26.4.76 as 351921 (4pp1347)

CHEC/ ★ D16 15323B/08 ★SU-601-307
Fodder yeast culture growing unit - includes perforated partition between diffusers and aerators connected to guide cup
CHECHURA A A 31.10.75-SU-187755
C03 (D13) (20.04.78) C12b-01/10

The unit has accelerated yeast cell growth using recirculation of the fluid to enhance efficiency using a horizontal partition, with holes for the fluid, and is mounted between the diffusers above the aerators.

The medium is aerated by feeding air to the turbines, the agitation resulting in circulation loops which include the space between the diffusers and the cavity of the cup. The stirring and aeration control the circulation of gas-fluid mixt. which prevents stratification of the multi-component medium as well as avoids the floatation of microorganisms.

Chechura A. A. Yurevich Yu. I. Bul. 13/5.4.78 31.10.75 as 187755 (3pp89)

NCAU= ★ D16 15324B/08 ★SU-601-308
Fermenter fluid aerating turbine - has flow dividers along periphery in annular nozzle between discs to improve heat and fluid circulation
N CAUCASUS PROTEIN 11.08.75-SU-163872
(20.04.78) C12b-01/14

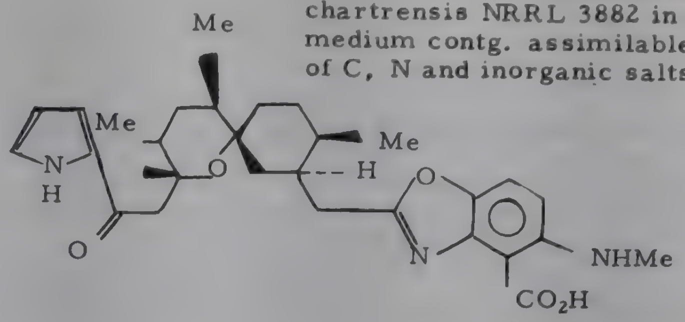
Improved mass heat exchange is obtd. when stirring and aerating fluid fermenters have flow dividers between the outside surface of the turbine and the discs. The unit is attached to the drive shaft and its throat connected to the air conduit.

The fluid is impelled through the holes of the discs for uniform ejection through the annular nozzle resulting in a partial vacuum inside the turbine. And this causes air suction from the atmosphere for mixing with the fluid in the annular nozzle. The flow dividers along the turbine periphery with sharp edges facing the incoming fluid give rise to microjets reducing the resistance to oxygen transfer on account of shear strains.

Nikolaev V. A., Glazman B. A., Trofimenko A. M. et al. Bul. 13/5.4.78 11.8.75 as 163872 (2pp89)

ELIL D16 84801W/51 =US 3960-667
Antibiotic A23187 from Streptomyces chartreusis NRRL 3882 - has antimicrobial activity and ionophorous properties
ELI LILLY & CO 17.01.74-US-434312 (23.03.72-US-237532)
*B02 C02 (01.06.76) *US3923-823 +C12d-09*

Prodn. of antibiotic A-23187 of formula (I):



comprises cultivating Streptomyces chartrensis NRRL 3882 in culture medium contg. assimilable sources of C, N and inorganic salts under submerged aerobic fermentation conditions.

(I) has antimicrobial activity and exhibits ionophorous properties with a specificity for divalent cations. The Parent Patent claims (I) and its alkali(ne earth) metal, Cd and Mn salts. 28.7.75 as 594157 (10pp393)

BIOR- ★ D16 15534B/08 ★US 4106-986
Microbiological prepn. of epoxide cpds. - by culture of Nocardia corallina ATCC 31338 in presence of alpha-olefin or alpha-omega-diene
BIO RES CENTER KK 24.06.77-JA-075127
A41 E13 G02 (15.08.78) C12d-13

Epoxides (I) are prepd. from olefins (II) by the aerobic culture of Nocardia corallina (ATCC 31338) on a conventional nutrient medium contg. (II). (II) are 4-20C α-olefins or α, ω-dienes.

Microbiological prepn. affords high yields of α-epoxides or α, ω-diepoxides which are useful as starting materials for surfactants and paints. The process is inexpensive and suitable for use on a commercial scale.

In an example, N. corallina (FERM-P-4094) was cultured at 30° on a medium (pH 7.2) contg. 1-tetradecene. After 5 days, the yield of 1,2-epoxytetradecane was 2.6 g/l. 14.10.77 as 842029 (5pp478)

KURE D16 26299Y/15 #US 4106-988
Microbial food prepd. by culturing Methylomonas probus - in medium contg. methanol as carbon source
KUREHA KAGAKU KOGYO 29.08.75-JA-104093 (22.02.77-US-770655)
*(D13) (15.08.78) *J52028-988 +C12b-01*

Microbial cells, usable as a protein source, are prepd. by cultivating the bacterium Methylomonas probus aerobically in a medium contg. methanol as C source, N and inorganic nutrient sources; and sepg. and collecting the propogated cells. Pref. the cultivation is carried out with aeration at 35-37°C while controlling the soln. pH to 6.3-7.

The new species of bacteria gives cells which can be used as a protein source in feed and food. 22.2.77 as 770655 (6pp976)

AJIN D16 91063Y/51 =US 4106-989
Heat stable cellulase prodn. - by culturing strain of Sporotricnum cellulophilium on medium contg. vegetable fibre
AJINOMOTO KK 30.04.76-JA-049463
*(15.08.78) *J52134-090 C12d-13/10*

A cellulose produced by Sporotrichum cellulophilum (a) hydrolyses microcrystalline cellulose, hydrocellulose, sulphite pulp, filter paper and cotton to mainly glucose and a small amt. of cellobiose, (b) has optimum activity or Whatman No. 1 filter paper at pH 5.5-6.5 and 60°C, (c) has optimum activity at 60-65°C, (d) retains > 50% of initial activity at 50°C and pH 4-7 for 4 hrs., (e) is stable when heated without any substrate at 50°C and (f) retains > 40% of initial activity when heated at 80°C for 1 hr. without any substrate.

The cellulose hydrolyses cellulose at elevated temp. to produce glucose and other useful by prods. 26.4.77 as 791013 (976)

NOVO D16 04786A/03 =US 4106-991
Enzyme granulate resisting abrasion - prepd. with fibrous cellulose addn. to enzyme, filler, opt. binder, and granulating agent (BE 6.1.78)
NOVO INDUSTRI A/S 07.07.76-GB-028343
*(15.08.78) *DT2730-481 C07g-07/02*

In the drum granulation of an enzyme compsn., including enzyme, inorganic salts and a granulation binder, using a liq. granulating agent, the improvement comprises incorporating into the compsn., finely divided cellulose fibres in an amt. of 2-40 w/w% of the dry compsn. Pref. the cellulose has an ave. length of 50-160 μ and an ave. width of 20-30 μ; the granulating agent is water and opt. a waxy substance; the granulation is at 50-70°C; and the enzyme is a proteolytic enzyme or anylase of microbial origin.

Build-up of unwanted layers of starting material on the wall is avoided. 28. 6. 77 as 810884 (11pp976)

MITU D16 69271Y/39 =US 4106-993

Glucose isomerase preservation - in aq. soln. set to pH 9-12 (NL 20.9.77)

MITSUBISHI CHEM IND KK 17.03.76-JA-028963
*E13 (D17) (15.08.78) *DT2711-720 C07g-07/02 +C12k-01*

An aq. glucose isomerase soln. is preserved by adjusting the pH to 9-12, pref. to 10-11 with NH_4OH and/or NaOH, KOH or $Mg(OH)_2$.

The aq. soln. can be stored at room temp. for ≮ 3, pref. ≮ 30 days, without microbial contamination, putrefaction, denaturation and deactivation. 15. 3. 77 as 777685 (7pp976)

UPJO D16 25013A/13 =US 4106-994

Antibiotic steffimycinol, prepn. - by cultivating Streptomyces peucetius ATCC 27952 with steffimycinone

UPJOHN CO 30.03.77-US-782621 (16.11.77-US-851866)
*B05 C03 (15.08.78) *US4077-844 C12d-09/14*

Prepn. of antibiotic steffimycinol (I) comprises cultivating Streptomyces nogalater var. nogalater (NRRL 3035) in an aq. nutrient medium under aerobic conditions in the presence of antibiotic steffimycinone (II).

Pref. (II) is present in the fermentation medium in a concn. of 1-100 mg/l. Pref. (II) is first added to the medium at ~ 2 days after inoculation, and then another addn. of (II) is made ~15 hours later. The parent patent describes the prepn. of (I) by culturing Streptomyces pencetius var. caesius ATCC 27952. 16. 11. 77 as 851866 Div. ex 4077844 (6pp924)

RSHC ★ D16 15535B/08 ★US 4106-995

Device for inhibiting localised microorganism growth - using heavy metal coating on paddle swinging in desired locality, preventing fouling of analytical instruments etc.

ROBERTSHAW CONTROLS CO 05.08.76-US-711489
(15.08.78) C12b-01/20

A device is used to inhibit the growth of microorganisms on the surface of an oxygen permeable membrane of an oxygen cell immersed in an aq. culture of the microorganism.

The device comprises a source of antiseptic which has a limited water solubility sufficient to inhibit the microorganism growth in the locality of the membrane but insufficient to inhibit the microorganism growth in the main body of the culture. The source is mounted on a carrier which sweeps the source within the culture across the surface of the membrane in a continuous repetitive manner.

The device is used to prevent fouling of prim. sensing surfaces of analytical instruments e.g. when used in analysing biochemical processes such as an activated sludge treatment of raw sewage or fermentation processes using yeast cultures. The measurements obtd. from the analysing instruments will be more accurate if there is no microorganism growth on the membrane. 5. 8. 76 as 711489 (5pp295)

ORIY ★ D16 15541B/08 ★US 4107-014

Coloured protein markers for gel isoelectric sepn. procedures - when protein analysis is facilitated and simplified

ORIENTAL YEAST KK 30.01.76-JA-008388
B04 J03 R16 (15.08.78) G01n-27/26

Isoelectric point markers for gel isoelectric sepn. comprise $\geqslant$ 2 coloured proteins of known isoelectric point pH values, the difference between the highest and lowest pH values being $\geqslant$ 0.5

Determn. if isoelectric point is simplified; many samples can be measured in a short time; and the possibility of proteins being denatured in the pH determn. is reduced.

In an example, a combination of cytochrome c, cytochrome c', cytochrome c_2 and myoglobins was used in the sepn. of isoenzymes of pyruvate kinase extracted from ra liver. 28. 12. 76 as 754976 (6pp1248)

HOFF ★ D16 15597B/08 ★US 4107-157

Antibodies specific for 5-substd. barbituric acid derivs. - useful in assay of barbiturate(s) in biological fluids

HOFFMANN-LA ROCHE INC 23.03.76-US-670210 (24.08.71-US-174517)
B04 (15.08.78) A61k-37/06 C07g-07

Barbituric acid specific antibodies (AB) consist of a γ-globulin fraction protein having numerous sites which comple selectively with (a) 5- substd.-1,3-unsubstd. barbituric acids (I), and (b) antigens (A) consisting of (I) coupled at the 5-substituent via a peptide link to a protein or polypeptide immunogenic carrier.

(AB) are made by inoculating a host animal with (A), collecting serum, then pptn. Esp. the γ-globulin protein has mol. wt. about 160000.

Used for assay of (I), e.g. barbital, phenobarbital or pentobarbital, in biological fluids at the nanogram level. (AB) are very specific and will not react with 1,3-substd. barbituric acid cpds. 23. 3. 76 as 670210 Div. ex. 3766162 (+ 12. 7. 73 - US - 378744)(5pp1251)

NUTR ★ D16 15650B/08 ★US 4107-29

Insecticidal compsn. - contg. Bacillus thuringiensis insecticida material and 1-chloro-phenyl-3-di:fluoro-benzoyl-urea

NUTRILITE PRODUCTS INC 27.06.77-US-810566
C03 (15.08.78) A01n-09/02 A01n-15

Insecticidal compsn. comprises 70-30% Bacillus thuringiensis insecticidal material (I) and 30-70% 1-(4-chlorophenyl)-3-(2,6-difluorobenzoyl)urea (II).

Activity of (I) is improved and compsns. are esp. effective against various lepidoptera larvae. (II) is a known insect growth regulator. Applied at 0.05-0.75 lb/acre.

In an example tests with mixts. of (I) and (II) against the cabbage looper showed that mixts. of 40-70% (I) and 60-30% (II) caused an unexpected increase in mortality. 27. 6. 77 as 810566 (4pp1248)

UPJO ★ D16 15651B/08 ★US 4107-29

Antibiotic rubradirin C - prepd. from Streptomyces sp. NRRL 306 and useful as antibacterial and as preservative

UPJOHN CO 29.06.77-US-810955
B04 F09 (D22) (15.08.78) A61k-35

Antibiotic rubradirin C (I) is claimed. (I) is effective against Streptococcus pyogenes and Bacillus cereus; it is soluble in DMF, DMSO and aq. base and is insoluble in a acid and hydrocarbons; it analyses as C, 60.77, H4.45 an N5.1%; it has a mol. wt. of 779; it has characteristic IR and UV spectra; it melts at > 300°C (dec.); and its molecular formula is $C_{40}H_{33}N_3O_{14}$. It forms salts with alkali(ne earth) metals; the Na salt being claimed.

(I) is an antibacterial and useful as a preservative for woollen felts in paper making, as a preservative for impregnating paper and fabrics, and in microbiological testing. 29. 6. 77 as 810955 (6pp1248)

KITA D16 44336A/25 =US 4107-29

Antibiotic AM-2282 obtd. by culturing Streptomyces - has antifunga hypertensive, anti-oedema and antiulcer activity

KITASATO RES INST 11.12.76-JA-148299
*B04 C03 (15.08.78) *DT2754-326 A61k-35*

New antibiotic (designated AM-2282) (I) has specified cha -acteristics including (a) elementary analysis (C, 70.03% H, 6.03%; N, 11.21%); (b) mol. wt. : m/e determined by mass spectrum, 466; (c) molecular formula $C_{28}H_{26}N_4O_3$; and (d) specific rotation : $[\alpha]_D^{25}$ = +35.0(C=1.0 in methan

(I) is prepd. e.g. by aerobically cultivating the organi -m Streptomyces sp. AM-2282 (FERM-P No. 3725, NRRL 11,184) in a culture medium contg. assimilable sources of C, N and inorganic salts.

(I) has an antibiotic activity on yeast and fungi and pharmacological activity on hypertension, edema and ulce 28. 11. 77 as 855379 (8pp936)

PROC- D16 21639A/12 =US 4139-350
Foam separator at outlet of fermentation vessel - has heater for reducing viscosity of viscous foam
PROCESS ENG CO 11.10.76-CH-012910
*(13.02.79) *CH-595-868 B01d-19/02*

Appts. for sepg. a foam into its consituent liq. and gaseous components comprises a housing mounted on the vessel in which the foam is generated and containing rotating foam-breakers; hollow baffles fixed around the foam-breakers prevent smooth circulation of the foam and carry a heat exchange fluid to heat it. The shaft on which the foam-breakers are rotated is hollow and has orifices through which the released gas is transferred to an inclined outlet pipe in the side of the housing.

Sepn. of high viscosity or hard foams is achieved.
11.10.77 as 840625 (5pp1364)

PAYG- ★ D16 15910B/08 ★US 4139-640
Aerobic thermophilic decomposition of organic wastes - to produce fertiliser, mulch or animal feedstuff
PAYGRO INC 23.01.78-US-871721 (11.07.73-US-378331)
(13.02.79) A23b-04/12

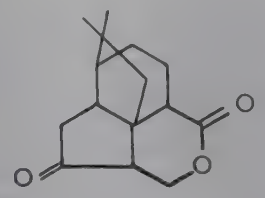
Animal and other solid organic waste material is aerobically decomposed solely by the action of the host thermophilic bacteria inherently in the material. Individual charges of undecomposed waste are sequentially introduced at one end of an elongate open-top vessel with perforated bottom. The material is not mixed with any other charge.

All the charges in the vessel are maintained in a quiescent state until the last added charge reaches thermophilic temps. The oldest fully decomposed charge is then removed from the other end of the vessel and all the other charges are advanced along the vessel with agitation and mixing within a single charge but no intermixing between charges. When the oxygen content of any charge falls below a predetermined value air under pressure is added through the perforate bottom. The method is used to decompose animal wastes including bedding. All objectionable bacteria a and any virile seeds are sterilized and rendered innocuous.
23.1.78 as 871721 (9pp295)

GRAC D16 87867A/49 =WP 7900-081
Tetra:cyclic antitumour agent quadrone - obtd. by culturing Aspergillus terreus strain
GRACE W R CO 24.04.78-US-899616 (02.08.77-US-821087)
*B02 (22.02.79) *BE-869-439 A61k-31/36 C07d-311/94 +C12d-13*

D/S: (FR) E, (CH, DT, GB, SW) N, SU.

(A) Prodn. of a complex quadracyclic lactone (quadrone) of formula (I) comprises cultivating the micro-organism Aspergillus terreus NRRL 11156 under submerged aerobic conditions in an aq. carbohydrate soln. contng. a nitrogenous nutrient until a substantial amt. of quadrone is produced.


(I)

(B) Cpd. (I) (octahydro-10,10-dimethyl-6,8b-ethano-8bH-cyclopenta[de][2]benzopyran-1,4-dione) is new.

(I) has been found to inhibit the growth of cancerous human nasopharynx cells (ED_{50} = 1.3 μg/ml. in test of Cancer Chem.Rpts. 25, 52(1962). It is also relatively non-toxic in mice (doses of 340 mg/kg. did not exhibit a lethal effect). When administered dissolved in DMSO into the abdominal cavity once daily for 9 days to mice having Lewis Lung Carcinoma, a dosage level of 12 mg/kg. provided a cure for 5 out of 10 treated mice.
28.7.78 as US0058 (20pp954).
ISR: 4 Journal References.

See Also

D11 J7 9001781 D13 J5 4005070 D13 J7 9001784
D13 US 4107334 D17 DT 2828684 D17 US 4106987
D21 US 4107291 D22 J5 4005040 D25 GB 2002369

D17: SUGAR; STARCH

PROJ- ★ D17 14176B/08 ★BE-869-780
Sugars and opt. cellulose and lignin extn. from vegetable material - esp. wood using two/stage solvent extraction and hydrolysis
PROJ CHEM VERFAHREN 17.08.77-DT-737118
(19.02.79) C13d D21c

The lignocellulosic materials are treated with a mixt. of almost equal volumes (i.e. 70:30-30:70, pref. 60:40-40:60) of water and a lower alcohol and/or a lower aliphatic ketone. The vegetable materials are first treated with the solvent mixt. at 100-190°C for 4 hrs. -2 mins. such that < 20% pref. <10%, of the principal hemicellulose constituents decompose and pass into soln. The product is sepd. and then treated with the solvent mixt. at 120-220°C, pref. 170-220°C, for 6hrs. -2 mins., pref. 180-2mins such that the hemicelluloses are decomposed into soluble carbohydrates The fibrous material is sepd. The soln. is treated with acid to hydrolyse oligosaccharides and polysaccharides and then the solvent and lignin is sepd.; or the solvent and lignin is sepd. before aq. hydrolysis.

Opt. the monosaccharide is recovered from the aq. soln or the monosaccharide opt. without isolation, can be reduced to sugar alcohol or corresp. -itol in the known manner. Opt. the cellulose, pref. washed, is decomposed into glucose and recovers it and/or the glucose opt. without isolation, is reduced into sorbitol or fermented into alcohol.

The fibrous by-products may be used in papermaking and in animal feeds. Compared with previous processes the above enables the isolation of very pure sugars in very good yields. Also the lignin is isolated in powder form.
17.8.78 as 869780 (45pp597)

SUDC D17 ✓ 12797Y/08 =DS 2545-112
Xylose recovery from annual plants - esp. straw, by treating with base and then with mineral acid
SUD-CHEMIE AG 08.10.75-DT-545112
*E13 (D13) (15.02.79) *BE-847-082 C13k-13*

Xylose is extracted from annual plants, such as straw but with the exception of oat husks, by decomposition with alkali hydroxide and treating the resulting solid residue with mineral acid. Sufficient alkali hydroxide is used to split off and neutralise the acetic acid bonded in the plant, e.g. 1-1.1.2 moles alkali hydroxide per mole of bound acetic acid.

The plants may be maize, reeds, bagasse, oat or wheat straw, etc. The xylose, as its hydrogenation prod. xylite, may be used as sweetener for diabetics. 8.10.75 as 545112 (3pp068)

INSF ★ D17 14436B/08 ★DT 2828-684
Extraction of oil by flooding with bio:polymer solns. - obtained by bacterial fermentation of polysaccharide(s)
INST FRANCAIS DU PETROLE (RHON) 25.07.77-FR-023008
E34 H01 Q49 (D16) (15.02.79) E21b-43/20

Water-soluble thickener compsns. based on polysaccharides, for sec. or tert. extraction of oil from rock formations, consist of (a) at least one crude fermentation liquor of a polysaccharide-forming organism, which has been clarified by centrifuging or filtering, and (b) at least one bactericide.

Pref. fermentation is by bacteria of Xanthomonas strain Clarification is by centrifuging at 4000 g.min., pref. 6000-60,000g. The bactericide is Na azide, pref. in concn. of 10-2000 (100-1000)ppm. Concn. of polysaccharides in the liquor is sufficient to give a viscosity of 2-30 cP at the formation temps., usually 0.005-1.0(0.05-0.25) wt.%. Fermentation medium is a usual sugar or starch soln. 30.6.78. as 828684 (35pp195)

IRDL- ★ D17 B/08 ★IL --49-244
Glucose prodn. from starch - by liquefying and saccharifying to obtain a syrup which is then concentrated, with addn. of an oxidising agent during the concn.
IRD LABORATORIES 18.03.76-IL-049244
E13 (31.01.79) C13k-01/06

SNAM D17 46008U/33 =J7 9001-795
Glucose isomerisation - to fructose, using enzyme mounted on fibrous carrier
SNAMPROGETTI SPA 28.01.72-IT-019884
*(29.01.79) *NL7300-963 C07g-07/02 C12d-13*

α-Glucose is isomerised to fructose or glucose - and fructose-contg. syrups resembling invert sugar, using an enzyme catalyst comprising glucose isomerase mounted on a fibrous carrier. The isomerisation catalysts are made e.g. by emulsifying pure glucose isomerase soln. in a soln. of film forming polymer (esp. cellulose esters such as cellulose triacetate) and spinning the product into fibres in the usual way. Pref. approx. 50% aqs. solns. of glucose at pH 7.0 and contg. small amts. Mg^{++} and Co^{++} are treated at 30-70°C.

The fibre-enzyme catalysts have high activity and may be re-used many times. Low isomerisation temps. are possible, thus obviating discolouration of the solns. 27.1.73 as 010700 (clg. 2.11.73-IT-001988) C12d-13/00, C07g-7/02, (29.1.79) SNAM PROGETTI S.p.A (3pp) (J48082084)

NATT D17 71065Y/40 =J7 9001-820
Water-insoluble starch fibres contg. amylopectin - spun from colloidal starch dispersion into coagulating bath contg. ammonium salts (NL 29.9.77)
NAT STARCH & CHEM CORP 25.03.76-US-670342
*A11 F01 (30.01.79) *DT2713-312 D01d-05/06 D01f-09 +C08l-03*

Prepn. of starch fibres resistant to water and contg. 45-100 wt.% amylopectin. A filamentary stream of a colloidal starch dispersion contg. 5-40 wt.% solids is first extruded into a moving coagulating bath which comprises an aq. soln. contg., as coagulating salt, NH_4 sulphate and/or sulphamate and/or mono- and/or dibasic ammonium phosphate in a quantity at least sufficient to coagulate the starch.

Fibres may be used in paper mfr., opt. in combination with natural and/or synthetic staple fibres, to form sheets e.g. of paper, cardboard and textiles, or shaped articles The fibres can be recovered completely from aq. suspensions at pH 4-9.5, ever after removing the coagulating salt, and at 40-72°C. 25.3.77 as 032360, (clg. 25.3.76-US-670342) D01f-9/00, C08l-3/00, D01d-5/06 (30.1.79) NAT STARCH & CHEM CORP (12pp200) (J52118034)

ARCH ★ D17 15468B/08 ★US 4106-487
Continuous steeping of corn prior to milling - in tank with conical bottom angled to prevent channelling
ARCHER-DANIELS MIDL CO 20.07.77-US-817488
(15.08.78) C13l-01

Corn is steeped in a cylindrical tank which has a conical bottom. The corn is steeped in water for 36-48 hours at 110-135°F then fresh corn is passed continuously into the top of the tank and steeped corn and steep water are removed from the bottom. The steeped corn is recovered and the steeped water is recycled together with fresh water in countercurrent flow to the descending corn. The combined water is introduced into the tank at inlets near the junction of the vertical walled portion of the tank with the conical bottom.

Water contg. corn solubles is continuously removed from the top of the tank. The conical bottom has an angle of 22-28° from the vertical side of the tank. The height of the tank is 1.5-2.5 times its dia. above the conical bottom.

Used in the processing of corn by milling. The cleaned corn is prepd. for milling by steeping in an aq. soln. contg a small amt. of SO_2 and lactic acid.

Channeling is prevented and so continuous steeping is possible. 20.7.77 as 817488 (5pp295)

SHOS D17 62219Y/35 =US 4106-987
Isomerisation of glucose to fructose - using suspension of an isomerase (source) and passing through anion exchange resin repeatedly to improve yield
SHOWA SANGYO KK 16.01.76-JA-004462 (08.01.76-JA-001789)
*E13 (D16) (15.08.78) *J52087-294 C12d-13*

Glucose is isomerised to fructose by contacting a stream of an aq. glucose soln. with a hydrogel of an edible substance and then with an anion exchange resin. The hydrogel contains dispersed cells of a microorganism having glucose isomerase activity.

Pref., the edible substance is agar-agar, gelatine, collagen, pectin, flour of Amorphophalus Konjac K. Koch, locust bean gum, casein, wheat gluten, soy protein, egg white, tarmin, persimmon tarmin, wheat flour and/or starch; and the microorganism is a Lactobacillus, Pseudomonas, Leuconostoc, Streptomyces and/or Aerobacter. 6.1.77 as 757211 (3pp976)

See Also

D13 GB 1541182 D15 DS 2525306 D16 J5 4005095
D16 US 4106993

D18: SKINS; HIDES; LEATHER; TOBACCO

MOLM D18 21632T/14 =DS 2140-522
Slow burning cigarettes - with porous cigarette wrapping paper and filter tip spaced from tobacco end
MOLINS LTD 12.08.70-GB-038916
*A97 P15 (A11) (15.02.79) *DT2140-522 A24d-01/04*

In a filter cigarette the tobacco filling is separated from the filter by a plug of porous glass-fibre material. The paper tube section filled with tobacco has a relatively low chalk content. It is perforated to achieve high porosity. Its combustion rate is so low as to be barely sufficient to prevent the glowing cigarette from going out.

The filter is about as long as the tobacco-filled section of the cigarette, and its resistance to flow of air/tobacco smoke being sucked through it is so great that the pressure drop in it is considerably greater e.g. twice as much, than in the tobacco filled section. 12.8.71 as 140522 (4pp267)

TESS/ ★ D18 14308B/08 ★DT 2734-063
Finishing pelts by coating leather and pile - with thin vacuum-deposited metal, metal alloy, semiconductor and insulating layers
TESSMER K 28.07.77-DT-734063
(15.02.79) D06p-03/30 D06q-01/04

Animal pelts are finished by coating with pigment layers applied as one or more vacuum-deposited opt. superimposed thin films. On finishing the hair-side of pelts, coatin thickness seen from hair tip is varied by applying an electric potential to pelts and/or by varying the vacuum pressure and/or by varying the angle of incidence of the impinging coating material stream to main hair axis. One or more substances can be applied with different angles of incidence to main hair axis.

The thin films can also be applied to leather side of pelt. One or more of the thin films are metal-, metal alloy- or semi-conductor films. Thin insulator film(s) can also be applied, esp. as cover layer.

New optical affects and optimum protection against weathering and ageing can be achieved without altering hand and structure of pelt. Hair anchoring in leather is unaffected. The thin films are flexible and do not impair pelt and leather softness. 28.7.77. as 734063 (19pp200)

DOKO/ ★ D18 14534B/08 ★FR 2391-308
Continuous hot gluing press for leather and footwear blanks etc. - has low-pressure zones to smooth out the blanks before bonding them in high pressure zones
DOKOUPIL J 27.12.77-DT-758349 (17.05.77-CH-006167)
F06 P71 Q36 (19.01.79) B30b-05/04 B65h-05 B65h-29/24 C14b-01/34 C14b-17 D06c-15/04

The process is of the type in which, partic. a pair of superimposed blanks are hot-glued together as they are conveyed through a pressure zone. The path followed by the conveyor carries blanks successively through a low pressure zone, which spreads and smooths out the blanks, and then through a high pressure zone to undergo the pressing operation. The conveyor path rises progressively from the blank loading station. Processed blanks are discharged at a point above the feed station and travelling in the opposite direction to blanks being loaded below.

The conveyor path is pref. provided by lapping a conveyor band around a major arc of a rotary drum and carrying blanks sandwich fashion between band and drum. The low pressure zone is provided by band pressure on the drum due to band tension alone. The high pressure zone is pref. achieved by using a loaded roller on the side of the band remote from the drum.

Used for hot bonding together blanks in laminated pairs for the leather, footwear and clothing industries. The machine has a very high output and is simple to use, a single operator being able to watch and reach both feed and discharge stations. The prod. is free from wrinkles, being smoothed at low pressure before the main pressing operation. 17.5.78 as 014585 (31pp448)

MORI/ ★ D18 14546B/08 ★FR 2391-624
Hand pliers to extract wire nails from furs etc. - temporarily pinned to stretching panels
MORINI G 20.05.77-IT-004803
P62 (19.01.79) B25b-07 C14b-19

A hand tool in the form of pliers for extracting wire nails or pins, partic. for use by furriers to extract pins used to fasten tanned hides and furs to wood stretching panels.

The pliers comprise a pair of scissor action levers with pivot pin between handle grips and jaws. The jaws are tapered and longitudinally slotted so that they can slide between the underside of the pin head and a fur, with the stem of the pin passing along aligned slots in the jaws.

The jaws are opened to lift the head with one jaw while the other holds down the fur without damaging it. A spring holds the jaws in closed position when the pliers are not in use. 16.5.78 as U14439 (5pp448)

NTOK ★ D18 14827B/08 ★J5 4005-869
Sintering and fixing chromium-contg. material e.g. sludge - by adding zinc cpd. and silicic cpd. and calcining, gives prod. for use in prodn. of pottery, construction material etc.
NORITAKE KK 17.06.77-JA-071025
J01 M11 (17.01.79) B01j-01 C04b-31/02 C04b-35

Cr-contg. material, e.g. Cr-contg. sludge obtd. in the treatment of Cr-contg. effluent discharged, e.g. during plating or in leather-tanning, is subjected to Cr-insolubilising and fixing treatment by adding a synthetic or natural Zn cpd. (e.g. ZnO, $ZnCO_3$, Zn stearate $ZnCl_2$, ZnS, etc. or a substance contg. one of these cpds. and silicic acid, Mg silicate, Al silicate, Fe silicate, Feldspar, bentonite or silica gel etc. in amts. of 1.0 to 10 mols of Zn cpd. (as ZnO) per mol. of the Cr-contg. material (as Cr_2O_3), and 0.1 to 2 pts. wt. of the silicic cpd. per pt. wt. of the Cr-contg. material respectively, and subsequently calcining at > 800°C, pref. 900-1,300°C.

The sintered prod. is suitable for use as raw material or filler in the prodn. of pottery, and also in the prodn. of construction material etc. 17.6.77 as 071025 (4pp34)

FARB D18 05919X/04 =US 4106-897
Tanning process using hydrophilic oligo-urethanes - opt methylolated, and opt formaldehyde, for leather and hide
BAYER AG 31.01.75-DT-504081 (04.04.74-DT-416485)
*A82 (A25) (15.08.78) *FR2266-743 C14c*

Hide, skin or leather is tanned or retanned by treating with an aq. soln. which contains (a) opt methylolated water-soluble oligourethanes contg. ionic gps., and of mol. wt. 300-20,000, the oligourethanes contg. no phenolic gps., no free NCO gps. and no aziridine gps., and opt. (b) formaldehyde or a substance from which formaldehyde may be split off.

Pref. the oligourethanes contain hydrophiles polyether segments and have a $\bar{M}_n$ of 300-20,000. Pref. the ionic gps. are of formula $\equiv S^{\oplus}$ $\equiv N^{\oplus}$, $\equiv P^{\oplus}$, $-COO^{\ominus}$, $SO_3^{\ominus}$, $-O-SO_3^{\ominus}$, $-SO_2^{\ominus}$ or $-P=O(R)-O^{\ominus}$ (where R is alkyl, cycloalkyl aralkyl or aryl.

High quality, soft, light-fast leathers may be produced. 30.8.76 as 718489 (+ 25.3.75 - US - 561809)(5pp964)

FARB D18 05919X/04 =US 4106-898
Tanning process using hydrophilic oligo-urethanes - opt methylolated, and opt formaldehyde, for leather and hide
BAYER AG 31.01.75-DT-504081 (04.04.74-DT-416485)
*A82 (A25) (15.08.78) *FR2266-743 C14c-03/18*

Hide, skin or leather is tanned or retanned by treating with an aq. liquor which contains (a) opt. methylolated hydrophilic oligourethanes of mol. wt. 300-20,000, the oligourethanes having no free NCO gps., no aziridine gps., no phenolic gps. and no ionic gps., and opt. (b) formaldehyde or a substance from which formaldehyde may be split off.

Pref. the oligourethanes are water soluble or water dispersable to form an aq. dispersion with an average particle size < 200 mμ. The oligourethanes are pref. synthesised from (a) polyhydroxyl cpds. selected from polyethers, polyesters and polycarbonates, with (b) polyisocyanates and (c) opt. chain terminating agents.

High-quality soft, light-fast leathers may be produced. 30.8.76 as 718499 (+ 25.3.75 - US - 561809)(6pp964)

D2: DISINFECTANTS; DETERGENTS

D21 : DENTAL ; TOILET PREPARATIONS

BONY- ★ D21 14225B/08 ★BE-871-179
Repairing cracked or broken dental prosthesis - using e.g. cyanoacrylate adhesive and polyacrylic resin
BONYF S A 11.10.78-BE-871179
A96 G03 P32 (A14 A35) (01.02.79) A61c C09j

A cracked or broken dental prothesis is repaired by bonding the broken surfaces to each other with a fast curing, non-toxic adhesive which is compatible with the prothesis material and then forming on the lingual surface, facing the bonded broken surfaces, a joint-cover made of polyacrylic resin and overlapping the lingual surface on either side of the joint.

The lingual surface is pref. first roughened before applying the joint-cover. The joint-cover is prepd. by mixing equal wts. of a polyvinyl acetate powder with a methacrylic acid monomer to form a paste which is then applied and allowed to harden. Pref. before hardening, the cover-joint is coated with the monomer.

Process can be carried out by an unskilled person and does not require a special mould. 11. 10. 78 as 871179 (10pp950)

LAND- ★ D21 14251B/08 ★BE-871-267
Disinfecting skin ointment based on alcohol - together with vinyl polymer esp. carboxy contg. vinyl polymer
LANDSTINGENS INKOPS 31.03.78-SW-003646
A96 (D22) (01.02.79) A61k

The ointment contains an alcohol and a modified vinyl polymer. It is prepd. by mixing the ingredients contg. the acid of a modified vinyl polymer, pref. a carboxy vinyl polymer and adding finally a base to obtain the polymer salt.

The ointment is esp. applied to the hands. The use of the polymer enables a high alcohol disinfectant concn. giving a gel consistency with easy application. 13. 10. 78 as 871267 (7pp597)

BADI D21 61708X/33 =DS 2503-582
N-Alkyl-glycine nitriles prepn - by reacting amines with formaldehyde and hydrogen cyanide in presence of water (BE280776)
BASF AG 29.01.75-DT-503582
*B05 C03 E16 (15.02.79) *DT2503-582 C07c-121/43*

N-alkylglycylnitriles of formula $R_1R_2N-CH_2-CN$ (I) are prepd. by reacting amines of formula R_1R_2N-H (II) with formaldehyde and hydrocyanic acid in the presence of water for 0.1-4 hours at 0-40°C, keeping the concn. of hydrocyanic acid at $\not>$0.1 wt.% during reaction. In the formulae, R_1 and R_2 are each (1-10C)alkyl, opt. substd. with (1-4C) alkoxy; R_2 may also be H.

(I) are starting materials inthe prepn. of dyes, fungicides bactericides, textile aids, aids for dental cosmetics, gas purification and process to render materials hydrophobic. The process is simpler and more economical than known processes, giving a better yield and purity. It is more suitable for large scale mfr. as it does not pose problems with waste-water and environmental pollution. 29.1.75 as 503582 (4pp279)

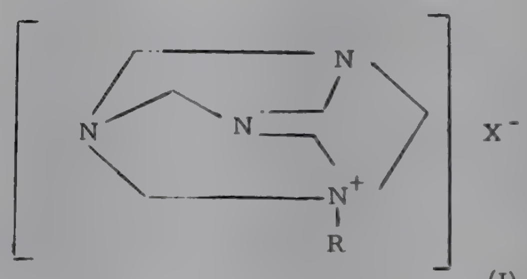
MINN ★ D21 14474B/08 ★DT 2833-711
Sun protection compsns. - based on a UV-absorbing acrylate polymer in a cosmetic oil base
MINNESOTA MINING CO 29.07.77-US-820122
A96 (A14) (15.02.79) A61k-07/42

Sun protection agents are comprised of (a) a non-volatile cosmetically acceptable oil base and (b) $\geqslant$0.5 wt.% (on (a)) of a water-insoluble UV-absorbing (meth)acrylate polymer with a solubility parameter of 6-10 in solvents with weak hydrogen bonding. The polymer is made by polymerisation of the same or different ester monomers of formula $R^3-CH=C(R^2)-COOR^1$ in which R^1 is 1-18C alkyl, R^2 is H, CH_3 or $-CH_2COOH$, and R^3 is H, COOH or $COOR^1$, provided that if R^5 is COOH or $COOR^1$, R^2 is H, opt. with up to 50 mol.% acid monomers of formula $R^4-CH=C(R^5)-COOH$, where R^4 is H or COOH and R^5 is H, CH_3 or CH_2COOH, provided that if R^4 is COOH, R^5 is H.

The agents give good protection against sunburn and are non-irritating to the skin. They are not affected by water sweat, etc., and are suitable for use by sportsmen, etc. 28.7.78. as 833711 (48pp513)

HENK D21 44097A/25 =GB 1540-936
Treating hair with quat. hexa:methylene-tetramine salts - to improve hair structure after waving, bleaching etc.
HENKEL KG AUF AKTIEN 20.12.76-DT-657689
*E13 (21.02.79) *BE-861-989 A61k-07/06 C07d-487/22*

A hair structure-improving compsn. comprises an acid-aq.-alcoholic soln. of $\geqslant$1 quat. salt of hexamethylenetetraamine of formula (I). In (I), R is propenyl, 2-3C hydroxyalkyl, $-CH_2COOR_1$ or $-CH_2CONHR_1OH$. R_1 is 1-4C alk(en)yl. X^- is Br^- or Cl^-. R is pref. $-CH_2CH_2OH$.



(I)

Pref. the compsn. has a pH of 2.5-6.5 (2.5-4). Pref. (I) is present at 1-10(2-7) wt.%, w.r.t. total soln. Pref. the compsn. is an aq. ethanolic or aq. isopropanolic soln..

Compsn. is used to improve hair damaged by waving, blonding or dyeing. 15.12.77 as 052160 (5pp992).

CHAM/ ★ D21 14569B/08 ★GB 2002-232
Removing adipose tissues from certain parts of human body - by applying a vasodilator approximately one hour after taking a high protein low carbohydrate diet
CHAMPION J 24.08.78-GB-034471 (22.06.77-GB-026015)
B05 (21.02.79) A61k-31

Process comprises applying a vasodilator or its mixt. to the area where it is desired to lose fat at a time when the condition of the blood is such that it is taking up fatty components stored in the adipose tissues.

The process removes fats from certain parts of the body, and is an adjunct to known processes of slimming so that certain parts are preferentially affected by the slimming treatment. Thus it is useful for slimming for aesthetic or cosmetic purposes by means of a high-protein, low carbohydrate diet.

Suitable vasodilatory include methyl salicylate, diethylamine salicylate, and nicotinic acid. 24.8.78 as 034471 (4pp957).

CHAM/ ★ D21 14570B/08 ★GB 2002-233
Selector lotion for local removal of fat during slimming - comprises a vasodilator e.g. ethylene glycol mono:salicylate
CHAMPION J 11.09.78-GB-042249 (02.08.77-GB-032303)
B05 E14 (B03 E13) (21.02.79) A61k-31

"Selector lotion" for applying the parts of body to favour local removal of fat during slimming by diet, comprises a suitable blend of vasodilators.

The lotion, cream, ointment or an impregnated dressing can be used on an area selected for localised slimming, and is an adjunct to known processes of slimming for aesthetic or cosmetic purposes.

Suitable vasodilator is ethylene glycol monosalicylate, contg. a small amt. of ethyl alcohol and is pref. applied approx. 1 hr. after taking a high-protein, low-carbohydrate diet. 11.9.78 as 042249 (4pp957).

NIBU- ★ D21 14723B/08 ★J5 4005-048
Gelatin hydrolysate prepn. for cosmetics - by heat treating aq. gelatin soln., enzymatically hydrolysing and opt. treating with active carbon
NIPPON BULK YAKUHIN 12.06.77-JA-069139
(16.01.79) A61k-07 C07c-99/02

The method comprises treating aq. 20-40% gelatin soln. at 100-120°C for 1-3 hrs., hydrdysing enzymatically and opt. treating with active carbon.

The hydrolysis of gelatin is effected at 40-70°C for 10-120 mins. using protease ca. 1% on gelatin. After the hydrolysis the soln. is made to pH ca. 10 with aq. NaOH soln. and boiled for 10 mins. to deactivate protease.

The pretreatment reduces the time required for the enxymic hydrolysis and obtd. hydrolysate is virtually odourless. The remaining odour can be easily deodorised by treating with active carbon. The hydrolysate has constant molecular wt. 12. 6. 77 as 069139 (2pp5)

SHIS ★ D21 14724B/08 ★J5 4005-049
Gel compsn. for nail enamels - comprises chip compsn. of montmorillonite clay, nitrocellulose and swelling and plasticising substance, dispersed in organic mixed solvent
SHISEIDO KK 09.06.77-JA-068324
A96 (A11) (16.01.79) A61k-07/04

Gel compsn. is prepd. by dispersing 10-30% of a chip compsn. in 90-70% of an organic mixed solvent. The chip compsn. is obtd. by mixing (a) 25-70 wt.% of organic modified montmorillonite clay, (b) 5-70 wt.% of nitrocellulose and (c) 5-30 wt.% of a swelling agent for (a) and plasticiser for (b), and kneading the mixt. while heating and compressing it.

Substance (c) is (1) cpds. of formula $HO(RO)_mH$ (R is C_2H^4 or C_3H^6, m = 3-90), (2) cpds. of formula $R'O(RO)_nH$ (R is the same as above. R' is $C^4H_9-C_2OH^{41}$, n = 1-50) and (3) esters prepd. from 4-20C dibasic acid and 1-4C lower alcohol.

The chip compsn. shows no loss of gloss or transparency in nail enamels and excellent nail enamels can be obtd. with it. 9.6.77 as 068324 (7pp5)

SUMO D21 34779Y/20 =US 4107-049
Semi-permeable membranes of acrylonitrile polymer - with thin skin deposited from plasma of an organic cpd.
SUMITOMO CHEMICAL KK 30.10.75-JA-131253
*A88 J01 (A14 A35) (15.08.78) *DT2649-543 B01d-31 B01d-39 B29d-27/04*

Semipermeable membranes are prepd. by exposing porous shaped articles of polyacrylonitrile or copolymers contg. > 40% mole % acrylonitrile, to a plasma consisting of a gaseous organic cpd. opt. mixed with an inert gas, at room temp. under a pressure of 0.01-10 Torr.

The porous shaped articles are prepd. by (a) dissolving the polymeric material in a solvent, (b) casting the resulting soln., (c) dipping the cast soln. in a non-solvent to prepare a porous membrane opt. after partial evapn. of the solvent, and (b) drying the membrane obtd. The membranes have high strength, high water permeability and high selectivity and are useful for reverse osmosis, ultra-filtration esp. for waste water treatment, concn. of fruit juices, etc. 27.10.76 as 736071 (6pp924)

LABO D21 43548Y/25 =US 4107-225
Hydrogenation of poly(iso)butenes to white oils - of very low iodine number over a catalyst of platinum supported on alumina of specific pore size
LABOFINA SA 16.03.76-LU-074571
*A17 B07 H08 (15.08.78) *BE-851-598 C07c-05/14*

An olefin liq. polymer derived from 4C olefin units, is hydrogenated at a H_2 pressure of 40-120 Kg/cm^2 and 200-250°C in the presence of a Pt catalyst supported on alumina showing a total pore vol. of $\geqslant 0.25$ ml/g. About 90-98% of the pore vol. is provided by pores having a pore size distribution of < 100Å.

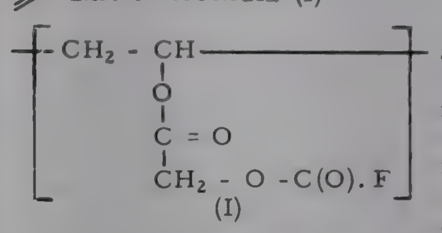
Pref. the liq. hourly space velocity is 0.25-4 l/hr and the H_2 : polymer ratio is 250-6000 Nl/l. The polymer is selected from butene polymers, isobutene polymers and their copolymers.

The polymers are colourless, odourless, stable to heat and storage and are used as white oils and medicinal oils.

15. 3. 77 as 777908 (5pp982)

OREA D21 05010V/03 =US 4107-290
Anti-inflammatory polymers - with prolonged activity and lowered side effects
L'OREAL SA 29.06.72-LU-065622 (29.07.76-FR-023175)
*A96 B04 (15.08.78) *NL7309-151 A61k-07/42*

An antisolar cosmetic compsn. comprises an aq., hydroalcoholic or oily soln. contg. an amt. to assure protection against wavelengths of light in the erythomatous zone of $\geqslant 1$ antisolar polymer contg. in its macromolecular chain, $\geqslant 1$ unit of formula (I)



$$\left[-CH_2 - \underset{\underset{\underset{\underset{\displaystyle CH_2 - O - C(O).F}{|}}{\displaystyle C = O}}{|}}{\displaystyle O}}{\overset{}{CH}} - \right]$$

(I)

(where F is derived from an aromatic cpd. which absorbs light of wavelength 280-315 nm) and $\geqslant 1$ unit derived from an ethylenically unsatd. monomer present in an amt. of 20-90 wt.% of the total amt. of the polymer.

Erythema is prevented and desirable sun tan due to light of wavelength 315-400 nm is possible. The compsn. can be used to prevent colour degradation in hair colouring compsns. 18. 8. 76 as 715566 C.i.p. 3992356 (+ 27. 6. 73 - US - 374059)

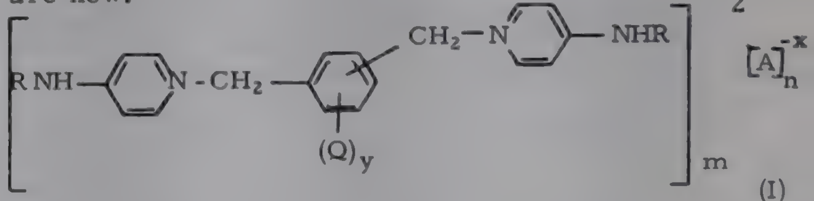
SANY D21 90884R/49 =US 4107-291
Invertase in prepns for dental hygiene
SANKYO KK 05.06.69-JA-044210
*(D16) (15.08.78) *DT2028-285 A61k-07/28 +A61k-09/68*

Teeth and oral cavities are cleaned by applying invertase, pref. in the form of a compsn. contg. 10-3,000 units/g of compsn. Pref. the compsn. is a powder, toothpaste, gargarism, ointment or lotion. Pref. the toothpaste comprises $\geqslant 50$ wt.% Ca phosphate, water and 10-3,000 units of invertase as sole active enzyme present in the pure state.

The compsn. gives reduced dental plaque formation and prevents dental caries. 23. 3. 72 as 237577 (+ 3. 6. 70 - US - 043224)(4pp976)

STER D21 61184Y/35 =US 4107-313
Bis-amino-pyridinium-alkylene or xylylene salts - for control of fungi, bacteria, herpes virus and dental plaque
STERLING DRUG INC 22.10.76-US-734729 (25.02.76-US-661128)
*B03 C02 (15.08.78) *BE-851-807 A01n-09/22 C07d-213/74*

a, a'-bis-[4-(R-amino)-1-pyridinium] xylenes of formula (I) are new.



(I)

In (I) R is H, straight or branched 1-18C alkyl or benzyl; Q is methyl or Cl; y is 0-4% A is an anion; m is 1 or 3; n is 1 or 2; x is 1-3 and (m)(2)=(n)(x).

(I) are used in antibacterial and antifungal compsns. suitable as skin-cleansing agents or for application to skin or other living tissues or to inaminate surfaces. 22. 10. 76 as 734729 (8pp918)

LCAS D21 77883X/42 =US 4107-333
Cosmetic compsns contg oleyl acetate - esp skin-care compsns having lipase-inhibitor activity (BE270976)
LAB CASSENNE 26.03.75-FR-009438
*E17 (15.08.78) *DT2612-038 A61k-07/48*

Process for care of the skin comprises applying a cosmetic compsn. contg. effective amt. of oleyl acetate and a carrier to the skin. Effective amt. of oleyl acetate is 0.1-50%, pref. 3-30%.

Pref. oleyl acetate in such compsns. are prepd. from oleyl alcohol, acetic acid acid, benzene and paratoluene sulphonic acid successively added in a reactor fitted with a water trap, and refluxed for 6 hrs. Water is separated, benzene and acetic acid distilled off and product recovered for use in perfume compsn. Oleyl acetate is used by mixing with ingredients including ketostrearyl alcohol, high viscosity paraffin oil and white vaseline Codex q. s. p.

Olelyl acetate acts as an inhibitor on lipases secreted by corynebacterium acnes bacteria on skin, thereby reducing unaesthetic skin reactions such as redness due to inflammations, skin eruptions inherent with such species. 22. 3. 76 as 669026 (2pp931)

HIRS/ ★ D21 15672B/08 ★US 4107-348
Porcelain-metal dental restoration construction - uses resin in volatile vehicle to fix opaque frit to metal base
HIRSCHHORN L 19.01.77-US-760634
A96 L02 P32 (15.08.78) A61c-05/10 A61c-13/02

In the prodn. of dental restorations, esp. false teeth having a metallic base, with $\geqslant 1$ particulate opaque ceramic coating and $\geqslant 1$ transparent ceramic coating over this, the improvement comprises applying the opaque coating in conjunction with a resinous binder, e.g. PVC, in a volatile vehicle, which binds the particles of opaque coating to the metallic base without a separate baking operation.

The problem of 'gassing' which occurs when non-precious and semi-precious metals are used as the base is prevented, and fewer baking steps are required. 19. 1. 77 as 760634 (3pp955)

ENGH D21 65898A/37 =US 4139-030
Amalgam prodn. appts.
ENGELHARD MINERALS CORP 17.01.77-US-759816
*M26 +Q31 (M27) (13.02.79) *J53090-123 +B65b-01/30*

Amalgam dispensing and mixing device has two passageways through which the solid and liquid components are urged using a slide arranged in a guide. The materials are discharged in the correct proportions into a mixing vessel. The mixing vessel can be detached to allow the amalgam to be removed and a locking system prevents discharge of the components in the absence of the mixing vessel.

The appts. can be hand held or wall mounted. The system prevents loss or oxidn. of the mercury. 17. 1. 77 as 759816 (9pp397)

COLG D21 39947V/22 =US 4139-599
Toothpaste compsn. - contg. calcium and phosphate-based product
COLGATE PALMOLIVE CO 25.07.73-GB-035471 (11.01.73-GB-001633)
*E33 (13.02.79) *BE-809-651 +A61k-07/16 C01b-15/16 C01b-25/26*

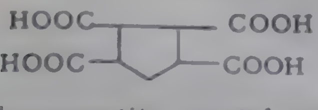
Dicalcium phosphate dihydrate is prepd. contg. 0.1-5 wt.% calcium displaced by a divalent metal ion comprises reacting with a mixt. of mono- and dibasic sodium phosphate in aq. soln. maintained at pH $\leqslant 5$, a reactant mixt. of calcium halide with non-toxic divalent metal ion halide or nitrate to form prod.

Divalent metal ion halide or nitrate used in amt. to displace 0.1-5 wt.% Ca, is Zn, Cu, Cd, Ni, Co, Fe, Mn, Cr Mg, Sr or Ba. Pref. prod is dehydrated to remove water of crystallisation to form anhydrous prod. with 0.1-5 wt.% Ca replaced by divalent metal ion. Pref. divalent metal ion is Zn, halide is chloride, pH of aq. soln. is maintained at pH 4-5.

Prod. is used as a dental prepn. to 10-90 wt.% with a dentally acceptable carrier. Method does not use high reaction temp. > 1000 °C or closed reaction conditions. 2. 6. 77 as 802759 Div ex. 4048300 (+25. 7. 73-GB-035459) (+9. 1. 74, 19. 1. 76-US-431945, 653998) (12pp931)

COLG ★ D21 15900B/08 ★US 4139-608
Oral anti-calculus preparations - contg. humectant and cis,cis,cis,cis-1,2,3,4 cyclopentane-tetra:carboxylic acid or its salts
COLGATE PALMOLIVE CO 27.12.76-US-754778
B05 (13.02.79) A61k-07/16 A61k-31/19

Oral prepn. comprises a humectant vehicle and an acid of formula (II) or its alkali metal salts including the NH_4 salt.

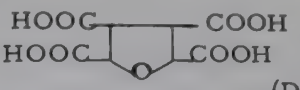


(I) (Derwent)

(I) inhibits transformation of amorphous Ca phosphate to hydroxyapatite crystal structure normally associated with calculus. In an example, a mouthwash contained (I), surfactant, glycerol, NaH_2BO_4 and $CaCl_2$. 27. 12. 76 as 754778 (4pp1248)

COLG ★ D21 15901B/08 ★US 4139-609
Oral anti:calculus compsns. - contg. humectant and 2,3,4,5-tetra:hydro-furan tetra:carboxylic acid or its salts
COLGATE PALMOLIVE CO 27.12.76-US-754779
B03 (13.02.79) A61k-07/16 A61k-31/19

Oral prepn. comprises a humectant vehicle contg. an acid of formula (I) or its alkali metal salts including the NH_4 salt.



(I)

(Derwent)

(I) inhibits transformation of amorphous Ca phosphate to hydroxyapatite crystal structure normally associated with calculus i.e. is an anticalculus agent. Prepns. pref. contain 0.025-2% (I).

In an example a toothpaste contained (I), glycerol, surfactant, hydrated and calcined alumina, flavour etc. 27. 12. 76 as 754779 (4pp1248)

KYOW D21 79787Y/45 =US 4139-610
Permanent wave compsn. - contains cysteine and (N)-acetyl cysteine and prevents crystal deposition or allergic reactions
KYOWA HAKKO KOGYO 19.04.76-JA-043609
*E16 +P24 (13.02.79) *DT2717-002 A61k-07/09 +A45d-07/04*

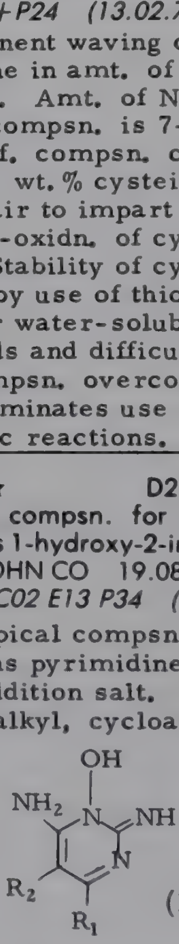
Permanent waving compsn. contains as active ingredients cysteine in amt. of 3-15 wt.% and N-acetylcysteine to 0.2-3 wt.%. Amt. of N-acetylcysteine is 10wt.% cysteine. pH of compsn. is 7-10.

Pref. compsn. contains N-acetylcysteine to 0.3-3 wt.% to 4-10 wt.% cysteine. Compsn. is used by contacting human hair to impart a wave. Pref. crystals derived from the air-oxidn. of cysteine are sepd. from compsn. before use. Stability of cysteine susceptible to air-oxidn. is enhanced by use of thioglycollic acid with EDTA, nitrilo-acetic acid or water-soluble salts, but provides slippery compsn. to hands and difficulty when rolling hair.

Compsn. overcomes disadvantages of other compsns. and eliminates use of thioglycollic acid which may induce allergic reactions. 14. 4. 77 as 787409 (3pp931)

UPJO ★ D21 15904B/08 ★US 4139-619
Topical compsn. for stimulating growth of mammalian hair - contains 1-hydroxy-2-imino-6-amino-pyrimidine derivs.
UPJOHN CO 19.08.77-US-826180 (29.12.71-US-213743)
B03 C02 E13 P34 (13.02.79) A61k-31/53 A61l-09/04

The topical compsn. for application to mammalian skin contains pyrimidine deriv. of formula (I) or acceptable acid addition salt. In (I), R_1 is NR_3R_4; R_2 = H, alk(en)yl, alkoxyalkyl, cycloalkyl, (alk)aryl, aralkyl, alkaralkyl, alkoxyaralkyl or haloaralkyl. R_3 and R_4 = H, alk(en)yl, aralkyl or cycloalkyl or together complete -N $(CH_2)_n$ (n = 2-3), morpholino or 4-alkyl-piperazino, all heterocycles opt. being substd. on C by 0-3 alkyl, OH or alkoxy. Alkyl, alkoxy etc. are 'lower'.) (I) are formulated with an ointment, lotion, paste, jelly, spray or aerosol as carrier, esp. at 0.1-20% of the compsn.



(I)

(I) increase the rate of terminal hair growth and stimulate conversion of vellus hair to growth as terminal hair. The compsns. are useful e.g. in treating baldness and to improve pelts of animals such as mink.

A specific (I) is a 6-amino-1,2-dihydro-1-hydroxy-2-imino-4-piperidine-pyrimidine. 19. 8. 77 as 826180 (+13. 9. 73, 21. 5. 75, 24. 5. 76-US-396820, 579559, 689473) (5pp1251)

OREA D21 73243T/46 =US 4139-635
Hair and skin treatment prepns - contg cysteamine homologues or deriv.
L'OREAL SA 23.04.71-LU-063057 (21.02.67-LU-053029)
*B05 E19 (13.02.79) *NL7205-451 A61k-31/16*

A scalp with an excessive excretion of sebum is treated to improve its condition by reducing the excessive excretion of sebum by oral admin. of a therapeutic compsn. comprising an ingestible carrier admixed with a non-toxic cpd. of formula $R-S-CH_2-CH_2-NHZ$ (I).

In (I), R is 1-18C alkyl, 3-18C alkenyl, propyne-2-yl, or mono- and dihydroxy(2-4C) alkyl; and Z is -COR' or

-SO_2R'' (where R' is 1-6C alkyl, phenyl, benzyl or tolyl, and R'' is 1-4C alkyl, phenyl or tolyl).

The compsn. is administered in an amt. of 1-5mg/kg/day based on the wt. of the human for about 15 days.
22.4.77 as 790000 Div. ex 3821405, 39500542, 4035492, C. i. p. 3629452 (+19.2.68, 20.2.69, 6.5.71, 9.5.74, 29.1.76-US-706652, 801154, 140956, 468595, 653526) (+20.2.68, 23.4.71-LU-055522, 063056) (18pp982)

JETC- ★ D21 15961B/08 ★WP 7900-076
Dental prosthesis working model prodn. - using device with jaws and ribs to hold model
JET-CERAMIC DENTAL 01.08.77-GB-032133
P32 (22.02.79) A61c-09

D/S: FRE, (CH, DT, GB, LU, SW) N, SU, US.

Device for producing a dental working model for making dental prostheses has an integral base (1) in which is formed an arcuate hollow space (6) open at both its ends and corresp. in its configuration to the contour of the jaws. The raised sides of the space have their respective faces (7,8) provided with transversely extending ribs for the formation of retention marks in the plaster model.

The device provides accurate and secure guidance of a plaster model in its dismembered (sawn apart) state. Local deformation is made possible.
1.8.78 as DT0015 (20pp536).
ISR: DT7141244; DT2644797.

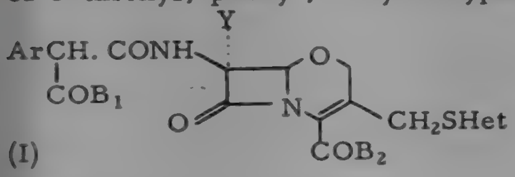
See Also

D25 J5 4005919

D22 : BANDAGES ; DRESSINGS

SHIO ★ D22 14239B/08 ★BE -871-213
7-Aryl:malonamido-1-oxa-de:thia-cephalosporin derivs. - useful as broad spectrum antibacterials resistant to beta-lactamase
SHIONOGI KK 12.10.78-BE-871213
B02 C02 E13 (01.02.79) A61k C07d

1-Oxadethiacephems of formula (I) are new. In (I) Ar is 2- or 3-thienyl, phenyl, 4-hydroxyphenyl or 4-acyloxyphenyl



(I)

where acyl is derived from an organic or inorganic acid. COB_1 and COB_2 are opt. protected carboxy. Het is 1-Q-1H-1,2,3,4-tetrazol-5-yl or 2-methyl-1,3,4-thiadiazol-5-yl. Q is CH_3 or COB_3. COB_3 is opt. protected carboxy. Y is H or CH_3O but if it is CH_3O then Het must be 1-methyl-1H-1,2,3,4-tetrazol-5-yl.

(I) are antibacterials useful in human or veterinary medicine and as disinfectants. Compared with known oxadethiacephalosporins they are more active aginst Gram negative species and resistant strains (such as Enterobacteria, Serratia, Proteus), give high concns. in the blood, and are more stable to β-lactamase. Cpds. with Y=CH_3O have a broader spectrum of activity (Pseudomonas and anaerobes such as Bacteroid fragilis), greater activity aga against β-lactamase producers, higher stability in the blod blood and reduced tendency to combine with serum proteins. A typical cpd. is 7β-[α-(2-thienyl)-α-carboxyacetamodi]-3-(1-methyltetrazol-5-yl)thiomethyl-1-oxadethia-3-cephem-4-carboxylic. 12.10.78 as 871213 Add to 852912 (105pp)

MOSE/ ★ D22 14410B/08 ★DT 2736-646
Sterilising oily and aq. fluids with azide biocides - esp. using ethoxylated alkyl azide with surfactant character
MOSER J 13.08.77-DT-736646
E16 H07 P34 (D15 E37) (15.02.79) A61l-13

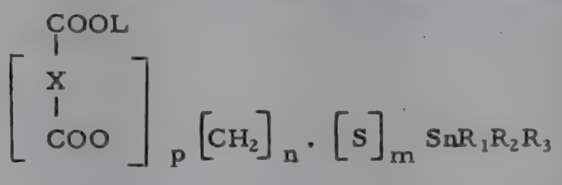
(In)organic azides (I) are used as biocides for the long-term sterilisation of waters, esp. oil-contg. waters, including oily liqs., e.g. (a) petroleum and crude oils, and (b) oil-in-water and water-in-oil emulsions, e.g. cold lubricants and non-inflammable hydraulic fluids.

Azides with surfactant character, pref. 3x ethoxylated undecyl-azide, are used partic. to facilitate the handling of oil concentrates and for preparing sterile oil-in-water emulsions.

Bactericidal and fungicidal activity of (I) sets in immediately. The microorganisms in oils, oil-in-water emulsions and aq. fluids are destroyed, even during movement of fluids. Clogging of filter devices, screens and narrow conduit passages is prevented. Plastic and metal conduits are not corroded by (I) at alkaline pH. Flow properties of liqs. treated is unchanged. (I) are detoxicated with $FeCl_3$, to form non-toxic complex cpds. 13.8.77. as 736646 (11pp200)

RESE D22 52230Y/30 =GB 1541-055
Sucrose organo-tin derivs. - with fungicidal, algicidal, acaricidal, herbicidal and bactericidal activity
RESEARCH CORP 26.03.76-GB-012168
*C01 E12 (21.02.79) *BE-852-536 C07f-07/22 + C08k-05/58*

Novel organo-tin sucrose cpds. are of formula (I). L is a



$$\left[\begin{array}{c} COOL \\ | \\ X \\ | \\ COO \end{array}\right]_p \left[CH_2\right]_n \cdot \left[S\right]_m SnR_1R_2R_3$$

(I)

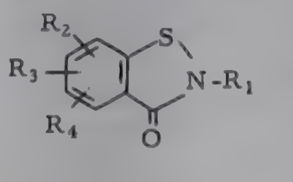
sucrose residue. X is o-C_6H_4, -CH_2-CH_2-, or -CH:CH-. m is 0 or 1. p is 1-m. n is 0-6 but not 0 if m is 1. R_1, R_2 and R_3 are undefined gps. such that the Sn atom is bonded to three C atoms and one other atom.

Specifically claimed cpds. include $(n\text{-butyl})_3SnOCOC_6H_4COO$-sucrose.

(I) have fungicidal, algicidal, miticidal, herbicidal and/or bactericidal activity, at a high activity per unit wt. of Sn. They may be incorporated with polymer into anti-fouling paints and applied to crops. 25.3.77 (14pp).

FUJF ★ D22 14634B/08 ★GB 2002-530
Preserving solns. of hydrophilic colloid contg. viscosity improver - for forming photographic materials, by addn. of benzisothiazol-3-one(s)
FUJI PHOTO FILM KK 03.08.77-JA-093232
A89 E13 G06 R23 (21.02.79) G03c-01/37

The degradation of solns. contg. ≥1 hydrophilic colloids (I) and which also contain a viscosity-increasing anionic polymer (II) contg. an acid gp. consists of the addn. of ≥1 benzisothiazolones of formula (III) to the soln. The (I) is used as a binder for Ag halide photographic light-sensitive materials.



(III)

In the formula, R_1 is H, or opt. substd. 1-20C alkyl; and R_{2-4} are each H, halo, 1-6C alkyl, or opt. substd. 1-6C alkoxy. Addn. of small amts. of non-toxic (III) (at pref. 0.01-0.25 wt.%) reduces the known microbial decompsn. of (I) (e.g. gelatin) over a wide pH range without impairing the viscosity reducing activity of (II). (III) do not cause a redn. in sensitivity esp. during high temp./high humidity storage, do not change gamma, do not cause fogging, and do not affect the stability of formed latent images, etc. (III) are at least 10 times more active than phenols, and are effective against bacteria, yeasts and moulds. 28.7.78 as 031535 (13pp478).

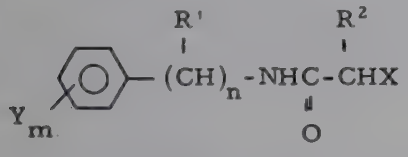
ASAH- ★ D22 14702B/08 ★ J5 4005-003
Treating wood to prevent size change, warping, etc. - by impregnation with a soln. of alkylamine
SHIN ASAHIGAWA KK 10.06.77-JA-068431
C03 E16 F09 P63 (16.01.79) B27k-03/34

The wood which has not been used as a high class decorative material and material for furniture, toys, etc. due to change in size, cracks, flowing out of resin, etc., can be made free of those defects. The adhesive property, paintability and surface hardness of the wood can be improved remarkably, and soft wood can be treated and used for floors, tables, etc. The alkylamine soln., after the treatment, is decanted and the clear soln. can be recycled. The treatment can be practiced without pollution, and the sedimented sludge can be used as a feed for earthworms.

Pref. the alkylamine is triethylamine, diethylbutylamine, diethylaminoethanol, etc. used as an aq. soln. of 0.1-0.5% concn. Firstly, the wood is pretreated by immersing it in the soln., heating it slowly to 92-98 °C and then boiling it. Then it is press-heated in the soln. in a pressure pan and the pressure is reduced to decrease the moisture content to the fibre satn. point. Finally it is dried naturally and/or artificially. Pref. an antiseptic and/or insecticide is added to the alkylamino soln. 10.6.77 as 068431 (7pp5)

MITP ★ D22 14704B/08 ★ J5 4005-005
Antimicrobial alpha-halo:carboxylic acid amide compsn. - used to protect wood esp. from attack by Basidiomycetes microorganisms
MITSUBISHI PETROCH KK 14.06.77-JA-069416
C03 E14 F09 P63 (16.01.79) A01n-09/20 B27k-03/40

Wood antiseptics contg. as active component α-halocarboxylic acid amide of formula (I):


(I)

(where X is halogen; Y is H, 1-4C alkyl, 1-4C alkoxy, 2-5C alkoxycarbonyl, acyl, carboxy, hydroxy, acyloxy, nitro, halogen; m is 1-3; n is O-2; R' is H or methyl, when n is 1; R' is H, when n is 2; R^2 is H or lower alkyl; and Y_m may form a condensed benzene ring).

(I) shows the excellent antiseptic activity against wood-putrefying Basidiomycetes microorganism.

(I) is formulated as soln., emulsion, paste, aerosol and wettable powder by mixing (I) with suitable carrier and various aids. The amt. of (I) in the formulation is 0.01-99.9, pref. 0.05-90 wt.%. These formulations are applied to wood by coating, immersing, injection under pressure and spraying to provide 0.1-2, pref. 0.5-1 kg (I) per m^3 of wood. 14.6.77 as 069416 (5pp108)

OJIP ★ D22 14718B/08 ★ J5 4005-040
Deodorisation of liq. and/or gas by contact with fungi - used in paper mfr., petroleum industry, sewage treatment and fish processing
OJI PAPER KK 13.06.77-JA-068802
J01 P34 (D16) (16.01.79) A61l-09/ B01d-53/34 C12k-01*

Fungi used are Cephalosporium C-1 (FERM-P 3976) Cephalosporium C-2 (FERM-P 3977), Penicillium P-1 (FERM-P 3978), Penicillium P-2 (FERM-P 3979), Aspergillus (FERM-P 3980), Mucor (FERM-P 3981) and/or Trichoderma (FERM-P 3982).

Process is used to remove malodours generated by sulphur cpds.

In an example. 1 g NH_4OH, 1 g KH_2PO_4, 0.5 g $MgCl_2$-$6H_2O$ and 0.5 g yeast extract are added to 1 litre of the evaporator condensate exhausted from kraft pulp mfr. After sterilisation of the mixt. 50 ml of seed culture of Cephalosporium C-2 is inoculated, and the cultivation is conducted in a sealed tank filled with pure oxygen, for 3 days at 30°C so that the malodorous substance may not be scattered. After cultivation for 3 days, the vapour phase contains 0.1 ppm H_2S, 0.1 ppm CH_3SH, 0.5 ppm $(CH_3)2S$ and 28 ppm $(CH_3)_2S_2$. 13.6.77 as 068802 (6pp108)

TOKZ ★ D22 14719B/08 ★ J5 4005-041
Malodour masking compsn. - comprises fatty polybasic (oxy)acid (salt) e.g. oxalic acid and flower fragrance
TOKYO ORG CHEM IND KK 13.06.77-JA-068864
*E19 P34 (16.01.79) A61l-09/**

The masking compsn. contains component A selected from fatty polybasic acid (including dibasic acid, its soluble salt fatty polybasic oxyacid (including dibasic oxyacid) and its soluble salt and component B which is flower fragrance.

The polybasic acid or polybasic oxyacid is e.g. malonic acid, tartaric acid, succinic acid, maleic acid, fumaric acid, itaconic acid, glutaconic acid, oxalic acid or citric acid. The soluble salt is e.g. Na, K, L, Mg, Ca, L salt. The flower fragrance is Bouquet Blanc, Rose, Finarose, phenylethylalcohol, American Beauty, Rose oil, etc.

Excellent masking effect can be obtd. by incorporation of the flower fragrance to fatty polybasic acid or polybasic oxyacid. The compsn. has the excellent residual effect. 13.6.77 as 068864 (3pp108)

TOKE ★ D22 14822B/08 ★ J5 4005-864
Appts. for deodorising gas with ozone - includes means for removing water, e.g. glycol or glycerine, used prior to treatment in reaction vessel
TOKYO SHIBAURA ELEC LTD 16.06.77-JA-070528
E36 J01 (E17) (17.01.79) B01d-53/34 B01j-01/14

The appts. is provided with means for removing water from the gas at a step prior to the introduction into the reaction vessel. As the water-removing means a di- or trivalent alcohol absorbing liquor is used, e.g. ethyleneglycol, propyleneglycol, triethyleneglycol and glycerin etc.

By removing moisture from the gas to be treated, the deodorising effect is increased. Ammonia (difficult to be oxidised with O_3) is dissolved in high efficiency in the di- or tri-valent alc. and therefore removal of ammonia becomes possible. 16.6.77 as 070528 (3pp34)

MITO ★ D22 14823B/08 ★ J5 4005-865
Appts. for deodorising gas contg. hydrogen sulphide - includes decomposition vessel contg. porous supports and UV lamps, enabling recovery of sulphur
MITSUBISHI HEAVY IND KK 17.06.77-JA-071014
E36 J01 (17.01.79) B01d-53/34

Porous supports such as wire nets are stretched in a vessel and UV lamps are disposed removably around the side wall of the vessel to decompose H_2S, thus deodorising the gas.

Specifically the supports are made of a wire net plated with Cr and the vessel is a reactor pipe of 30 millimeters in dia. The lamps are 0.6 kW in power.

H_2S is removed from the gas in a dry process, without using any special chemical and without causing sec. pollution. 17.6.77 as 071014 (3pp26)

TOKE ★ D22 14825B/08 ★ J5 4005-867
Ozone oxidn. type deodorising appts. - where condensation of steam on catalyst is controlled according to detected humidity values
TOKYO SHIBAURA ELEC LTD 17.06.77-JA-071825
E36 J01 (17.01.79) B01d-53/34 B01j-01/14

Ozone oxidn.-type deodorising appts. is claimed which has partic. good effect as a result of controlling the humidity of gas mixt. comprising unpleasant gas (e.g. H_2S, CH_3SH, $(CH_3)_2S$, $(CH_3)_2S_2$ etc.) and ozone. Appts. comprises a humidity-controlling appts. equipped with heater, capable of controlling the humidity of the unpleasant gas, a mixing vessel where ozone and the gas passed through the humidity controlling appts. are mixed together, a reacting vessel packed with activated charcoal etc. as the catalyst. A humidity-detector is provided between the mixing vessel and the reaction vessel, capable of detecting the humidity of the gas mixt., said the humidity of the gas mixt. passing into the reaction vessel being controlled according to signal detected by the humidity-detector.

Reduced in catalytic deodorising effect (due to the dewing of steam on the surfaces of the catalyst preventing gas-solids contact) may now be controlled. 17.6.77 as 071825 (3pp34)

MITO ★ D22 14829B/08 ★J5 4005-872
Continuous transferring bed absorption appts. - used for treating odorous gases
MITSUBISHI HEAVY IND KK 16.06.77-JA-070542
J01 (17.01.79) B01d-53/08

The appts. comprises continuous transferring bed having trapezoidal cross-sectional area, partitioned into layers each of which is filled with different kind of adsorber having different adsorbability. Typically acid-adsorbed charcoal capable of selectively adsorbing alkali matter is packed in the first layer, alkali-adsorbed charcoal packed in a second layer and charcoal capable of selectively adsorbing neutral matter packed in a third layer. Clearance is provided between each of the layers, and drain outlets are provided at the bottom of the clearance.

The amt. of theadsorber to be used is saved and installation area is smaller than that in prior art. Operation cost is low and adsorbability in vertical direction becomes uniform without any solidification of the adsorber and any clogging. 16. 6. 77 as 070542 (4pp34)

KURS D22 32728T/21 =J7 9001-501
Gelatinous vinyl alcohol polymers - useful as carriers for fishing baits, deodorants and fertilisers
KURARAY KK 26.03.71-JA-018116
*A14 C04 P14 (A97) (25.01.79) *DT2146-129 C08j-03 C08l-29/04*

Gelatinous PVA is produced by freezing an aqs. soln. of a vinyl alcohol polymer (polymerisation degree pref. 500-2000), opt. mixed with dyes, fillers, deodorants, fish baits, fertilisers and sewlling agents, to below -5°C, pref. -15 to -50°C for 10-50 hrs., and thenmelting or thawing the frozen soln.

The PVA can be used as a support for fishing baits (e. g. for tunny fishing), deodorants or fertilisers (e. g. in sea-water algae culture). 26. 3. 71 as 018116, C08j-3/00, C081-29/04 (25. 1. 79) KURARAY CO. LTD (3pp) (J47034545)

DEKN- D22 72784W/44 =US RE29-909
Wound-cleansing solns contg detergent - block copolymers of ethylene oxide and propylene oxide having high polyoxyethylene content
DEKNATEL INC (SUTU) 12.04.74-US-460451 (04.08.77-US-821963)
*A96 (A25) (13.02.79) *DT2515-600 C11d-01/72 C11d-03/48*

Contaminated wounds are cleansed with an aq. detergent soln. which does not impair wound's ability to resist infection comprising an aq. soln. ⩾10 wt. % block copolymer of ethylene oxide and propylene oxide of structure $HO(C_2H_4O)_a(C(CH_3)H-CH_2O)_b(C_2H_4O)_cH$ (I) where ratio of $(C_2H_4O)_{a+c}$ to $(C(CH_3)H-CH_2O)_b$ is 4:1. Copolymer has average mol. wt. of 5,000-15,500.

Pref. mol. wt. of copolymer is 5,000-13,500 esp. 8350 and $(C_2H_4O)_{a+c}$ is 80%. Prepn. is from propylene oxide which is added to stainless steel chamber purged with nitrogen, and reacted with propylene glycol and sodium hydroxide. The mixt. is heated to 120°C with agitation to effect dissolution. Ethylene oxide is then added in desired amts.

Cleansing agent has desired effective cleansing action without adverse effects on wound healing. Scrub also has antiseptic benefits. 4. 8. 77 as 821963 Reissue of US3997458 (5pp931)

LACM- ★ D22 15427B/08 ★US 4106-120
Reversible surgical gown - with flaps on back panels to cover either side of secured panels
LAC-MAC LTD 24.03.75-CA-222941
F07 P21 (15.08.78) A41d-13

A gown comprises a front and two back panels, two back flaps extending from the respective back panels, sleeves attached between front and back panels, and fasteners attached to the back panels on opposite gown surfaces to secure the back panel margins together. There are retainers on the flap edges and on the front panel, the latter being on both gown surfaces.

The retainers allow respective flaps to be secured over the secured back panel sides depending on which surface is the gown outside surface. The retainers may be ties or hook and loop fasteners. The gown can be worn with either surface outside. 12. 9. 77 as 832571 (+ 23. 10. 75 - US - 625229) (15pp1358)

CHEM- D22 22522W/14 =US 4106-477
Self-heating therapeutic dressing - incorporating electrochemical heating elements activated by water
CHEM-E-WATT CORP 12.04.74-US-460492
*P32 +Q74 R59 (15.08.78) *BE-821-844 F24j-01/04 +F24j-03/04*

A water activated therapeutic moist heating pad is formed with outer porous water retaining layers enclosing an inner layer of distributed heat generating cells and an associated water retaining absorbent inner porous layer. A flexible moisture and air permeable non. metallic sponge-like external layer enables water to reach the heating cells through the external layer for activation of the cells and for storage of water in the inner porous layer while providing a moist heat transfer path from the heating cells to an external surface of the external layer.

The heating pad is retained in a hermetically sealed container formed by sealing a pair of impervious sheets together around a peripheral edge. The container enables long term dry storage of the heating pad structure. Pref. the heating pad structure includes a pair of outer layers formed of foam-like porous or open-celled material capable of allowing air and water to pass through towards inner layers and to retain the water.

The flexible therapeutic moist heating pad is able to conform to the body surface to be treated. Pref. a self-contained heating device is formed with an electrochemical heat cell using an anode member and connected shorting elements. A cathode member is formed with an electrochemically active reducible material intermixed with a dry electrolyte material. 12. 4. 74 as 0460492 (7pp1363)

HIGA/ D22 83065X/45 =US 4106-478
Heat generating package, e.g. for medical use - comprising powdered metal compsn. and oxidation promoting compsn. kept in separate envelopes until used
HIGASHIJIMA S 19.03.76-JA-030641 (09.06.75-JA-U78482)
*G04 Q74 +P28 P32 Q73 (15.08.78) *BE-842-684 F24j-01*

Packaged heat generator comprises a heat generating material contained in a 1st enclosure of air-impermeable material which in turn is surrounded by a 2nd enclosure of air-impermeable material. The 2nd enclosure has air passages through it to allow air to enter into it.

An oxidn. promotion material is provided within the 2nd enclosure and outside of the 1st enclosure. A 3rd enclosure of air-impermeable material surrounds the 2nd enclosure and is operable and reclosable at one end to allow removal of the 2nd enclosure.

The heat generating material is e.g. a mixt. of powdered Fe, Al, ferro-silicon, Si, graphite and opt. bentonite. The heat generator is suitable for warming the human body canned foods, etc. Surface oxidn. of the heat generating material is prevented. 9. 4. 76 as 675569 (+ 14. 10. 75 (3) - JA - U39783-4, U 48764)(12pp927)

USDA D22 37975Y/21 =US 4107-192
Antimicrobial (2)-benzoxy-ethoxy-ethyl furoate - for control of bacteria, yeasts and moulds, e.g. in paints
US SEC OF AGRICULTURE 15.03.76-US-667055 (15.02.77-US-768806)
*A60 C03 G02 (15.08.78) *US4024-164 +C09f-05/08*

New 2-benzoxyethyl laurate, palmitate, oleate, erucate and 12-acetoxyoleate are useful as antimicrobial agents. The cpds. are effective against bacteria, yeasts and moulds and are useful e. g. as fungicides for incorporation into coating compsns.

The cpds. are com patible with vanous resins e. g. PVC and can serve as both plasticisers and antifungal agents. The parent patent describes 2-(2-benzoxyethoxy)ethyl-2-furoate useful as antimicrobial agent. 15.2. 77 as 768806 Div. ex 4024164 (4pp924)

FMCC D22 04813A/03 =US 4107-268
Humidity regulator and air purifier for a closed animal house - circulates the air through an aqueous solution of peroxide and a mineral acid (BE 9.1.78)
FMC CORP 09.07.76-US-703915
*E36 J01 P14 +P34 Q74 R26 (15.08.78) *DT2730-947 B01d-53/34*

Controlling the humidity of a close animal confinement habitat and purifcn. of the habitat air to prevent build-up of odourous and noxious gases is described. A portion of the air is removed from the habitat and contacted with an aq. soln. contg. 0.01-1.0 (0.1-1.0)% H_2O_2 and 10-85 wt.% of a mineral acid selected from phosphoric and sulphuric acid; the air and aq. soln. being at same temp.

The gases are absorbed and oxidised in the aq. soln. the mineral acid concn. being adjusted during contact to maintain the relative humidity of the contacted air at 40-95% (50-80%) the air is then passed back to the habitat. The aq. soln. pref. contains 30-70 wt.% phosphoric or 25-50 wt.% sulphuric acid.

Process reduces fuel costs, eliminates floor level drafts and floor to ceiling temp. gradients. 9.7.76 as 703915 (5pp964)

NAAR D22 14034Y/08 =US 4107-289

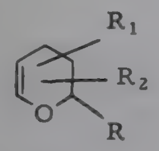
Substd. pyran cpds. prepn. - useful chemical deodorant agents in cosmetic prepns., aerosols, etc.

NAARDEN INT HOLLAND 29.07.76-US-709668 (07.08.75-US-602958)

*E13 P34 (15.08.78) *NL7608-720 A61l-09/04*

Substd. pyran cpds. such as 2,5-dimethyl 3,4-dihydro 2H-pyran 2-carbinol or structures of formula (I) (where R_1 and R_2 are each H, lower alkyl and cyclo-alkyl and R is an organic radical) are prepd. in compsns. by providing pyran in admixture with a carrier substrate and forming addition prods. Addition prods. are formed across the double bond and used for the chemical destruction of malodours imparted by cpds.

(I)



Esp. used for removing unpleasant odours due to smoke from cigarettes, etc. various foodstuffs such as coffee, garlic, onion, cheeses, etc. or others such as perspiration, household pets, etc. 29.7.76 as 709668 (6pp931)

HENK D22 96284X/52 =US 4107-312

Disinfectant compsn. for recirculation toilets, pref. in areoplanes - comprises aq. soln. contg. formaldehyde, glyoxal, glutaric dialdehyde and quat. ammonium salt

HENKEL KG AUF AKTIEN 16.06.75-DT-526964

*E19 P21 +P34 (15.08.78) *BE-842-921 +A01n-09/02*

A soln., suitable for disinfecting the circulatory fluid in a closed-circuit toilet system consists of (by wt.) 5-20% formaldehyde, 0-1.5% glyoxal, 2-13% glutoraldehyde, 0.5-5% quat. ammonium biocide (I), 0-5% inert scent, 0-5% non-ionic ethylene oxide adducts of higher fatty alcohols or alkyl phenols having 8-22C, 0-5% inert dye, and balance solvent (II).

(I) is benzyl trimethyl ammonium chloride, benzyl dimethyl dodecyl ammonium chloride, dichlorobenzyl dimethyl dodecyl ammonium chloride, dodecyl trimethyl ammonium chloride, dodecyl pyridinium chloride or (p-dodecylbenzyl)trimethyl ammonium chloride; (II) is water opt. mixed with 2-4C glycol or 1-4C aliphatic alcohol.

The disinfectant is esp. used in the toilet systems which operate with aq. flushing liqs. 14.6.76 as 695456 (5pp976)

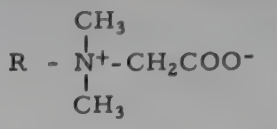
MICH/ ★ D22 15659B/08 ★US 4107-328

Antimicrobial compsn. of acid pH contg. betaine, amine oxide - used for controlling bacteria, fungi, protozoa and preventing body odour

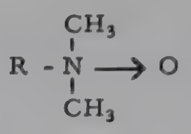
MICHAELS E B 26.05.77-US-800898 (02.04.75-US-564454)

B05 C03 (15.08.78) A01n-09/20

Broad spectrum antimicrobial composition of low toxicity consists of 0.1-40 parts by wt. of betaine (I), 0.1-40 parts wt. of amine oxides (II), (III) or (IV) and a protonating agent to adjust the pH to 4.0 -5.5. In the formulae R is (10-18C) alkyl or mixed (10-18C) alkyl.

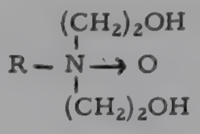


$R-\overset{CH_3}{\underset{CH_3}{N^+}}-CH_2COO^-$ (I)



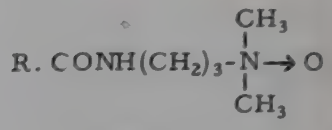
$R-\overset{CH_3}{\underset{CH_3}{N}}\rightarrow O$

(II)



$R-\overset{(CH_2)_2OH}{\underset{(CH_2)_2OH}{N}}\rightarrow O$

(III)



$R.CONH(CH_2)_3-\overset{CH_3}{\underset{CH_3}{N}}\rightarrow O$

(IV)

Compsn. is non-toxic and causes less eye irritation than soap. It may also be used for treatment of dandruff, crotch itch, athlete's foot and acne. A typical compsn. contains coco-N-betaine (6%), cocoamido-N, N-dimethylamine oxide (6%) and citric acid (0.55%) in distilled water. 26.5.77 as 800898 (+ 18.12.75 - US - 641727)(7pp916)

PROC D22 94323X/51 =US 4107-364

Continuous mfr. of composite non woven matting - for disposable cloths with good drape and hand properties

PROCTER & GAMBLE CO 06.06.75-US-584312

*A94 F04 +P73 (A23 A96) (15.08.78) *BE-842-632 +B32b-03*

Nonwoven cloth of increased toughness and tear resistance comprises at least two types of organic polymer fibres, one being elastomeric and one elongatable but non-elastic. At least one fibre type is dispersed to give frequent random fibre intersections which are bonded so that the non-elastic fibres can be stretched between bonds with few breakages.

The bonds include at least some heat bonds between both fibres of the same type and fibres of different types. The elastomeric fibre is pref. polyurethane and the non-elastic fibre is polyester or polypropylene. In particular, the cloth is suitable for lingerie and has the softness, drape, hand, feel elasticity and appearance of a knit rayon jersey. 6.6.75 as 584312 (28pp1358)

GORD/ ★ D22 15698B/08 ★US 4107-426

Water repellent cellulose surfaces - prepd. by vapour phase treatment of cellulose with acid chloride(s)

GORDON R G 06.07.76-US-702534

A96 P32 P73 (A11) (15.08.78) A61f-13/16 B32b-27/42

Cellulose sheets, pads, or cloth with $\geqslant 1$ H_2O-repellent side are new. The H_2O-repellent side(s) consist of the vapour phase reaction prod. of the cellulose (I) with an acid chloride of formula RCOCl (II) (where R is 6-20C straight-chain, branched-chain, or cyclic aliphatic hydrocarbon).

Exposure of (I) to vapours of (II) for short (1-15 sec.) reaction times affords permanent highly H_2O-repellent treated surfaces, while unexposed areas remain H_2O-permeable. The treated prods. are esp. useful as disposable articles of sanitary clothing, sanitary napkins, bandages, paper cups, and bags, etc. In addn., compared with known processes (US 3934587 etc.), the above inexpensive method does not need to be effected in the presence of long-chain aldehydes, or solvents. Also treated surfaces do not wrinkle (like liq. phase treatments). Finally, treated prods. are fully biodegradable, and may be prepd. without using petrochemicals (including PVA) on a fully automated basis.

In an example, very thin sheets of tissue paper were exposed to $Me(CH_2)_nCOCl$ (n=6-16) for 1-60 sec. at temps. to give acid chloride vapour pressure 10-20 mm. Very hydrophobic surfaces were formed. 6.7.76 as 702534 (12pp478)

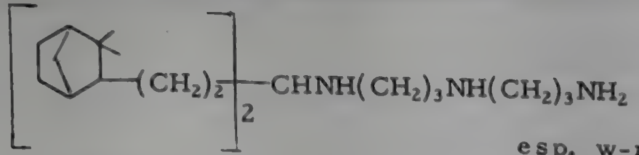
MERI ★ D22 15878B/08 ★US 4139-559

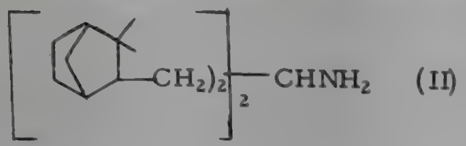
1-Bis-di:methyl-nor-bornyl-pentyl-1,5,9 triazanonane prepn. - by redn. of the corresp. omega-nitrile

MERCK & CO INC 16.01.78-US-869879 (02.07.76-US-702317)

A60 B05 C03 (13.02.79) C07c-87/40

1-[1,5-Di-(3,3-dimethylnorborn-2-yl)-3-pentyl]-1,5,9-triazanonane of formula (I) is prepd. by redn. of the corr-


(I)


(II)

esp. w-nitrile by catalytic hydrogenation or chemically. The amine of formula (II) is new.

(I) is broad-spectrum antibacterial, esp. effective against Pseudomonas sp., and antifungals. It may be used to preserve natural fibres, synthetic fibres such as nylon or polypropylene fibres, and hard surfaces such as glass. (II) is an intermediate in the prepn. of (I).

In an example (I) was obtd. by reacting 1-[1,5-(3,3-dimethylnorborn-2-yl)-3-pentyl]-1,5-diazapentane with acrylonitrile and then catalytically hydrogenating. 16.1.78 as 869879 (6pp1248)

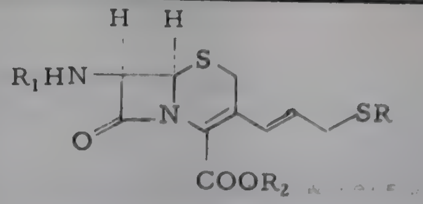
CIBA D22 58721W/36 =US 4139-560
Preservative and disinfectant (un)satd. nonylamine derivs - prepd. from alkylidene amine and dienes using nickel catalyst
CIBA GEIGY CORP 13.09.74-CH-012518 (22.02.74-CH-002544)
*E19 P34 (13.02.79) *BE-825-800 C07c-87/28*

Nonylamines of formula R_1-NH-C(R_2)(R_3)-CHR_4-C(R_5)=C(R_5)-CHR_4-C(R_5)-C(R_5)=CH(R_4) (I) are new. In (I), R_1 is Y-methoxypropyl, 1-18C alkyl; and R_3 is H, 1-18C alkyl, bezyl, β-phenylethyl, or phenyl opt. substd. by halogen, 1-4 C alkyl or alkoxy, naphthyl-1 or napthyl-2; or R_{2-3} together form 4-11 membered alkylene chain, provided that ≥ 1 of R_1 and R_3 contains one of aryl gps., the R_4 gps. are a each H and the R_5 gps. are each H or CH_3 or the R_4 gps. are each CH_3 and the R_5 gps. are each H.

(I) are used to combat microorganisms, e.g. in the protection of materials, e.g. adhesives, paints, textiles and permanent sizes. 3.3.77 as 775654 (+20.2.75-US-551481) (20pp982)

SYNT ★ D22 15903B/08 ★US 4139-618
7-Substd.-acetamido-3-heterocyclyl:thio-propenyl 3-cephem(s) - useful as broad spectrum antibacterials in therapeutics and antiseptics used in disinfectants
SYNTEX (USA) INC 28.06.76-US-700697 (08.03.76-US-664599)
B02 C02 E13 (13.02.79) C07d-501/36

7-(Substd. acetamido)-3-(3-heterocyclylthiopropen-1-yl) 3-cephem-4-carboxylic acids and their salts and esters of formula (I) are new:

(I)


In (I), R is 2-methyl-1,3,4-thiadiazol-5-yl, 3-methyl-1,2,4-thiadiazol-5-yl or 2-methyl-1,3,4-oxadiazol-5-yl; R_1 is PhCHR_3CO, p-XC_6H_4-CH(NH_2)CO, YCH_2CO or MeON=C(2-furyl)CO; R_3 is H, OH, SO_3H, or COOH; X is H or OH; Y is 2-thienyl, PhO, CF_3S, (1H)-tetrazol-1-yl, sydnon-3-yl or CNCH_2S; and R_2 is H, Ph_2CH, PhCH_2, O-NO_2-, p-$NO_2$1, 3,5-$(NO_2)_2$- or p-MeO-benzyl, t-Bu, Me_3-CCO_2CH_2, PhCCOCH_2 or 2-6C polyhaloalkyl or a cation.

(I) are broad-spectrum antibacterials for use as therapeutic agents and antiseptics for use in cleansing and disinfecting compsns. 28.6.76 as 700697 C.i.p. 3983113 4049806 (+14.10.75, 15.8.75-US-621717, 605109) (22pp1248)

SAND/ ★ D22 15962B/08 ★WP 7900-077
Sterilised storage container with temp. and pressure responsive valve - for automatic sealing during sterilisation cycle and before removal from autoclave
SANDERSON R S 10.04.78-US-895239 (01.08.77-US-821042)
P31 P34 Q33 (22.02.79) A61b-19/02 A61l-01 A61l-03 B65d-51/16

D/S: (CH, DT, FR, GB, LU, SW) E, BR, SU.

Appts. for containing articles during sterilization or storage comprises a container provided with a pressure responsive device for sensing a redn. in the pressure of a sterilizing environment applied to the exterior of the container. A valve permits flow of a steam environment into an expandable chamber until a predetermined temp. is reached, at which time a temp. responsive valve closes. This results in the capture of a vol. of steam within the chamber which is utilized to provide a force, upon a redn. in pressure surrounding the chamber, which is used to seal closed a valve opening in the container.

Steam sterilization of objects, e.g. surgical instruments and other medical items, in gravity and vacuum autoclaves.

The container automatically seals itself during the sterilization cycle and before removal from the sterilizer, so that the container contents are maintained in an aseptic environment without danger of recontamination during storage.

26.7.78 as US0050 (56pp1044).

ISR: US2097585; US2024511; DT1642161; US3331105; US2997397; US2489989.

See Also

D13 US 4107425 D15 US 4139718 D16 US 4107296
D21 BE 871267

D23: OILS; FATS; WAXES

UNIX ★ D23 14214B/08 ★BE -871-137
Wool wax lanolin prepn. from wool degreasing extract - using hot methanol and alkali then sepg. wax layer
UNISEARCH LTD 10.10.77-AU-001987
B01 (01.02.79) C11b C11c

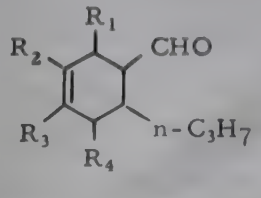
The extract, obtd. by treating a liquor arising from wool degreasing, is heated to above its m.pt. The molten extract is then mixed with hot methanol, and alkali added in amt. about 120% of that required for neutralising the extract, The insoluble immiscible wax layer is sepd. and the wax recovered by drying the sepd. layer.

The extract used is obtd. from an aq. mixt. the soaps being converted into fatty acids, by codistilling the mixt. with a water immiscible fat solvent. Most of the water, the insoluble solids or the material coagulated from the fat soln. are sepd. by known methods. The condensed solvent/water to sepd. and the solvent is recycled. The fats are recovered from the solvent soln. by known methods.

The process enables simple sepn. of the wax and avoids environmental pollution. The product may be used as a lanolin. 10.10.78 as 871137 (13pp597)

NAAR D23 74540T/47 =DS 2221-949
6-propyl-3-cyclohexene -carbaldehydes - perfumes prepd by diels alder addn of 2-hexene-1 al to a penta/hexa diene
NAARDEN INT NV 27.04.71-NL-005711
*E15 (15.02.79) *DT2221-949 C07c-47/42 C11b-09*

New 6-propyl-3-cyclohexene-carbaldehydes are of formula (I) (where R_{1-4} are CH_3 or H; ≥ 2 of them are H; and R_1 and R_4 can together form -CH_2-) e.g. 2,4-dimethyl-6-n-propylcyclohexene carbaldehyde.



(I) may be prepd. by reacting 2-hexene-1-ol with the corresponding pentadiene or hexadiene in the Diels-Alder reaction. (I) are useful as perfume ingredients giving a spicey, floral scent. 27.4.72 as 221949 (4pp068)

KURS D23 29031U/21 =DS 2250-065
Trimethylhydroquinone purification - by precipitation from organic solvents with liquid hydrocarbons
KURARAY KK 05.11.71-JA-088438
*A60 B05 E14 (15.02.79) *DT2250-065 C07c-37/22 C07c-39/08*

2, 3, 5-Trimethylhydroquinone (I) is purified by dissolving crude (I) in an ester of formula RCOOR' (in which R is H or (1-3C) alkyl; and R' is (1-4C) alkyl) or in acetone, ethylmethylketone, diethylketone, methylisobutylketone or cyclohexanone. Crystalline (I) is obtained after adding pentane, hexane, octane, cyclohexane, cyclohexene, benzene, toluene and/or xylene.

(I) is an anti-oxidant for fats and oils; a UV-absorbant for plastics, gums and rubbers; and an intermediate for medicaments, esp. vitamin E. The process gives (I) in pure white crystalline form which is colour-stable in yields of >90%. Evaporation of the solvents used in simpler and requires less heat. In an example crude (I) is dissolved in ethylacetate at 55°C, filtered and cooled. Hexane is added to give 93.7% of (I) with a purity of >99%. 12.10.72 as 250065 (4pp279)

STAG/ D23 30854W/19 =DS 2352-859
Crude fatty acids treatment - in stripping column and enrichment columns with condensed column vapour reflux
STAGE H 22.10.73-DT-352859
*(15.02.79) *DT2352-859 C11c-01/08*

The process de-gases de-waters and de-odorises crude fatty acid, superheated booster steam being directed in the opposite direction to the acid to be treated.

The steam is passed through a discharge scrubber column for the acid and then through or past the column distribution base into an amplification column acting on the distributor base subjected to the crude acid. The vapours arriving in the tower head are condensed, and the fatty acid then separated from the condensate forms part of the return flow into the amplification column. 22.10.73 as 352859 (4pp160)

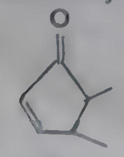
STAG/ ★ D23 14400B/08 ★DT 2736-357
Tall oil distn. with prod. temp. control - partic. in falling film evaporators with steam addn. to prevent anhydride formation
STAGE H 12.08.77-DT-736357
(15.02.79) C11c-01

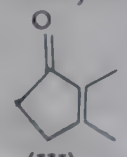
In gentle tall oil distn. to recover pure fatty-end resin acids, prod. temp. is kept below 260°C throughout working up operation and partic. in falling film evaporators. If prod. temps. exceed 250°C in the falling film evaporators used for protective evaporation, a few tenth % of steam are added to improve the separation of unsaponifiable material and to prevent anhydride formation in falling film evaporation heads.

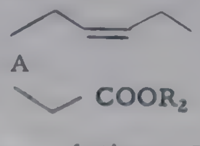
Additional reactions are prevented. 12.8.77. as 736357 (18pp200)

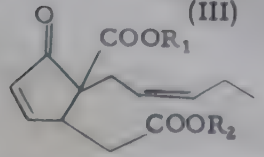
SAKB ★ D23 14429B/08 ★DT 2824-841
2-Cyclopentenone derivs. with jasmine smell - made by decarboxylation of 5-tert. butoxycarbonyl 4-methoxycarbonyl:methyl-5-(cis-2-pentenyl)-2 cyclopentenone
OTSUKA KAGAKU YAKUHIN 12.08.77-JA-097173
E15 (15.02.79) A61k-07/46 C07c-69/95

Prodn. of 2-cyclopentenone derivs. of formula (I) (where A is a gp. (II) or (III); and R_2 is a low straight- or branched chain alkyl , alkenyl or aralkyl)comprises decarboxylating a 5-(cis-2-pentenyl)-2-cyclopentenone deriv. of formula (IV) (where R_1 is branched alkyl).


(II)


(III)

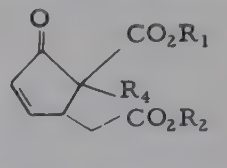

(I)


(IV)

(I) have a jasmine-like scent and are useful components in perfume compsns. 6.6.78. as 824841 (21pp513)

SAKB ★ D23 14430B/08 ★DT 2824-842
Novel 2-cyclopentenone derivs. - are useful intermediates for jasmone(s), used in perfumery
OTSUKA KAGAKU YAKUHIN 12.08.77-JA-097172 (12.08.77-JA-097171)
E15 (15.02.79) C07c-69/95

(A) Novel 2-cyclopentenone derivs. are of formula (where R_1 and R_2 are lower alk(en)yl or aralkyl and R_4 is 2-pentenyl or 2-pentynyl).

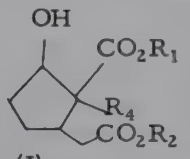

(I)

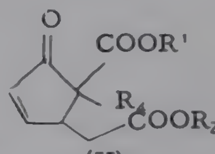
(B) (I) is produced by reacting cpd. (II) with CH_3COCH_2-CO_2R_1 (III), treating with pentynyl halide, hydrolysis, ring closure and redn. using Lindler catalyst (when R_3 is as R_1 or R_2).

(I) are intermediates for jasmine-type cpds. useful in perfumery. 6.6.78. as 824842 (18pp922)

SAKB ★ D23 14431B/08 ★DT 2824-843
Cyclopentanol derivs. - are useful intermediates for jasmone cpds., used in perfumery
OTSUKA KAGAKU YAKUHIN 12.08.77-JA-097175 (12.08.77-JA-097174)
E15 (15.02.79) C07c-69/74

(A) Novel cyclopentanol derivs. are of formula (I):

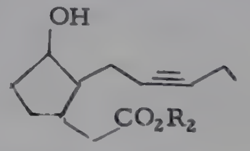

(I)


(II)

(where R_1 and R_2 are lower alk(en)yl or aralkyl and R_4 is 2-pentenyl or 2-pentynyl). Cpds. are prepd. by selective redn. of a 2-cyclopentenone deriv. of formula (II). 6.6.78. as 824843 (21pp922)

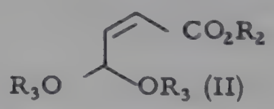
SAKB ★ D23 14432B/08 ★DT 2824-844
2-(2-Pentynyl)-cyclopentanol derivs. - useful intermediates for jasmone cpds., used in perfumery
OTSUKA KAGAKU YAKUHIN 12.08.77-JA-097181
E15 (15.02.79) C07c-69/74

Novel 2-(2-pentynyl)-cyclopentanol derivs. are of formula:


(I)

(where R_2 is lower alk(en)yl or aralkyl). The cpds. are prepd. from cpds. (II) and (III) in a 4 stage process.

$CH_3COCH_2CO_2R_1$ (III)


(II)

(I) are intermediates for jasmine-type cpds. useful in perfumery. 6.6.78. as 824844 (15pp922)

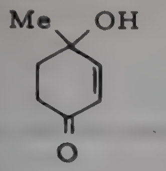
UNIL D23 74334X/40 =GB 1541-017
De-waxing triglyceride oils - by adding a strong acid or anhydride, followed by water and removing the sludge obtd. (BE100976)
UNILEVER LTD 10.03.75-GB-009862
*C03 E17 (D13) (21.02.79) *DT2609-705 C11b-03/04*

Degumming of triglyceride oils which are liq. at 40°C is effected by (a) dispersing in the oil an acid or acid anhydride having a pH of ⩾0.5 as measured in a 1 molar aq soln. at 20°C; (b) dispersing 0.2-5 % of water in the mixt. obtd., by wt. of the oil; and (c) sepg. an aq. sludge contg. the gums from the oil. The mixt. of oil, water and acid is maintained for ⩾5 min. at < 40°C before sepg. the aq. sludge.

The acid used is pref. citric acid, in the form of a conc. aq. soln. The oil is e.g. soybean, rapeseed, sunflower seed, groundnut, safflower or coconut oil. Process removes phosphatides, waxes and other minor components. When an edible acid is used the aq. sludge can b added to animal foodstuffs to improve their nutritive valu 9.3.76 (15pp927).

TAKS ★ D23 14601B/08 ★GB 2002-37
4-Hydroxy-4-methyl-cyclohex-2-en-1-one - useful as perfume component, to give warm fragrance and sweet impression
TAKASAGO PERFUMERY KK 08.08.77-JA-094162
E15 (21.02.79) A61k-07/46 C07c-49

4-Hydroxy-4-methylcyclohex-2-en-1-one of formula (I) is new.


(I)

(I) is useful as a perfume component, at low concns. (2-15 pref. 5-10 ppm) giving a warm fragrance and a sweet impression. Thus mixed with various synthetic essential oils (petigrain, lavender, orange, or peppermint oils, etc.) (I) markedly increases the naturalness of the blend odour.

In an example, (I) was prepd. by hydrogenation of the corresp. cyclohexa-2,5-dien-1-one in EtOH over 5% Pd/C at room temp./1 atmos.. 3.8.78 as 032076 (5pp).

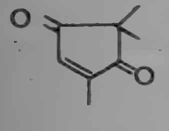
HOFF ★ D23 14605B/08 ★GB 2002-382

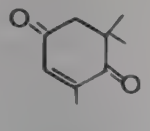
2,2,4-Tri:methyl-cyclopent-4-en-1,3-di:one prepn. - by oxidn. of 3,5,5-tri:methyl-cyclohex-2-en-1,4 di:one with oxygen and metal catalyst

HOFFMANN-LA ROCHE AG 12.08.77-CH-009910

E15 (21.02.79) C07c-49/46

2,2,4-Trimethylcyclopent-4-en-1,3-dione (I) is prepd. by oxidn. of 3,5,5-trimethylcyclohex-2-en-1,4-dione of formula (II) with O_2 in the presence of a catalyst based on Mn, Co or Cu.


(I)


(II)

Simple process readily affords (I), known to possess olfactory properties and to be an intermediate in various syntheses. In an example, (I) was prepd. by treatment of a mixt. of (II), Mn(OAc)$_2$ 4H$_2$O, and pyridine at 60° (with O_2 for 2 hr. (73% (II) conversion). 11.8.78 as 033013 (3pp478).

HLSI- ★ D23 B/08 ★IL --49-581

Liq. edible oil prodn. from animal or vegetable oils or fats - by multistage process including transesterification, chlorination, dehydrochlorination and fractional distn. stages

HLS LTD IND ENG 14.05.76-IL-049581

(31.01.79) C11b-03/02

TANA/ ★ D23 14725B/08 ★J5 4005-051

Powdery perfume compsn. used in plastics, paints, medicines, etc. - is obtd. by absorbing perfume on e.g. silica and enclosing the powder with a microcapsule membrane

TANAKA N 15.06.77-JA-069785

A60 B07 G02 (D21) (16.01.79) A61k-07/46

The powdery perfume is prepd. by adsorbing perfume on fine powdery inorganic substance such as silica, clay, talc, kaolin, ZnSO$_4$, AnO, CaCO$_3$, MgCO$_3$, Mg(OH)$_2$, etc. and enclosing the obtd. powder or the aggregate obtd. from the powder with microcapsule membrane.

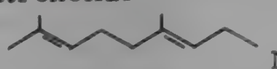
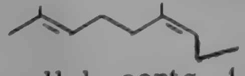
The powdery perfume holds perfume for a long time and can give fragrance for long time. It can be combined in plastics, paper, printing ink, paint, varnish, cosmetics, medicines, etc. 15.6.77 as 069785 (7pp5)

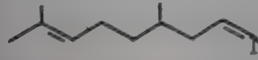
TAKS ★ D23 14852B/08 ★J5 4005-906

Citronellal prepn. - by isomerisation of geranyl amine or nerylamine deriv.

TAKASAGO PERFUMERY KK 15.06.77-JA-070886

E17 (17.01.79) B01j-31/18 C07c-45 C07c-47/20 C07c-119/08

Prepn. of citronellal is new where geranial amine deriv. of formula  NH-R (I) or a nerylamine deriv. of formula  NH-R (II) (where R is alkyl, cycloalkyl or allyl, contg. 1-6C) is isomerised in the presence of a low valent cobalt phosphine (or arsine) complex to give an aldehydeimine of formula

 N-R (III) then subjecting the aldehydeimine to hydrolysis.

Process can be effected in high yield. Pref. (I) or (II) reacted at 30-150°C for 2-10 hrs. in the presence of the above catalyst. Amt. of catalyst is pref. such that the molar ratio of CO cpd. w.r.t. (I) or (II) is 200-2000:1. 15.6.77 as 070886 (5pp75)

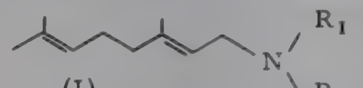
TAKS ★ D23 14853B/08 ★J5 4005-907

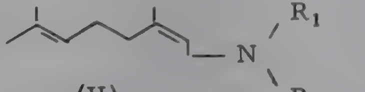
Optically active citronellal prepn. - by isomerisation of e.g. geranylamine deriv. in presence of cobalt phosphine complex catalyst followed by hydrolysis of enamine obtd.

TAKASAGO PERFUMERY KK 15.06.77-JA-070887

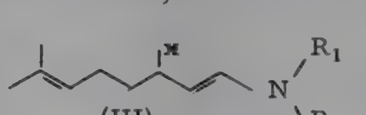
E17 (17.01.79) B01j-31/24 C07c-45 C07c-47/20 C07c-87/24 C07c-119/08

Geranylamine deriv. as formula (I):

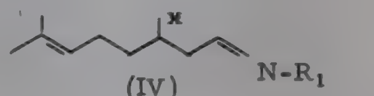

(I)


(II)

or a nerylamine deriv. of formula (II) (where R$_1$ is 1-6C alkyl, cycloalkyl or allyl, and R$_2$ is H or 1-6C alkyl or, together with the adjacent N atom, R$_1$ and R$_2$ form a 5- or 6-membered ring, or R$_1$ and R$_2$, together with adjacent N atom, form a 6-membered ring contg. another N or O) is subjected to isomerisation in the presence of a low valent Co optically-active phosphine complex as the catalyst to give an optically-active enamine or an optically-active aldehyde imine of formula,


(III)

or


(IV)

(where R'$_2$ is 1-6C alkyl, then the enamine or aldehyde imine is subjected to hydrolysis.

Isomerisation can be conducted with a high efficiency. 15.6.77 as 070887 (5pp75)

CHET D23 23069S/13 =J7 9001-481

Process and apparatus for deodorising oils

CHEMETRON CORP 17.07.70-US-055675

*(D13) (25.01.79) *BE-756-507*

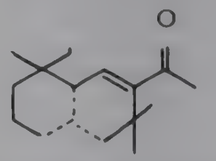
INFL D23 21425A/11 =US 4107-066

Unsaturated-acetyl-di:methyl-cyclohexane cpds. - intermediates for hexa:hydro-tetra:methyl acetonaphthone derivs. useful as vetiver ingredients in perfumes

INT FLAVORS & FRAGR INC 11.11.76-US-740890 (28.07.77-US-819959)

*E15 (15.08.78) *US4076-749 +C11d-03/50*

A perfumed article comprises a compsn. contg. a mixt. of 3 cpds. of formula (I)


(I)

(where one of the dashed lines is a C=C bond; and each of the other dashed lines is a C-C bond) and a detergent or soap.

(I) give a vetiver aroma. (I) can be prepd. from 3-chloromesityl oxide and myrcene. The parent patent (21425A/11) claimed similar cpds. 28.7.77 as 819959 Div. ex 4076749 (27pp976)

INFL D23 52578Y/30 =US 4107-093

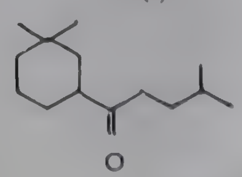
Higher carbonyl cpds. having organoleptic properties - prepd. by reacting a substd. halide or substd. aldehyde with a carbonyl cpd. (NL 19.7.77)

INT FLAVORS & FRAGR INC 11.08.76-US-713357 (28.07.77-US-819954)

*E15 P15 (D13) (15.08.78) *DT2700-688 C11b-09*

Derivs. of 1-acetyl 3,3-dimethylcyclohexane of formula (I) are prepd. as a perfume compsn. with ≥1 auxiliary perfume ingredients. Perfume comprising a mixt. of 1-(3,3-dimethyl cyclohexyl) 4-methyl cis-2-penten-1-one (II), 1-(3,3-dimethylcyclohexyl) 4-methyl 3-penten-1-one (III) and 1-(3,3-dimethylcyclohexyl)-4-methyl-trans-2-penten-1-one (IV) plus auxiliaries is claimed. Cologne compsns. contg ethanol, water and (I), or ethanol, water and a mixt. of (II), (III) and (IV) are claimed.

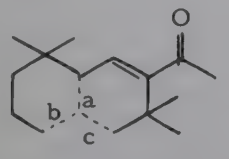
(I)



Derivs. of (I) are used to augment or enhance the flavour and/or aroma of consumable materials or impart flavour and/or aroma. Sweet, fruity, raspberry, woody, lemon, piney, i on one-like, blueberry and floral aroma characteristics are enhanced, and sweet, raspberry, lemony, sweet fruity, red berry, piney, floral, i on one-like and nut meat flavour characteristics are esp. desirable in foodstuff flavourings, chewing gums, toothpastes and medicinal products. 28. 7. 77 as 819954 (11pp931)

INFL ★ D23 15614B/08 ★US 4107-208
Hexa:hydro-tetra:methyl-2-acetyl-naphthalene cpds. - useful as vetiver ingredients in perfumes etc.
INT FLAVORS & FRAGR INC 19.09.77-US-834500 (11.11.76-US-740890)
E15 (15.08.78) C07c-49/61

A mixt. of hexahydronaphthalenes (I) is new :



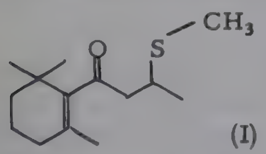
(I)

(where one of a, b, c is a double bond, and the others are single bonds).

(I) have aromas with sweet woody, citrusy, vetiver-like, musky, woody/peppery, woody/leathery, hay and green nuances and/or woody fragrance notes. In an example, a mixt. of (I) isomers was prepd. by cyclising 1-acetyl-6, 6-dimethyl-4-(4-methylpent-3-en-1-yl)cyclohexa-1, 3-diene with 85% H_3PO_4 and PhMe at 25-35°, then 50-65°. Parent patent claimed the cyclehexadiene deriv. 19. 9. 77 as 834500 C. i. p. 4076749 (28pp478)

INFL D23 67315A/38 =US 4107-209
Methyl-thio-butyryl-tri:methyl-cyclohexene and cyclo hexadiene - used as flavourants, prepd. by reacting damascone or damascenone with methyl-mercaptan
INT FLAVORS & FRAGR INC 03.03.77-US-774055
*E15(D13) (15.08.78) *DT2808-710 +C07c-49/61*

Pure synthetically produced 1-[3-(methylthio)butyryl] 2, 6, 6-trimethyl-cyclohexene or the 1, 3-cyclohexadiene analogue of general formula (I) is new, where the dashed line is a carbon-carbon single or double bond.



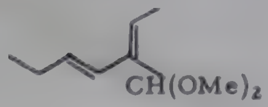
Prepn. is by reacting methyl mercaptan with "beta-damascenone" or beta-damascone" for 2 hrs. at room temp., the NMR, Infra-red or mass spectral analyses being used to assay product.

Compsns. are used to impart (augment or enhance) flavours and fragrances to (or in) consumable materials, diminishing the need for natural ones. Sweet, black tea-like, tobacco-like, cocoa-like, "damascenone-like", chocolate-like, dried fruit-like and rose petal-like aroma or flavour characteristics are used in the foodstuff, chewing gum, toothpaste and medicinal product flavour area. 3. 3. 77 as 774055 (13pp931)

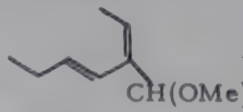
INFL ★ D23 15616B/08 ★US 4107-217
Mixt. of 2-ethylene-trans-3-hexenal di:methyl acetal(s) - prepd. from 1,1-di:methoxy-trans-3-hexen-2-one and phosphorane
INT FLAVORS & FRAGR INC 26.05.77-US-800890 (30.07.73-US-383579)
E17 (15.08.78) A61k-07/46 C07c-43/30

A mixt. of cis-2-ethylidene-trans-3-hexenal dimethyl acetal (I) and the corresp. trans, trans-isomer (II) produced by reacting $EtPh_3PBr$ with n-BuLi then treating the prod. with 1, 1-dimethoxy-trans-3-hexen-2-one (III) at < 30° is new.

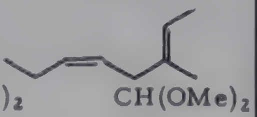
(I)



(II)



(IV)

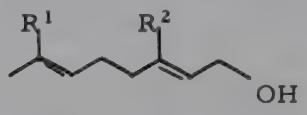


Additionally, cis-2-ethylidene-cis-3-hexenal dimethyl acetal (IV) is prepd. by reaction of $EtPh_3PI$ with PhLi, then treatment of the prod. with 1, 1-dimethoxy-3-hexyn-2-one (V), followed by hydrogenation over $Pd/BaSO_4$ at 1 atmos.

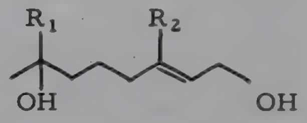
(I), (II) and (IV) are intermediates for known 2-alkylidene-3-alkenals and -alkynals which are useful for augmenting or enhancing the taste and aroma of foods, tobaccos, and perfumes, etc. (US 3988487) In an example, (III) was added to a mixt. of $EtPh_3PBr$ and n-BuLi in Et_2O at <30° to give a mixt. of (I) and (II). 26. 5. 77 as 800890 Div. ex 3922309 (+ 18. 7. 75, 11. 7. 76 - US - 597189, 713471) (11pp478)

NISC D23 85076Y/48 =US 4107-219
Chain-forming terepene alcohol prepn. - from unsaturated amine, by oxidn. to amine oxide, rearrangement to unsaturated dialkyl hydroxylamine and hydrogenation
NISSAN CHEM IND KK 14.05.76-JA-054941
*E17 (15.08.78) *DT2720-839 C07c-29*

Chain terpene alcohols of formulae (I) and (II) are prepd. (where R^1 and R^2 are each H or lower alkyl). Prepn. is from corresp. amine gp. NR^3_2 (where R^3 is an alkyl gp.) to form the amine oxide, heating to effect thermal rearrangement to form chain unsatd. hydroxylamine, then reducing with H_2 in the presence of a metallic Fe, Co, Ni, Cu, oxides thereof or copper chromite catalyst.



(I)

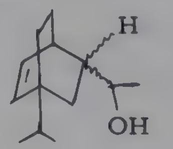


(II)

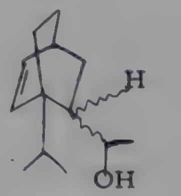
Hydrogenation process is less hazardous from the environmental aspect w. r. t. Zn-acetic acid methods or Pt catalysis. 11. 5. 77 as 795789 (5pp934)

INFL D23 91452A/50 =US 4139-484
Hydroxyethyl-bi:cyclooctene derivs. - useful as perfumes esp. with tobacco
INT FLAVORS & FRAGR INC 23.03.77-US-780685 (08.06.78-US-913734)
*E15 (13.02.79) *US4128-729 +C11d-03/50*

Process for altering, modifying or enhancing the aroma of soap comprises intimately admixing soap chips with 1-3% of a mixt. of bicyclo [2. 2. 2] octene derivs. of formula (I) and (II), (where the way lines express oxo and ends configurations of the ethanol moiety w. r. t. the C=C of the bicyclo [2. 2. 2] octene moiety)



(I)

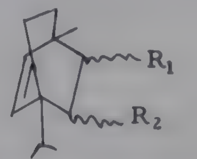


(II)

The modification, alteration or enhancement of the aroma of a liq. or solid detergent by a similar process is also claimed.

(I) and (II) have sweet, woody, floral aromas, with clay-sage, violet leaf and orris undertones.

Parent Patent describes cpds. of formula (III) (where one of R_1 and R_2 is H and the other is 1-hydroxyethyl in the exo or endo configuration).



(III)

8. 6. 78 as 913734 Div. ex 4128729 (19pp393)

See Also

D13 J7 9001787 D13 US 4107094 D13 US 4107197

D24 : SOAP ; SOAP DETERGENTS

KAPP/ D24 84991R/46 =DS 1924-980
Multi-layer soap tablets
KAPPUS F L (KAP /) 16.05.69-DT-924980
*(15.02.79) *DT1924-980 +C11d-13/18*

The process produces bars of soap each comprising a core and a casing of soaps of different characteristics. These are extruded to form core and casing portions which are joined together, parted off into blanks and pressed into bars in a mould.

Core and casing are continuously extruded direct in a multi-layer skein, and parted off into blanks. These are then squeezed in a mould, having depressed surfaces at top and bottom at the blank ends, into bars of cushion shape. 16. 5. 69 as 924980 (5pp160)

COLG D24 43910T/27 =DS 2157-907
Multi-coloured streaked soap - extruded from mixture of different colour soap fragments
COLGATE PALMOLIVE CO 29.12.70-IT-055693
*(15.02.79) *BE-777-334 C11d-13/08*

The process produces pieces of soap of different colours from a basic soap mixt. which is initially compressed by the first auger of a multiple extrusion press and then extruded in small particles in a vacuum chamber.

To the basic soap particles in the vacuum chamber, solid plastic soap of a colour different to the basic soap is added. A second auger extrudes this mixt. from the vacuum chamber through a nozzle in bar form and with a marble-coloured effect. 23. 11. 71 as 157907 (9pp160)

D25 : OTHER DETERGENTS

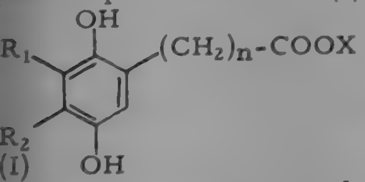
UNIL ★ D25 14186B/08 ★BE-869-806
Aq. liq. detergent compsn. prepn. for washing clothes etc. - using alkanolamine to avoid sediment formation
UNILEVER NV 22.08.77-GB-035089
E34 (19.02.79) C11d

Prepn. of the detergent compsn. comprises adding 0. 5-5% of a mono-, di- or tri-alkanolamine, pref. triethanolamine to a compsn. contg. an active additive which contains 2-10 % detergent, $\geqslant$2% sodium tripolyphosphate, $\geqslant$2% alkali metal orthophosphate, the sum of the two phosphates being 5-35% and a hydrotrope or stabilising system, in which the alkali metal orthophosphate is formed in situ by neutralising with the appropriate base.

The in situ neutralisation results in the formation of a little undesirable sediment and the addn. of the alkanolamine overcomes this. A further advantage is that the modified process enables a higher sodium tripolyphosphate content ($>$12%) without having to use a polyphosphate which hydrates rapidly or has a high phase I content. 17. 8. 78 as 869806 (6pp597)

OREA ★ D25 14188B/08 ★BE-869-839
Hair colouring compsn. contg. direct colourants - and 2,5-di:hydroxyphenyl-carboxylic or -alkane carboxylic acid cpds.
L'OREAL SA 19.08.77-LU-077995
E14 (E12) (19.02.79) A61k

Compsn. for colouring keratinic fibres, partic. decolourised human hair, comprises at leastone direct colourant and and a cpd. of formula (I). In (I) R_1 and R_2 independently are H or 1-4C alkyl, pref. methyl, ethyl or propyl; X is H, an alkali metal such as Na or K, NH_4 or an alkanolamine residue such as mono-, di- or triethanolamino and n is 0-4.



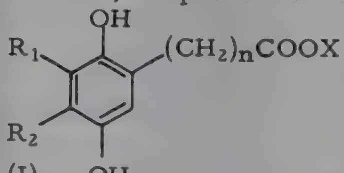
(I)

The compsn. is used for dyeing human hair, by applying it to hair which has been freshly bleached by a powerful oxidant, leaving it 5-30 mins, rinsing and drying.

It has been prepared to used direct dyes together with ascorbic acid or thiourea, to suppress traces of oxidant present which can destroy the applied colourant. However ascorbic acid is unstable at the pH normally used for dyeing, also thioureas is suspect from a toxic aspect. (I) overcome this difficulty having a good solubility, compatibility and storage stability. 18. 8. 78 as 869839 (27pp597)

OREA ★ D25 14189B/08 ★BE-869-840
Hair colouring compsn. contg. oxidn. dyes - and 2,5-di:hydroxyphenyl alkanoic acid cpds.
L'OREAL SA 19.08.77-LU-077994
E14 (E12) (19.02.79) A61k

Compsn. for colouring keratinic fibres, partic. human hair, comprises $\geqslant$1 oxidn. colourant and also, as antioxidant, a cpd. of formula (I). In (I) R_1 and R_2 independently are H or 1-4C alkyl, pref. methyl, or propyl; X is H, an alkali metal such as Na or K, NH_4 or an alkanolamine such as mono-, di- or tri-ethanolamine and n is 1-4. The compsn. is used by mixing it with a cosmetic oxidant, applying for 5-45 mins. rinsing and drying.



(I)

(I) where at least one of R_1 and R_2 is alkyl are new.

(I) are used to replace cpds. presently used such as ascorbic acid, mercaptans, sodium dithionite and sodium sulphite all of which have a number of disadvantages. (I) enhance storage stability and have no undesirable side effects. 18. 8. 78 as 869840 (34pp597)

COLG ★ D25 14201B/08 ★BE-871-082
Washing powders based on zeolite(s) and nonionic detergent - with pyrophosphate, or carbonate with bi:carbonate or silicate, for washing polyester based clothes etc.
COLGATE PALMOLIVE CO 06.10.77-US-839781 (06.10.77-US-839779)
E37 (01.02.79) C11d

A detergent compsn. for washing clothes etc. contains (a) a zeolite ion exchanger, (b) a nonionic detergent and (c) a water-soluble additive salt which comprises an alkali metal pyrophosphate or a mixt. of alkali metal carbonate/bicarbonate or/an alkali metal silicate. The proportions of (a):(b):(c) are 1:0. 1-2. 5:0. 2-5.

Prepn. of a free-flowing particulate detergent compsn. of apparent density $>$0. 6g/ml, comprises spray drying a mixt. of zeolite ion exchanger, water, sodium carbonate or sodium carbonate/bicarbonate to a moisture content of 2-16%. The zeolite/carbonate or carbonate/bicarbonate ratio is 1:0. 5-3. 6, the proportion of bicarbonate being 0. 2 2. When $NaHCO_3$ is absent, the particles are mixed 0. 1-0. 0. 3 pt. of particulate hydrated sodium silicate and the dry product is also mixed with 0. 2-1. 6 pt. liquid nonionic detergent to absorb it.

The product enables use of phosphorus contg. products which are superior to anionic detergent products contg. pentasodium tripolyphosphate esp. on synthetics such as polyester cotton. They also have reduced P content. 6. 10. 78 as 871082 (+6. 10. 77-US-839780) (51pp597)

ALBR ★ D25 14257B/08 ★CA 1047-877

Dry, free flowing granular sequestrant compsn. - contg. alkali metal phosphate, poly:phosphoric acid and sodium (bi)carbonate

ERCO INDS LTD 13.06.77-US-806197 (13.12.74-GB-053900)

E34 (E36) (06.02.79) C11d-10

Compsn. comprises granules made from (a) 65-75. 5wt. % hydratable alkali metal phosphate (I); (b) 9. 2-30 wt. % polyphosphoric acid (II) of P_2O_5 content 75-80%; (c) 1. 8-23wt.% Na_2CO_3 and/or $NaHCO_3$ (III), and (d) 4-15 wt. % water. The granules have bulk density 0. 5-0. 75 g/cc; oil absorbancy 60-80% and when dissolved in water give a soln. of pH 7-8.

The bulk density is esp. 0. 55g/cc; oil absorbancy 75% (I) is $Na_5P_3O_{10}$ (Ia) and (II) has P_2O_5 content 81-82%. Used as a sequestrant for detergents, cosmetics etc.

The granules can be made by dry blending the components, then granulating with water. 12. 12. 75 as 241918 (17pp1251)

INTT ★ D25 14261B/08 ★CA 1048-055

Ammonium or alkali metal mannoheptonate prodn. - by direct conversion of ammonium or alkali metal salt of mannose bi:sulphite using cyanide salt in alkaline solvent

ITT INDS INC 02.07.75-US-592599

C04 E12 M14 (06.02.79) C07c-51

An ammonium or alkali metal salt of mannose bisulphite is directly converted to an ammonium or alkali metal mannoheptonate salt by reacting it with a molar equiv. of an alkali metal cyanide salt in a solvent at pH$>$9.

Sodium mannoheptonate is useful as a metal chelation or complexing agent in alkali washing cpds., detergents, scale inhibitors, photographic processing cpds. and phosphatising agents. It is also useful as a dissolving agent for oxides such as rust and is a metal cleaning agent. It forms chelates with many metals and is useful in chelated form as an agricultural micronutrient. 30. 6. 76 as 256054 (9pp)

HENK ★ D25 14300B/08 ★DT 2733-969

Detergent compsn. for cold-washing textiles - contains alkoxylated amino-amide and anionic, nonionic and/or zwitterionic surfactant

HENKEL KG AUF AKTIEN 28.07.77-DT-733969

A97 E16 (E15) (15.02.79) C11d-03/32

Textile detergent compsn. contains (a) an anionic, nonionic and/or zwitterionic surfactant (A), and (b) 0. 3-3 (0. 5-2. 5) wt. % alkoxylated aminoamide with formula $R^1\text{-}CO\text{-}NH\text{-}R^2\text{-}NR^3R^4$ (I). Wt. ratio (A): (I) is 50:1 to 2:1 (30:1 to 2:1).

In (I) R^1CO- is an opt. unsaturated 8-22C fatty acid or hydroxy-fatty acid gp.; R^2 is aliphatic or cycloaliphatic hydrocarbyl or $-R^5\text{-}N\left[(CH_2CHR^6\text{-}O)_m\right]\text{-}R^5\text{-}$, in which R^5 is 2-4C alkylene and R^6 is H or Me; R^3 is $-(CH_2CHR^6\text{-}O)_n\text{-}H$; R^4 is H or $-(CH_2CHR^6\text{-}O)_o\text{-}H$ and the sum m+n+ o is 2.5-8.

The compsns. can be used for washing with cold water, at 10-30 (15-25)°C. The addn. of (I) synergetically increases the washing power of (A), esp. in cold wash-baths. Surfactant and phosphate quantities can be reduced. 28. 7. 77. as 733969 (28pp200)

HENK ★ D25 14301B/08 ★DT 2733-970

Alpha-cyano-fatty acid hydroxyalkyl-amide detergent components - used in combination with surfactant(s) for cold washing textiles e.g. by machine

HENKEL KG AUF AKTIEN 28.07.77-DT-733970

E16 (15.02.79) C07c-121/16 C11d-07/32

New α-cyanofatty acid-N-hydroxyalkyl amides have formula $R^1\text{-}CHCN\text{-}CONR^2R^3$ (I) (where R^1 is 6-20C alkyl, R^2 is 2-6C hydroxyalkyl, opt. interrupted by an oxy- or imino gp. and R^3 is H or a hydroxyalkyl R^2 gp.). The cpd. $n\text{-}C_{12}H_{25}CHCNCONH(CH_2CH_2OH)$ is prepd. by reacting equimolar proportions of $C_{12}H_{25}CHCNCOOEt$ and $HOCH_2\text{-}CH_2NH_2$.

(I) are used as wash-active ingredients in cleansing and detergent compsns., esp. detergents for cold washing textiles by machine. The use of as little as 0. 3-2. 5 (0. 5-1. 5) wt. % (I) synergetically increases the washing power of surfactants, esp. in cold water baths, e, g. at 10-30 (15-25)°C. 28. 7. 77. as 733970 (28pp200)

FARH ★ D25 14304B/08 ★DT 2734-013

Heavy wash textile detergent - contains lower penta:sodium tri:phosphate with added alkali silicate to prevent fabric incrustation

HOECHST AG 28.07.77-DT-734013

E34 (15.02.79) C11d-07/16

Detergent compsn. for washing textiles contains (by wt.) 3-15% alkali silicate (I) having an $M_2O\text{:}SiO_2$ ratio $\geqslant$1:1. pref. 1. 5-2:1 (where M is K or Na), and 10-30% $Na_5P_3O_{10}$ (II).

Addn. of (I) reduces (II)-proportion required in compsn. without causing fabric incrustation after repeated washing. The detergent compsns. can be prepd. by adding (I) to a detergent slurry before spray-drying, or by adding (I) to detergent powder. The detergent compsns. can also be produced by preparing (I) during the spray-drying of the detergent slurry, by adding water-glass having $M_2O\text{:}SiO_2$ ratio $\leqslant$ 2:1, together with the required alkali hydroxide. 28. 7. 77. as 734013 (8pp200)

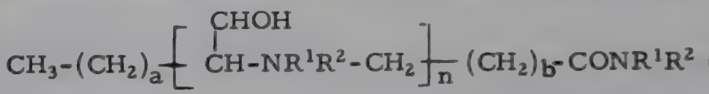
HENK ★ D25 14318B/08 ★DT 2734-596

Detergents for cold-washing textiles - contain amino-hydroxystearic acid amide prepd. by reacting epoxy-stearic acid with ammonia or amine

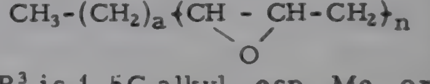
HENKEL KG AUF AKTIEN 01.08.77-DT-734596

E16 (15.02.79) C07c-103/50 C11d-03/32

Aminohydroxystearic acid amides having formula (I)



$$CH_3\text{-}(CH_2)_a\left[\overset{\displaystyle\overset{CHOH}{|}}{CH}\text{-}NR^1R^2\text{-}CH_2\right]_n(CH_2)_b\text{-}CONR^1R^2 \quad (I)$$

(where n=1 and a= 7, or n = 2 and a = 4, or n = 3 and a = 1; R^1 and R^2 are H, 1-12C alkyl, 2-15C hydroxyalkyl or 2-15 aminoalkyl) are prepd. by (a) reacting an epoxystearic acid ester having formula  $CH_3\text{-}(CH_2)_a\{\underset{\diagdown O\diagup}{CH - CH}\text{-}CH_2\}_n(CH_2)_6\text{-}COOR^3$ (II) (where R^3 is 1-5C alkyl, esp. Me, or a polyhydric 2-6C alcohol gp., the remaining OH gps. of which are esterified with epoxy fatty acid esters, opt. als with satd. or unsatd. fatty acid esters) with $\geqslant$ n + 1 mol amine having formula HNR^1R^2 (III), opt. in a solvent, at 130-200°C, and (b) sepg. volatile by-products.

(I) are used as active washing components in cleansing agent- and detergent compsns., esp. for cold-washing tex tiles. The addn. of as little as 0. 3-3 (0. 5-2. 5) wt. % (I) to standard surfactant(s) synergetically increases washing power, esp. in cold water baths. Washing power of (I) is unimpaired on using mixts. contg. $>$50 mol. % (I) together with reaction prods. of fatty acid esters and (III). 1. 8. 77. as 734596 (31pp200)

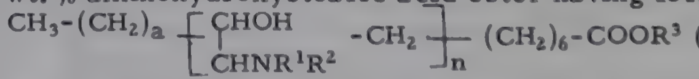
HENK ★ D25 14319B/08 ★DT 2734-597

Cold-washing textile detergent compsn. - contains amino-hydroxy stearic acid ester and anionic, nonionic and/or zwitterionic surfactant

HENKEL KG AUF AKTIEN 01.08.77-DT-734597

E16 (15.02.79) C11d-03/26

Textile detergent compsn. contains an anionic, nonionic and/or zwitter-ionic surfactant (A) and 0. 3-3 (0. 5-2. 5) wt. % aminohydroxystearic acid ester having formula



$$CH_3\text{-}(CH_2)_a\left[\begin{array}{l}CHOH\\ |\\ CHNR^1R^2\end{array}\text{-}CH_2\right]_n(CH_2)_6\text{-}COOR^3 \quad (I)$$

(where n= 1 and a = 7 (pref.), or n = 2 and a = 4, or n = 3 and a = 1; R^1 and R^2 are H, 1-12C alkyl, 2-15C hydroxyalkyl or aminoalkyl and R^3 is 1-5C alkyl, esp. Me). Wt. ratio (A): (I) is 50:1-2:1 (30:1-2:1).

The compsns. can be used in cold water, e. g. tap wate at 10-30(15-25) °C. The addn. of (I) synergetically increa ses washing power of (A) at low temps., surfactant and phosphate proportions can be reduced. Detergent comps for washing cotton or cotton/polyester at 20°C. contained 1% Me 9(10)-amino-10(9)-hydroxystearate, 8% Na dodecy benzyl sulphonate and 3% tallow alcohol + 7 C_2H_4O. 1. 8. 7 as 734597 (27pp200)

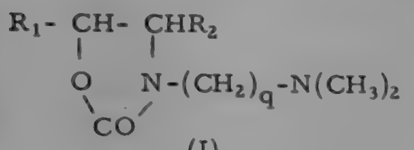
HENK ★ D25 14451B/08 ★DT 2832-679

Textile detergent compsn. having controlled foam - is effective at lower temps. and without a pre:wash

HENKEL KG AUF AKTIEN 01.08.77-OE-005678

A97 E16 (A28 E13) (15.02.79) D06l-01/12

Detergent compsn. comprises (a) 3-15 wt.% of $\geqslant 1$ nonionic surfactant contg. 10-20C and 3-20 ethyleneglycol ether gps., (b) 0-20 wt.% of $\geqslant 1$ anionic surfactant selected from sulphonates, sulphates and soaps whose hydrocarbon gp. contains 10-24C, (c) 20-60 wt.% of $\geqslant 1$ water-(in)sol. alkaline earth-binding builder, (d) 0.3-3 wt.% of $\geqslant 1$ polyamide contg. $\geqslant 1$ hydroxyalkyl or polyethylene glycol ether gp. whose cloud pt. (DIN 53917) in water is > 20°C and/or $\geqslant 1$ cpd. of formula $R_1\text{-}CH_2CO\text{-}[N(Y)\text{-}(CH_2)_q]_p\text{-}N(Y)\text{-}(CH_2CH_2O)_mH$, $R_1\text{-}CHX\text{-}CHR_2\text{-}[N(Y)\text{-}(CH_2)_q]_p\text{-}N(Y)\text{-}(CH_2CH_2O)_mH$, $R_1\text{-}CHX\text{-}CHR_2\text{-}HN\text{-}[(CH_2)_q\text{-}NH]_p\text{-}COCH_2OCH_2CH_2OH$ or cpd. (I) (where R_1 is 8-20C alk(en)yl, R_2 is H or 1-16C alkyl $R_1 + R_2$ = 8-20C), X is H, OH or $(CH_2CH_2O)nH$, Y is H or $(CH_2CH_2O)_nH$ m = 1-3, n= 0-3, p = 0 or 1 and q = 2 or 3). (e) 0.05-1 wt.% of dimethylpolysiloxane antifoam and (f) 0-40 wt.% other detergent ingredients.



(I)

The detergent is used to wash textiles, in amts. of 2-12 g/l with a bath ratio (Kg textile per l. bath) of 1:3-30 and is operative for 20-75 mins. (t_1) at 15-35°C (t_2), $t_1 + t_2$ being 35-90. The textile is mechanically agitated for 1/3 of the washing cycle. The detergent cleans 'delicates' effectively in shorter times (i.e. without any prewash) at low temps. and has a controlled foam. 26.7.78. as 832679 (23pp922)

ALBR ★ D25 14454B/08 ★DT 2832-814

Conc. dilutable aq. surfactant compsn. - contains mixt. of amphoteric and/or Zwitterionic surfactants and anionic surfactants

ALBRIGHT & WILSON LTD 26.07.77-GB-031350

(15.02.79) C11d-01/94

Compsn. consists of water and a mixt. (A) of active ingredients, and can be diluted to 5-30 wt.% active ingredient concn. The mixt. (A) consists of $\geqslant 10$ (>40) wt.% of $\geqslant 1$ amphoteric or zwitterionic surfactant and $\geqslant 10$ wt.% of $\geqslant 1$ anionic surfactant, opt. together with $\geqslant 1$ nonionic surfactant. The compsn. is predominantly present in G-phas.

The compsns. can be used for industrial and domestic purposes. Pumpable surfactant mixts. can be prepd. at active ingredient concns. exceeding twice the max. achievable so far, whereby transport and storage costs are saved. The compsns. have bacteriostatic activity. They are easily diluted, without gelling, or adding water. 26.7.78. as 832814 (24pp200)

GLOB- ★ D25 14476B/08 ★DT 2833-770

Cistern mounted lavatory cleaning agent - with composite cleaner which disintegrates gradually in water, contained in perforated container

GLOBOL-WERK GMBH 03.08.77-CH-009611

A97 Q42 (15.02.79) E03d-09/03

Cleaning agent inserts for lavatory cisterns comprise a container fixed to the wall of the tank, contg. a solid cleaning compsn. which disintegrates gradually in contact with water. The container has a solid base and carries holes in the side wall which are below the level of water in the cistern. As the solid cleaning agent gradually disintegrates, an aq. layer contg. the disintegration prods. forms in the lower part of the container below the level of the holes in the side wall. The cleaning agent insert projects above the level of the holes in the side wall.

The design of the cleaning agent container ensures that a charge of cleaning agent is released into the water in the cistern each time it is flushed, independent of how frequently flushing occurs or how quickly or slowly the cistern refills. The solid cleaning agent may contain e.g. non-ionic, anionic and cationic surfactants, Na sulphate, Na tripolyphosphate, Na pentachlorophenol, blue dye and perfume agent. 2.8.78. as 833770 (14pp513)

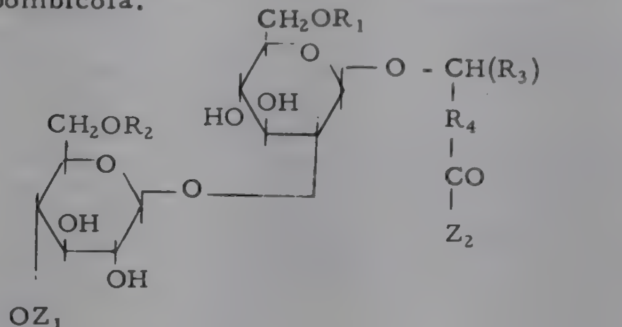
KAOS ★ D25 14599B/08 ★GB 2002-369

Dehydration purification of hydrated sophorolipid - by addn. of poly:hydric alcohol(s), to reduce viscosity of low water content materials

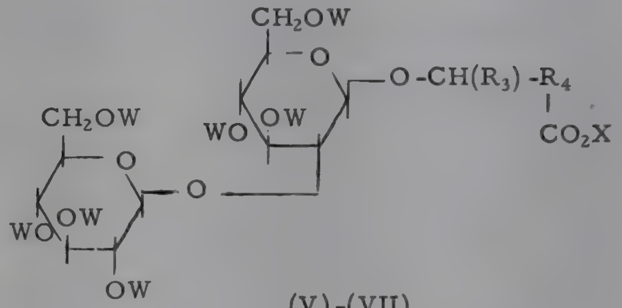
KAO SOAP KK 01.08.77-JA-092428

E13 (D16) (21.02.79) C07d-309/10 C07d-323/04

The dehydration purification of hydrated Sophorolipid (complex mixts. of cpds. (I) and (II)) or the sec. derivs. (V)-(VII) consists of the addn. of $\geqslant 1$ polyhydric alcohols $HO{+}C(R_8)HCH_2O{+}_m R_9$ (III) and/or $HO{+}CH_2CH(OH)CH_2\text{-}O{+}_n H$ (IV), then removal of H_2O by distn. in vacuo. Hydrated Soporolipid is obtd. by the culture of Torulopsis bombicola.



(I) and (II)



(V)-(VII)

In the formulae, R_1, R_2=H or MeCO; R_3= H or Me; R_4=opt. unsatd. hydrocarbon with 12-16C when R_3 is H, and 11-15C when R_3 is Me; for (I) Z_1Z_2 are together as bond, for (II) Z_1=H, Z_2=OH; for (V) X-R_5, W=H, or for (VI) X=R_6, W=H, or for (VII) X=R_7, W=R_7; R_5=H or Me; R_6= 2-20C alkyl; R_7=2-5C hydroxyalkyl; R_8=H or Me; R_9=H or 1-5Calkyl; mn=1-6).

Addn. of (III) and/or (IV) considerably reduces the viscosity of Sophorolipid (and derivs.) and allows contained H_2O (after isolation with EtOAc, etc.) to be removed completely an essential for deriv. formation (e.g. alcoholysis with acid catalyst to afford a hydroxy fatty acid polyhydric alcohol ester, suitable as an inter. for a large ring lactone musk useful as a perfume). Sophorolipid is a known complex mixt. of closely related cpds. ((I) and (II)) which is useful as a wetting agent, cleanser, and emulsifier possessing excellent hygroscopic and hydrophilic props., and which is compatible withskin physiology. Secondary derivs. (V)-(VII) possess good stability, and activity similar to the parent cpds.. 28.7.78 as 031468 (7pp478).

SATO/ ★ D25 14859B/08 ★J5 4005-919

Sulphation of higher fatty acid mono:glyceride - using sulphamic acid in presence of urea as catalyst, the sulphate obtd. being useful for detergent mfr. etc.

SATO J 13.06.77-JA-068876

E17 (D21) (17.01.79) C07c-139 C07c-141/08 C11d-01/28

In the sulphation of glycerine monoester and ethylene oxide adduct of higher fatty acid, the method comprises adding urea as the catalyst to the cpds. heating the mixt. to cause the formation of adduct, then adding sulphamic acid.

The method can be used to mfr. sulphate of glycerine monoester of higher fatty acid such as lauric acid, oleic acid, stearic acid, etc. having excellent properties as starting material or auxiliary material for prepg. liq. detergents, cosmetics, shampoo, etc. 13.6.77 as 068876 (4pp75)

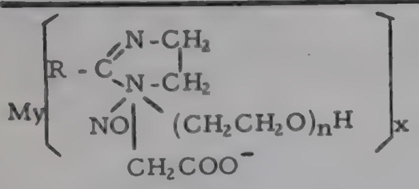
MIYO D25 11870T/08 =J7 9001-723

Washing compsns - contg polymeric surfactants, giving antistatic and soil-repelling properties

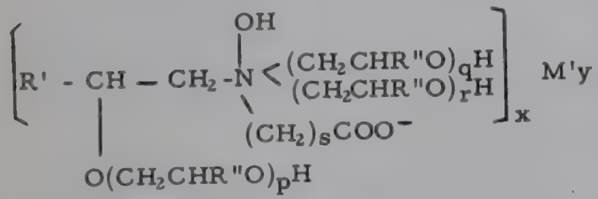
MIYOSHI YUSHI KK (MAR /) 04.08.70-JA-068145

*A97 E19 (29.01.79) *DT2139-074 +C11d-01/64*

The compsn. contains a cpd. of formula (I) solubilised in water by a cpd. of formula (II).



(I) (sic)



(II) (sic)

In the formulae R is 6-22C hydrocarbon; M is metal other than alkali; x and y are numbers determined by valency of M; R' is 6-26C hydrocarbon; R" is H or CH_3; n is any number; p, q and r are 1-50 s is 1 or 2; M' is Ca, Mg, Ba, Al or Ni.

(I) is high-melting and water-insoluble and is effectively solubilised in water by mixing with (II). It has excellent washing power at relatively low concn., and deposits on fabrics washed with the compsn. and provides durable anti-static property, soil-release property and softness. 4. 8. 70 as 068145, C11d-1/645 (29. 1. 79) MIYOSHI YUSHI KK (4pp83)

STAR- D25 09767B/05 =US 4106-901

Emulsifier-solvent scour compsns. - contg. emulsifier tri:component with specific solvent(s)

STAR CHEMICAL INC 31.08.76-US-719153

*A87 E19 F06 (15.08.78) *US4135-878 D01c-01 +D01c-03*

Cellulosic fibres are scoured, prior to dyeing, by treating them with an aq. caustic soln. contg. 0.05-10 wt.% (of fabric) of a scour compsn. which is stable in aq. solns. contg. $\geqslant$ 3% caustic at ambient temps. and $\leqslant$212°F.

It comprises 50-90 wt.% of a solvent medium of $\geqslant$1 inert organic solvent to provide a solvent medium having an ave. kauri butanol value of $\geqslant$45 and contg. (by wt.) (a) 5-35% of phosphate ester(s) of a 30-75% ethoxylated and/or propoxylated 8-24C aliphatic or aromatic alcohol, (b) 1-10% of $\geqslant$1 8-24C carboxylic acid or its salt and (c) 4-20% of (i) $\geqslant$ 1 of sulphonated 8-24C fatty acid or its salt, a 30-75% ethoxylated and/or propoxylated ester of an 8-24 C carboxylic acid, a 30-75% ethoxylated and/or propoxylated glyceride of an 8-24C hydroxy-contg. carboxylic acid and a sulphonated 1-18C alkyl diphenyl oxide or its salt, or (ii) $\geqslant$ 1 of a 30-75% ethoxylated and/or propoxylated 8-24C aliphatic or aromatic alcohol, prim. or sec. amine or mercaptan, sulphonated 1-18C alkyl benzene or its salt and 8-24C fatty diethanol amide.

The compsn. is used to treat textile materials and render them receptive to dyeing, and enhance the appearance of the material. 31. 8. 76 as 719153 (976)

RHON D25 05648Y/04 =US 4107-056

Hydrophilic polyacetal as antisoil agent for textiles - by acetalising prod. obtd. from diol phthalate deriv., polyoxyalkylene glycol and dihydroxyethyl amine

RHONE-POULENC INDUSTRIES 10.07.75-FR-022626

*A25 E19 F06 (A87) (15.08.78) *BE-844-006 D06m-13/12*

Aq. soln. contains 2.10^{-3}-5 wt.% of hydrophilic polyacetal polymer useful as soil release, anti-soil deposition and antistatic agent for textile substrates contg. polyester fibres.

The polymer is prepd. by reacting compsn. (I) : (A) 20-60 wt.% of component which is reaction prod. of a phthalic acid, anhydride or diester and $\geqslant$1 diol having a mol. wt. $<$ 300, (B) 40-80% of component comprising 1 : a mixt. of (a) 50-100 wt.% of cpd. $R(OC_xH_{2x})_n$-OH (where R is H or hydrocarbyl, x is 2, 3 or 4 and n is integer such that the mol. wt. is 300-10000, (b) 0-50 wt.% quat. dialkyl (diethanolamine $R'R''N^+(CH_2CH_2OH)_2X^-$ (where R' and R'' are each $<$ 5C alkyl or benzyl; and x is halogen or methylsulphate) or 2 : 100 wt.% of quat. ammonium cpd. contg. oxyalkylene units, of formula $R'R''N^+ (CH_2CH_2O)_mH(CH_2$-$CH_2O)_nH$ (where m and n are $<$15) with compsn. II.

Compsn. II comprises an aldehyde of formula R_1HCO (where R_1 is H or alkyl, 1-10C alkenyl or aryl). The number of mols of aldehyde is at least equal to half the total number of OH gps. in compsn. I. 9. 7. 76 as 703827 (9pp924)

ETHY D25 06256A/03 =US 4107-064

(2,3)-Di-carboxyalkoxy succinic acids - useful as lubricant additives, sizing agents, sequestrants and detergent builders

ETHYL CORP 03.05.76-US-682320 (16.06.71-US-153816)

*E17 F06 H07 (15.08.78) *US4066-687 +C11d-01/86*

Sequesterable metal ions in aq. soln. are sequestered by introducing into the soln., a sequestrant compsn. of 4,4'-carboxyalkoxy succinic acid (the carboxyalkoxy radical contg. 2-7C), or its water-sol. salt or mixt.; and a surfactant selected from anionic, cationic, nonionic, ampholytic and/or zwitterionic detergents, in a surfactant : sequestrant wt. ratio of 10 : 1-1 : 10.

Pref. the sequesterable metal ion is Ca or Mg; and the water-soluble salt is alkali(ne earth), (alkyl)ammonium, sodium or potassium salt. 15. 8. 77 as 824401 Div. ex. 3980578, 4066687 C. i. p. 3784486 (+ 3. 8. 73, 3. 5. 76 - US - 385545, 682320)(6pp976)

COLG ★ D25 15568B/08 ★US 4107-065

Peroxy cpd. bleaching compsns. - activated with aromatic or heterocyclic sulphonyl halide(s)

COLGATE PALMOLIVE CO 05.11.75-US-629117

A97 E14 (D34) (15.08.78) C11d-07/18

Solid bleach compsns. comprise alkali metal perborates and/or alkali metal percarbonates and as activator a lower acylaminobenzenesulphonyl halide, wherein the acyl gp contains 1-3C and the halogen is Cl or Br. T wt ratio of active O in the peroxy cpd. to activator is in the range 1:10 to 1:3. Detergent formulations contg. the combination are also claimed.

The compsns. are active at low wash temps., but are not so harsh in their action that damage to fabrics and dyes results. Pref. the compsn. includes higher fatty alcohol-polyethylene acids condensate. 5. 11. 75 as 629117(11pp955)

PROC D25 01987A/02 =US 4107-067

Gelatinous detergent compsn. for direct use and for washing - contg. alkylene oxide condensate electrolyte and water

PROCTER & GAMBLE CO 25.06.76-US-699762

*A97 (A25) (15.08.78) *BE-856-069 C11d-03/07 C11d-17*

A gelatinous liq. or flowable gel detergents compsn. has $>$ 40 wt.% nonionic alkylene oxide detersive surfactant, 2-10 wt.% detergency builder salt, and balance of water.

Detergent compsn. is in form of an inversed emulsion contg. a first continuous phase contg. hydrated, nonionic alkylene oxide detersive surfactant as neat liq. crystals, and a second disperse phase contg. an aq. soln. of builder salt being homogeneously distributed throughout continuous phase. Pref. compsn. contains 45-70 wt.% hydrated neat liq. crystals. Nonionic surfactant is a polyethylene oxide -based compsn., esp. as condensate of ethylene oxide and hydrocarbyl substituent having HLB of 9-14. Builder salt is 3-8 wt.% compsn. of water-soluble phosphate, polyphosphate, pyrophosphate, acid phosphate, pyro- or polyphosphate and hexametaphosphate.

Compsn. is used for direct application to fabrics as grease and spot removers, as well as a commercial detergent in the main wash. 25. 6. 76 as 699762 (7pp931)

COLG D25 63065V/36 =US 4107-095

Liquid mild detergent compn. - contg. water soluble salts of olefin sulphonate and alkyl ethoxy sulphate with foam promoter

COLGATE PALMOLIVE CO 11.04.73-US-350268

*E19 (15.08.78) *BE-813-503 C11d-01/14 C11d-03/34 +C11d-17/08*

An aq. liq. detergent compsn. contains 25-35 wt.% water-soluble salt of the reaction prod. of sulphonated 12-18C alpha olefin or mixt. of reaction prod. and water-soluble salt of 10-18C ethoxylated alcohol sulphate contg. 1-5 ethenoxy gps. Reaction prod. and sulphate salts of sodium potassium, ammonium and mono-, di- and triethanolammonium salts, 0.5-8 wt.% 8-16C alkanoic acid ethanolamide.

Alkanoic acid ethanolamide is a mono-, di- or ethoxylated monoethanolamide contg. 1-4 ethenoxy gps. and 2-6 wt.% an anti-gelling agent of water-soluble salt of sulphosuccinate or allyl sulphonate. Wt. ratio of olefin sulphonate to anti-gelling agent is 16-2 : 1 in aq. medium compsn. is resistant to gel formation and readily dissolves any gel formed.

Compsns. are esp. used as light duty detergents used in dishwashing and laundering fine fabrics. Have good foaming power, foam characteristics, detergency, biodegradability, storability, low toxicity and desirable viscosity. 11. 4. 73 as 350268 (6pp931)

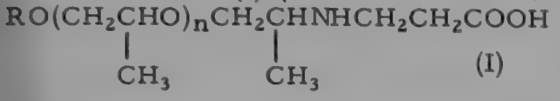
TEXC D25 08033B/05 =US 4107-096

Amphoteric surfactants having good solubility at isoelectric point - are prepd. from aminated propoxylated aliphatic hydrocarbon and acrylic acid

TEXACO DEV CORP 11.10.77-US-840940

*A25 E16 (A97) (15.08.78) *BE-869-382 +C07c-101/04 C11d-01/88*

Low-foaming, surface active beta-amino propionic acids are of formula (I) (where R is 6-18C aliphatic hydrocarbon and n is 0-13. Pref. R is 8-12 C alkyl and n is 0. 5 -1. 0, or 1-13). An improved detergent compsn. contains 0. 1-10 wt. % of (I) maintaining water solubility in pH range 1-11.



$$RO(CH_2\underset{CH_3}{\underset{|}{C}}HO)_nCH_2\underset{CH_3}{\underset{|}{C}}HNHCH_2CH_2COOH \quad (I)$$

Prepn. of (I) is from ammonolysis of amine moiety with acrylic acid or a methacrylate added in equivalent quantities (or with 2-3 times molar amts. of acrylic acid w. r. t. amine), in the presence of a solvent such as water, lower aliphatic alcohols and polyhydric materials e. g. ethylene or propylene glycol or glycerol. Reaction is at 25-200°C pref. 60-160°C at 1-10 atmos. pressure, normally in a blanket of nitrogen.

Amphoteric surfactants so prepd. show slight changes in solubility with pH and exhibit superior wetting properties and weak foam strength, desirable esp. where foamed is unwanted. 11. 10. 77 as 840940 (4pp931)

SAGA- D25 18218Y/11 #US 4107-360

Conditioning deformable gelatin microcapsules contg. stain remover - by coating outside of capsules with soln. of water-insoluble synthetic material in chlorohydrocarbon

SAGAPHA AG 13.11.75-DT-551061 (04.11.76-US-738890)

*A97 +P42 Q31 Q32 Q34 (A82) (15.08.78) *BE-847-977 B05d-03/02*

A basically anhydrous pasty stain remover, which is free of low mol.wt. alcohols, is packaged in portion capsules using gelatine as the supporting wall material. The capsules are sufficiently large only to contain sufficient stain remover to treat an individual stain, and is deformable under pressure.

The improvement comprises coating the (finished, filled) exterior of the capsule with a soln. of water-insoluble plastic in a chlorinated hydrocarbon. The soln. consists of 5-20 pts. post-chlorinated PVC per 100 pts. finished soln. in chloroform, methylene chloride, dichloro-ethane, trichloroethane and/or trichloroethylene. Pref. the coating is carried out in a fluidised bed drier.

The capsules can be stored directly, i. e. without inclusion in push-out packages, and in areas of high air humidity and temp. 28. 6. 77 as 810773 (3pp976)

SOLV D25 07496W/05 =US 4107-411

Water-soluble poly(alpha-hydroxy-acrylate) salts - prepd from dichloropropionic acid by gas-phase dehydrochlorination etc.

SOLVAY & CIE 18.07.73-LU-068037

*A14 (A91) (15.08.78) *BE-817-678 C08f-120/06 +C08f-02/10*

Prepn. of water-soluble salts of poly-α-hydroxyacrylic acid or its alkyl derivs. comprises (a) thermally dehydro-chlorinating, in gas phase in presence of catalyst, α, β-dichloro-propionic acid (or its alkyl derivs) to corresp. α-chloroacrylic acid; (b) polymerising ghe latter in water in presence of free radical polymerisation catalyst to obtain a solid prod. and (c) neutralising prod. with aq. alkali metal hydroxide or NH_4OH.

Pref. (a) is effected using a calcined alumina catalyst at 200-400°C. Catalyst in (b) is pref. potassium persulphate (PP), pref. using 0. 001-0. 1 (0. 005-005) moles of PP per mole α-chloro-acrylic acid. Temp. for step (b) is pref. 40-100 (60-80)°C.

Prods. are useful as sequestering agents or builders. 15. 10. 75 as 622503 (+ 18. 7. 74 - US - 489718)(4pp963)

HENK D25 10269A/06 =US 4139-475

Application of fabric softener to washed linen during drying - using a paste of the active material in a sealed sachet, with a slit film as one face

HENKEL KG AUF AKTIEN 05.08.76-DT-635257

*A92 E16 +Q31 Q34 (13.02.79) *BE-857-470 D06m-13/34*

Laundry finishing agent for mechanical drier comprises a paste of (1) textile fabric softeners; (2) textile antistatic agents; (3) mixts. of (1) and (2); (4) mixts. of (1) and/or (2) with disinfectant; (5) mixts. of (1) and/or (2) with odourant; and/or (6) mixts. of (1) and/or (2) with disinfectant and odourant.

Substances used are mixed with water contg. 0-5 wt. % organic solvent to give a paste which is contained in a pillow-like form made of film. One side is impermeable, and the other has slits of such dimensions which, at room temp. and in the absence of pressure on the article, are normally closed and obstruct issuance of paste from the article.

Effective components are more uniformly to the laundry, the slits gradually opening and releasing components. 19. 7. 77 as 816921 (10pp963)

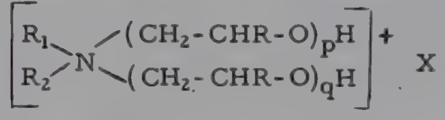
DUPO ★ D25 15843B/08 ★US 4139-477

Fabric softeners for clothes dryers - comprising quat. ammonium salt, higher alcohol and hydrocarbon

DU PONT DE NEMOURS CO 16.03.78-US-887331

A87 E16 F06 (13.02.79) D06m-13/34

Fabric softener compsn. comprises (a) 20-65 wt. % of a quat ammonium salt (I) and (b) 35-80 wt. % of a mixt. of high-mol-wt. alchol and hydrocarbon. (I) is of formula:



$$\left[\begin{matrix}R_1 \\ R_2\end{matrix} > N < \begin{matrix}(CH_2\text{-}CHR\text{-}O)_pH \\ (CH_2\text{-}CHR\text{-}O)_qH\end{matrix}\right]^+ X^-$$

(where X is an anion; R is H or Me; R_1 is 12-24C alkyl; R_2 is 1-4C alkyl; p+q =2-20).

The compsns. can be applied to a substrate in use in automatic clothes dryers. They soften the fabric being dried and reduce static cling without staining or reducing the wicking action of the fabric. 16. 3. 78 as 887331 (6pp367)

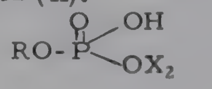
KAOS D25 45306Y/26 =US 4139-485

Detergent compsns. contg. salts of mono alkyl or alkenyl phosphates - causing only minor irritation to the skin

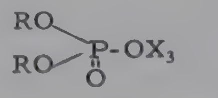
KAO SOAP KK 24.08.76-JA-101004

*E11 (13.02.79) *BE-851-806 +C11d-03/36 C11d-07/36*

Detergent compsn. having a low irritation effect on human skin has the organic surfactant component consisting of (A) 100-80 wt. % monoalkyl or monoalkenyl phosphate of formula (I) and balance a dialkyl or dialkenyl phosphate of formula (II).



(I)



(II)

In the formulae, R is alkyl or alkenyl having an average of 10-16C. X_3 is H, Na, K, Li, NH_4, 1-3C alkyl ammonium or 1-3C hydroxyalkylammonium. X_2 is Na, K, Li, 1-3 C alkylammonium or 1-3C hydroxy 1-3C alkyl ammonium. The salts have a krafft point of <55°C and their aq. solns. a pH of 5-9.

The compsn. has excellent deterging and foaming powers. 22. 2. 77 as 770455 (10pp393)

PROC ★ D25 15847B/08 ★US 4139-486

Detergent compsns. contg. ortho- and pyrophosphate builders - produce less deposits within washing machines and on fabrics

PROCTER & GAMBLE CO 22.03.77-US-779961

E34 (E33) (13.02.79) C11d-03/07 C11d-07/16

Detergent compsn. with a free alkalinity of 6-8 wt. % NaOH comprises (a) 1-70 (10-30) wt. % anionic and/or nonionic surfactants, (b) 5-50 (15-33) wt. % Na/K ortho- and pyrophosphates, the wt. ratio of ortho:pyro being 9-3:2-7 and (c) 0. 1-10 (1-5) wt. % of a water-sol. Mg silicate having a molar SiO_2:MgO ratio of 3. 2-1:1-4.

The compsn. forms little or no deposit on the surfaces of the drums (and esp. of the heating elements) in washing machines and less deposits of insoluble inorganic matter on fabrics washed with hard water. 22. 3. 77 as 779961

(5pp922)

LIOY D25 50647Y/29 =US 4139-498
Conc. olefin-sulphonate soln. prodn. - for use in mfr. of washing and cleaning compsns.
LION FAT & OIL KK 26.12.75-JA-154809
*A97 E17 (13.02.79) *DT2657-620 +C11d-01/14 C11d-03/37 C11d-11/04*

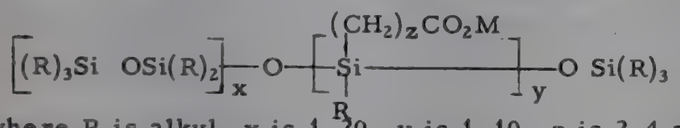
An aq. olefin sulphonate soln. is mfd. by neutralising and hydrolysing the reaction prod. obtd. by sulphonating an a-olefin contg. 10-20C, by performing neutralising and hydrolysing steps in the presence of an alkaline material in amt. equal to sum of amt. A plus amt. B, where A is stoichiometric amt. of alkaline material to effect neutralisation and hydrolysis of reaction prod. and B is 0.2-1.5 times amt. of A.

PVA with degree of polymerisation of 500-2000 where its amt. is 0.2-2.0 times amt. of B. Water is in amt. effective to make water content of prod. of neutralising and hydrolysis steps $<$50%. Pref. alkaline material is NaOH, KOH, Na_2CO_3 or mixts., to 15-35 wt.% soln.

a-olefin sulphonates are prepd. at high concn. having a low viscosity for use in granular heavy duty detergents. Prepn. does not interfere with prepn. of detergent slurry. 16.12.76 as 751164 (4pp931)

WITC ★ D25 15873B/08 ★US 4139-546
Anionic silicone defoamer for use in laundry detergent compsn. - prepd. by reacting di- and tri-alkyl:halo:silane and beta-cyanoalkyl:alkyl:di:halo:silane in presence of alkali hydroxide
WITCO CHEMICAL 06.09.77-US-830552
A26 E11 (A97) (13.02.79) C07f-07/08

Prepn. of an anionic silicane defoamer of formula (I)



$$\left[(R)_3Si\ \ OSi(R)_2\right]_x-O-\left[\underset{R}{\overset{(CH_2)_zCO_2M}{Si}}-\right]_y-O\ Si(R)_3 \qquad (I)$$

(where R is alkyl, x is 1-20, y is 1-10, z is 2-4 and M is a monovalent cation) comprises reacting a dialkyldihalosilane, trialkyl halosilane and β-cyanoethyl- or β-cyanopropyl alkyldihalosilane in the presence of MOH, the alky of the silane being methyl or ethyl. Laundry detergent compsn. consists of a sulphonate or phosphate detergent and $\leqslant$ 1 wt.% of (I).

Laundry detergent exhibits reduced foaming even after several months storage. (I) retains its stability in the presence of large amts. of nonionic and/or anionic surfactants. (I) also reduce foaming tendency in herbicides, cleansers, adhesives, cutting oils, lubricants, textile dyes, latex paints and fuel oils. 6.9.77 as 830552 (3pp966)

SHEL ★ D25 15880B/08 ★US 4139-56
Acid catalysed alkylene glycol alkylation with olefin - using liq sulphur di:oxide as solvent, giving mono:ether cpds. useful a detergents
SHELL OIL CO 03.10.77-US-838506
E17 (13.02.79) C07c-41/06

Reaction of olefins with (poly)alkylene glycols (I) at 25-250°C in presence of acid catalyst to give (poly)alkylene glycol monoalkyl ethers (II) is improved when liq. SO_2 is present. Reaction is esp. at 1-200 atmos. with mole rati olefin:(I):catalyst (H equiv):SO_2 of 1:1-30:0.01-10:1-100. Catalysts are pref. Bronsted acids with pKa $<$2.5 or Lewis acids with heats of complex formation with pyridin more exothermic than 9 kcal per mole.

(II) are industrial detergents. Use of SO_2 solvent improves conversion and selectivity, esp. it prevents polymerisation to higher glycols. 3.10.77 as 838506 (4pp1251)

See Also

D13 US 4107425

AARH 11.07.77 AARHUS OLIEFABRIK A/S D13 E17 #SW 7708-043
Rearranging 1,2-di:glyceride to 1,3-di:glyceride - 08184B/05
ACTI- 28.02.77 ACTIONITE CO D12 =US 4138-767
Stripping casings from sausage links etc. - 39482Y/22
*AGEN 14.06.77 AGENCY OF IND SCI TECH A35 D15 J09 *J5 4004-903
Cellulosic oil recovery from condensed water - 14638B/08
*AGRI= 06.09.76 AGRIC ELEC RES D14 J04 *SU -601-039
Feeding free-flowing materials into pressurised appts. - 15184B/08
AGRO- 03.09.75 AGROTECHNIKA NP D15 =US 4139-457
Water treatment plant - 20376Y/12
*AIRP 25.07.77 AIR PRODUCTS & CHEM INC C03 D16 (C04 D13) *DT 2827-474
Biomass with high phosphorus and nitrogen content - 14434B/08
AJIN 30.04.76 AJINOMOTO KK D16 =US 4106-989
Heat stable cellulase prodn. - 91063Y/51
*AJIN 10.06.77 AJINOMOTO KK D12 (D16) *J5 4005-057
Deodorisation of fish extract - 14726B/08
*AJIN 10.06.77 AJINOMOTO KK D13 *J5 4005-068
Hygroscopic powdery seasoning prepn. - 14730B/08
*AJIN 16.06.77 AJINOMOTO KK B04 D16 E13 (B02) *J5 4005-976
7-Glycyl:propylamino-4-methyl:coumarin - 14881B/08
*ALBR 13.12.74 ERCO INDS LTD D25 E34 (E36) *CA 1047-877
Dry, free flowing granular sequestrant compsn. - 14257B/08
ALBR 21.06.77 BUSH BOAKE ALLEN LT D23 E13 =GB 2002-358
Tetra:methyl-oxa-bi:cyclo:decene derivs. - 02358B/02
*ALBR 26.07.77 ALBRIGHT & WILSON LTD D25 *DT 2832-814
Conc. dilutable aq. surfactant compsn. - 14454B/08
ALFA 23.01.74 DE LAVAL SEPARATOR D15 =CA 1048-172
Aerating propellor for biological purificn. of waste water - 34225W/21
ALFA 16.05.77 ALFA-LAVAL AB D17 =FR 2391-279
Starch and by/products prepn. from corn - 82169A/46
ALKU 17.05.77 AKZO NV D13 (D23) =FR 2390-909
Soya flour prepn. for human food from soybeans - 68940A/39
ALKU 17.05.77 AKZO NV D23 (D13) =FR 2391-272
Soya oil prepn. from soybeans - 68939A/39
ALKU 27.06.77 AKZO NV A92 D25 E17 =DK 7802-850
Alkaline carbonate-acid detergent compsn. - 78401A/44
ALLC 05.08.77 ALLIED CHEMICAL CORP A85 D15 J03 (A18 A91) #NL 7708-679
Bipolar membrane of polyolefin matrix and vinyl polymer surface - 82742Y/46
*ALLD/ 12.09.77 ALLDREDGE R L D15 J01 *US 4139-473
Graded sand filter with reusable imperforate diaphragm - 15841B/08
ALLI- 28.01.75 ALL INDIA INST MED B04 D16 =IL --47-177
Contraceptive vaccine for women - 03897X/03
ALTM/ 16.05.77 ALTMEYER H J D15 =FR 2391-166
Sewage processing before biological stage - 86330A/48
ALZA 28.01.75 ALZA CORP A96 B07 C03 D21 (A23) =IL --48-799
Biodegradable ortho-ester polymers - 48032X/26
AMBI- 17.01.74 AMERICAN BIOCULTURE C04 D16 =CA 1047-784
Improving soil structure with algae - 39240W/24
AMCY 16.05.77 AMERICAN CYANAMID CO D22 =FR 2390-938
Surgical suture package - 88071A/49
AMCY 23.05.77 AMERICAN CYANAMID CO A96 D22 (A23) =SF 7801-419
Lactide polyester surgical articles, esp. sutures - 84108A/47
*AMMA 14.07.75 AMF INC D11 *US 4107-341
Three-stage mixing of dough - 15667B/08
AMMA 29.06.77 AMF INC A97 D18 =DK 7802-909
Reconstituted tobacco mfr. - 78436A/44
AMTR- 12.07.76 AMTRON IND D12 =CA 1047-896
Food esp. bacon slicing and weighing - 06060A/03
ANDO/ 31.05.74 ANDO M D13 #CA 1047-831
Fast-cooking rice prodn - 83418W/51
*ANHE 05.11.76 ANHEUSER BUSCH INC D13 *US 4107-338
Batter mix, e.g. for breading fish - 15664B/08
ANVR 17.05.77 AGENCE NAT VALORISATION D22 =FR 2390-943
Mfr. of absorbent, intra:vaginal, menstrual tampon - 68951A/39
*ANVR 20.05.77 AGENCE NAT VALORISATION A96 B04 D16 G02 *FR 2391-254
Prepn. of biochemically active films and coatings - 14529B/08
*ANVR 20.05.77 AGENCE NAT VALORISATION A89 D16 J04 *FR 2391-467
Enzymatic membrane micro:titration cell partic. for urine etc. - 14543B/08
ANVR 04.08.77 AGENCE NAT VALORISATION B04 C03 D16 =DT 2833-799
Immunostimulant 34129 RP from Streptomyces stimulosus - 06048B/04
ANVR 04.08.77 AGENCE NAT VALORISATION B04 C03 D16 =NL 7807-938
Immunostimulant 34129 RP from Streptomyces stimulosus - 06048B/04
ARCA/ 03.06.76 ARCAS V D11 E33 =FR 2390-952
Dietetic products in biscuit form - 68930Y/39
ARCH 03.03.75 ARCHER-DANIELS MIDL CO D13 =IL --49-015
Soya protein concentrate from cracked and shelled soya beans - 54224X/29
*ARCH 20.07.77 ARCHER-DANIELS MIDL CO D17 *US 4106-487
Continuous steeping of corn prior to milling - 15468B/08
ASAG 13.08.76 ASAHI GLASS KK A88 D15 J01 =J7 9001-674
Filter press electrodialyser - 27771A/15
ASAH 13.11.72 ASAHI CHEMICAL IND KK D16 =J7 9001-793
Aerobic microbe cultivation in fermentor - 78224V/45
*ASAH- 10.06.77 SHIN ASAHIGAWA KK C03 D22 E16 F09 *J5 4005-003
Treating wood to prevent size change, warping, etc. - 14702B/08
*ASCH/ 02.08.77 ASCHINGER A D11 *DT 2831-729
Dietetic bread compsn. - 14443B/08
*ASHL 23.06.71 ASHLAND OIL INC A97 D13 *US 4107-345
Dehydrated potatoes contg. mono:glyceride emulsifier - 15670B/08
ATLP 01.06.71 ATLAS COPCO AB D15 =US 4107-240
Oxygen-enrichment of water - 80572T/51
*AVIC= 24.03.76 AVICULTURE RES INST C03 D13 *SU -600-995
Chick growth stimulating compsn. - 15152B/08

*BABE/ 17.11.76 BABENKO G A B04 D16 *SU -600-595
Malignant tumour prodn. in experimental animal - 15144B/08
BADI 29.01.75 BASF AG B05 C03 D21 E16 =DS 2503-582
N-Alkyl-glycine nitriles prepn - 61708X/33
BADI 09.10.76 BASF AG C03 D13 E13 =US 4139-641
Preservation agents for fodder and silage - 25183A/14
BADI 02.07.77 BASF AG C03 D13 =DK 7802-977
Feed pellet prepn. from feed flours - 02298B/02
BADI 27.07.77 BASF AG A97 D25 =DT 2733-849
Cold bleaching activators for washing compsns. - 08009B/05
BADI 09.08.77 BASF AG D16 E19 F06 (E37) =DT 2735-816
Peroxide bleaching of textile material contg. cellulose - 09987B/06
*BAKU= 17.11.76 BAKU WATER SUPPLY D15 *SU -601-024
Water clarification appts. - 15169B/08
*BALD/ 18.05.77 BALDELLOU M D11 *FR 2390-902
Bakery transfer mechanism for dough lumps from flat conveyor - 14507B/08
BATT 10.06.77 BATTELLE MEMORIAL I C03 D13 =SF 7801-836
Carbohydrate based ruminant feedstuff - 89608A/49
*BATT 05.08.77 BATTELLE-INSTITUT EV D15 *DT 2735-301
Decontaminating waste waters contg. cyanide - 14369B/08
BAXT 15.02.73 BAXTER TRAVENOL LAB D16 E13 =DS 2406-833
Enzymatic glucose conversion to fructose - 47180V/26
*BEAF 12.08.77 BEATRICE FOODS CO D13 *GB 2002-217
Natural tasting cheese substitute compsns. - 14565B/08
BEEC 15.03.75 BEECHAM GROUP LTD B04 D16 =IL --49-125
Antibiotic MM 17880 from streptomyces olivaceus - 72175X/39
BEHW 25.06.74 BEHRINGWERKE AG B04 D16 =IL --47-509
Vaccine against chagas disease - 03845X/03
BERO- 11.07.77 BERO-ENERGIE BERATU D15 J08 =SW 7807-684
Recovering waste heat from buildings - 23309A/13
BETO- 26.01.72 BETONAC NV D15 J01 #BE -870-622
Gas/liquid contactor - 46019U/33
BETZ 25.08.72 BETZ LABS INC A91 D15 (A26) =US RE29-908
Clarification of waste water contg. oil - 86407Y/48
BEWA- 17.05.77 INST BEWARING LAND D17 E13 =FR 2391-278
Xylose prodn. from annual plant residues e.g. straw - 84084A/47
*BIOR- 24.06.77 BIO RES CENTER KK A41 D16 E13 G02 *US 4106-986
Microbiological prepn. of epoxide cpds. - 15534B/08
BIOT- 31.08.76 GES BIOTECH FORSCHU A97 D16 =DS 2639-129
Enzymes sepn. from cells after solubilisation - 78841Y/44
BLUM/ 15.07.77 BLUM A D15 #US 4139-579
Sewage aeration system - 55880Y/32
BOEF 28.06.77 SUEDDEUTSCHE ZUCKER D17 =DK 7802-024
Waste heat recovery from evaporative sugar mfr. - 74468A/42
*BONY- 11.10.78 BONYF S A A96 D21 G03 (A14 A35) *BE -871-179
Repairing cracked or broken dental prosthesis - 14225B/08
BORD 05.09.74 BORDEN INC D16 (D13) =CA 1047-952
Bacterial starter culture for cheese mfr - 22921X/13
BPNU- 09.06.77 BP NUTRITION UK D13 =SF 7801-795
Fish ensilage mfr. - B/04
BREI/ 27.06.77 BREITSAMETER H D12 =DK 7802-804
Automatically classifying butchered meat into defined commercial grade - 78399A/44
BROS- 01.07.77 BROSTE IND A/S D12 =NO 7802-267
Smoke flavoured fish prodn. - 02460B/02
BRPE 09.06.77 BP NUTRITION UK LTD D13 =J5 4005-055
Fish ensilage mfr. - B/04
BUCM 07.04.76 BUCHERGUYER MASCH D14 =US 4106-404
Fruit juice extractor with rotatable receptacle - 77794Y/44
BURN- 02.08.77 BURNS FOODS LTD D12 =DT 2746-767
Food product similar to bacon prepd. by extrusion - 19718A/11
BURN- 02.08.77 BURNS FOODS LTD D12 =NL 7711-348
Food product similar to bacon prepd. by extrusion - 19718A/11

CADB 17.08.73 CADBURY LTD D13 =US 4107-347
Milk chocolate prodn. with use of milk powder - 16409W/10
CALG 04.06.73 CALGON CORP A97 D15 E11 M14 =CA 1047-755
Anti-corrosion compsn for metals in oxygenated water - 87226V/51
*CALP- 28.07.77 CALPIS FOOD IND B04 D16 *DT 2819-035
Antibacterial protein C-3603 - 14419B/08
*CALP- 13.08.77 CALPIS FOOD IND KK D11 E17 *GB 2002-222
Treatment of wheat flour - 14566B/08

*CAMP 31.10.77 CAMPBELL & SONS LTD D13 *US 4139-648
Dense, textured protein prod. mfr. - 15914B/08
CANA- 05.03.74 CANAAN PRODS INC B04 C03 D13 =CA 1047-925
Feedstuff or animal medicament coated with yeast - 74529Y/42
CASS- 05.08.77 OFF MECC CASSIANO S D11 =DT 2834-005
Dough kneading machine with mechanised discharge of prod. - 74491A/42
CASS- 05.08.77 OFF MEC S CASSIANO D11 =NL 7807-551
Dough kneading machine with mechanised discharge of prod. - 74491A/42
CEDE- 11.07.77 CEDERROTHS AB D22 =SW 7708-031
Adhesive medical plaster with impregnated gauze dressing - 80223A/45
CENT- 04.08.76 CENTROX CORP D15 =GB 1541-164
Aerobic bacterial sewage treatment plant - 53913Y/30
*CEPA 29.01.76 CELLULOSE PAPER IND RES A11 C03 D13 *SU -600-994
Animal feed having increased carbohydrate content - 15151B/08
*CHAM/ 22.06.77 CHAMPION J B05 D21 *GB 2002-232
Removing adipose tissues from certain parts of human body - 14569B/08
*CHAM/ 02.08.77 CHAMPION J B05 D21 E14 (B03 E13) *GB 2002-233
Selector lotion for local removal of fat during slimming - 14570B/08
*CHEC/ 31.10.75 CHECHURA A A C03 D16 (D13) *SU -601-307
Fodder yeast culture growing unit - 15323B/08
*CHEL- 28.05.76 CHELSEA IND INC D12 *US 4107-337
Sliceable sausage prod. simulating bacon - 15663B/08
CHEM- 12.04.74 CHEM-E-WATT CORP D22 =US 4106-477
Self-heating therapeutic dressing - 22522W/14
CHET 17.07.70 CHEMETRON CORP D23 (D13) =J7 9001-481
Process and apparatus for deodorising oils - 23069S/13
CHIN 01.07.77 CHINOIN GYOGYSZER A97 D13 (A11) =DK 7802-992
Food flavours contained in cyclodextrin complex - 78426A/44
CHIN 01.07.77 CHINOIN GYOGYSZER A97 D13 (A11) =NO 7802-273
Food flavours contained in cyclodextrin complex - 78426A/44
*CHIY 15.06.77 CHIYODA CHEM ENG CO D15 *J5 4006-351
Denitrification of waste water - 14974B/08
*CHUR- 18.05.78 CHURCH & DWIGHT INC D15 E34 M14 *BE -869-847
Inhibiting lead corrosion in drinking water systems - 14192B/08
CIBA 14.09.73 CIBA GEIGY AG A97 D12 (A14) =CA 1047-830
Disinfection and sterilisation of seafood - 20955W/13
CIBA 22.02.74 CIBA GEIGY CORP D22 E19 =US 4139-560
Preservative and disinfectant (un)satd. nonylamine derivs - 58721W/36
CIBA 12.09.74 CIBA GEIGY AG B03 C02 D13 =IL --48-073
N(2)-(4-Azido-6-amino-s-triazin-2-yl)-N',N' dialkyl-formamidines - 24838X/14
COLG 29.12.70 COLGATE PALMOLIVE CO D24 =DS 2157-907
Multi-coloured streaked soap - 43910T/27
COLG 11.01.73 COLGATE PALMOLIVE CO D21 E33 =US 4139-599
Toothpaste compsn. - 39947V/22
COLG 11.04.73 COLGATE PALMOLIVE CO D25 E19 =US 4107-095
Liquid mild detergent compn. - 63065V/36
COLG 15.01.75 COLGATE PALMOLIVE CO A96 B05 D21 E11 =CA 1047-929
Toothpaste or dental hygiene composition - 44105X/24
*COLG 05.11.75 COLGATE PALMOLIVE CO A97 D25 E14 (D34) *US 4107-065
Peroxy cpd. bleaching compsns. - 15568B/08
*COLG 27.12.76 COLGATE PALMOLIVE CO B05 D21 *US 4139-608
Oral anti-calculus preparations - 15900B/08
*COLG 27.12.76 COLGATE PALMOLIVE CO B03 D21 *US 4139-609
Oral anti-calculus compsns. - 15901B/08
COLG 10.08.77 COLGATE PALMOLIVE CO D22 =GB 2002-237
Baby's disposable napkin with adhesive securing straps - 87884A/49
*COLG 06.10.77 COLGATE PALMOLIVE CO D25 E37 *BE -871-082
Washing powders based on zeolite(s) and nonionic detergent - 14201B/08
COLG 14.10.77 COLGATE PALMOLIVE CO A97 D25 (A25) =BE -871-241
Abrasive liquid detergent compsn. - 88305A/49
*COMM= 29.04.75 ACAD COMMUN AFFAIRS D15 *SU -601-227
Aerator for biochemical purification of effluents - 15247B/08
*CONO 28.09.77 CONTINENTAL OIL CO D15 J01 *US 4107-037
Controlling filtrate quality from filter - 15552B/08
*CORO/ 31.08.78 PERACAULA COROMINAS D12 *BE -871-190
Machine to form, cut and wrap hamburgers - 14229B/08
CORP 22.10.76 CPC INTERNATIONAL INC D13 (D17) =GB 1541-182
Sepg. a corn starch milk into protein and starch - 15966A/09
CORP 08.06.77 CPC INTERNATIONAL INC D13 =J5 4005-053
Peanut butter additive giving darker colour and roast flavour - 00271B/01
CSEP 15.07.74 CHEM SEPARATIONS US CORP D15 J01 =CA 1048-174
Ion exchange removal of chromium, chromate, molybdate and zinc - 63258X/33
CSME- 20.05.77 CONSTR MEC VARLET D12 =FR 2391-039
Slicing machine for skinning meat or fish - 58773A/33

*DAGE= 23.06.76 DAGESTAN POLY D14 J08 *SU -601-542
Paste-like material dryer - 15396B/08
DEAK 03.05.73 AKAD WISSENSCHAFT DDR D17 (D13) #CA 1048-017
Hydrolysed starch prods of low dextrose equivalent - 51953U/36
DEGS 29.07.77 DEUTSCHE GOLD AND SILBER D25 E33 =GB 2002-335
Prepn. of cation-exchanging aluminosilicate(s) - 08024B/05
DEGS 05.08.77 DEUTSCHE GOLD UND SILBER D15 E33 J01 =NL 7807-505
Mfr. of aluminosilicate cation exchangers contg. surfactants - 09982B/06
DEJI- 05.08.77 DEJ INT RES CO A97 D13 =DT 2832-267
Removing caffeine from green coffee beans - 09978B/06
DEJI- 05.08.77 DEJ INT RES CO A97 D13 =NL 7807-208
Removing caffeine from green coffee beans - 09978B/06
DEJI- 06.08.77 DEJ INT RES CO D13 =DT 2832-360
Selective extn. of a sol. component from granular material - 09979B/06
DEJI- 06.08.77 DEJ INT RES CO D13 =NL 7807-214
Selective extn. of a sol. component from granular material - 09979B/06
DEKN- 04.08.77 DEKNATEL INC A96 D22 (A25) =US [illegible]9-909
Wound-cleansing solns contg detergent - 72784W/44
*DENI/ 23.03.71 DENISOV N A C03 D13 *SU -600-996
Preserving bee-bread in honeycombs over winter - 15153B/08
DERA- 17.08.76 SOCIETE DERAL SA D13 =FR 2390-908
Silaging process for plants for animal feeds - 90092Y/51
DIAS 01.07.75 DIAMOND SHAMROCK COR A91 D15 =US 4139-499
Amphoteric polymer prepn. - 06866Y/04
*DOKO/ 17.05.77 DOKOUPIL J D18 F06 *FR 2391-308
Continuous hot gluing press for leather and footwear blanks etc. - 14534B/08
DOWA 30.04.75 DOWA MINING KK D15 =US 4139-456
Low pH value waste water ferrous ion oxidn. - 06548Y/04
DOWO 29.09.75 DOW CORNING CORP D15 J01 =US 4107-000
Solar heat using distillator - 33681Y/19
DSOH- 22.05.75 DSO HRANMASH D16 (D13) =GB 1540-879
Mycelium culture growth of polyporus species - 94585X/51
*DUPO 16.03.78 DU PONT DE NEMOURS CO A87 D25 E16 F06 *US 4139-477
Fabric softeners for clothes dryers - 15843B/08
*DWEE/ 24.02.77 DE WEESE R M D13 *US 4138-937
Corn popper with annular trough collecting popcorn - 15739B/08
DYNL 20.09.77 DYNAPOL A14 B07 D13 E24 =US 4107-336
Ethyl sulphonate-alkylamine copolymers - 27183Y/16

*EFFE- 15.08.77 EFFEM FOODS PTY LTD C03 D13 *BE -869-744
Animal food, esp. for cats and dogs, based on animal blood - 14161B/08
EFFE- 15.08.77 EFFEM FOODS PTY LTD C03 D13 =GB 2002-218
Animal food, esp. for cats and dogs, based on animal blood - 14161B/08
ELIL 23.03.72 ELI LILLY & CO B02 C02 D16 =US 3960-667
Antibiotic A23187 from Streptomyces chartreusis NRRL 3882 - 84801W/51
ELIL 05.08.77 ELI LILLY & CO A96 D21 G02 (A14 A82) =NL 7800-033
Nail varnish based on aq. polymer emulsion - 42204A/24
ELLE/ 05.08.77 ELLENBERGER W C03 D13 =GB 2002-388
Hydrolysing casein with aq. acid avoiding darkening - 87876A/49
ELLE/ 05.08.77 ELLENBERGER W C03 D13 =NL 7808-223
Hydrolysing casein with aq. acid avoiding darkening - 87876A/49
*ELMQ/ 27.07.77 ELMQVIST O A88 D15 *WP 7900-068
Heat exchanger flow elements comprising plastics foils - 15958B/08
*ELMQ/ 27.07.77 ELMQVIST O A88 D15 *WP 7900-069
Heat exchanger elements utilising solar energy - 15959B/08
*EMPI- 03.06.77 EMPIRE FOODS INC D12 *US 4106-161
Cleaning abdominal cavity of poultry - 15435B/08
ENGH 17.01.77 ENGELHARD MINERALS CORP D21 M26 (M27) =US 4139-030
Amalgam prodn. appts. - 65898A/37
ENVI 03.08.77 ENVIROTECH CORP D15 J04 =DT 2833-903
Appts. for taking liq. sample from flowing stream - 12488B/07
*EPIC- 25.08.76 EPICOR INC D15 J01 K07 *US 4107-044
Removing radioactive solid materials from fluid - 15556B/08
ETHY 16.06.71 ETHYL CORP D25 E17 F06 H07 =US 4107-064
(2,3)-Di-carboxyalkoxy succinic acids - 06256A/03
EXQU- 02.07.75 EXQUISIT-KOSMETIK A97 D25 =IL --49-394
Washing and rinsing composition for softening textiles - 05580Y/04

FAIQ 16.05.77 FAIRFIELD ENG CO D15 (D16) =FR 2391-164
Digester to dispose of organic rubbish, sewage sludge etc. - 68944A/39
FARB 04.04.74 BAYER AG A82 D18 (A25) =US 4106-897
Tanning process using hydrophilic oligo-urethanes - 05919X/04
FARB 04.04.74 BAYER AG A82 D18 (A25) =US 4106-898
Tanning process using hydrophilic oligo-urethanes - 05919X/04
FARB 08.03.75 BAYER AG A60 B04 C03 D13 (D22) =IL --49-158
Antibiotic from Actinoplanes SE-73 or 73B - 72411X/39
FARB 08.03.75 BAYER AG A60 B04 C03 D16 =IL --49-159
Antibiotic, produced from Actinoplanes SE-73 or 73B - 72412X/39
FARB 03.08.76 BAYER AG D15 =DS 2634-846
Toxic load control of sewage plant - 12445A/07
FARB 17.05.77 BAYER AG D15 =FR 2391-165
Two/stage biological waste water treatment - 87948A/49
FARB 25.05.77 BAYER AG A96 D21 (A14 A25) =SF 7801-637
Polyurethane elasticised PMMA dental moulding - 86137A/48
FARB 28.05.77 BAYER AG A25 D21 (A96) =SF 7801-666
Prodn. of polyurethane with vinyl gps. for dental impressions - 86157A/48

FARB 15.06.77 BAYER AG D25 E11 F06 =J5 4005-923
Surface active, water-soluble phosphoric acid ester - 02270B/02

FARB 01.07.77 BAYER AG D18 E12 (E16) =DK 7802-993
Smokable prods. based on cellulose and combustion modifiers - 02458B/02

FARH 23.07.74 HOECHST AG A97 B04 D16 =IL --47-728
Moenomycin fermentation prodn. - 11415X/07

FARH 16.05.77 HOECHST FRANCE A97 D15 (A14) =FR 2390-983
Powdered cationic polyelectrolyte cpds. for flocculating urban sludge - 82148A/46

FARH 09.07.77 HOECHST AG A97 D25 E11 =SW 7807-653
Liquid cleaning prod. for articles with a hard surface - 01923B/02

*FARH 28.07.77 HOECHST AG D25 E34 *DT 2734-013
Heavy wash textile detergent - 14304B/08

*FARH 06.08.77 HOECHST AG A97 D12 (A11 A25) *DT 2735-551
Plasticised cellulose hydrate film esp. for sausage skins - 14383B/08

FASM/ 21.06.76 FASMAN A B D13 E14 =US 4107-090
Catalyst for hydrogenolysis of dimethyl-dibutyl hydroxy-benzylamine - 00005A/01

*FERM= 26.04.76 FERMENT PROD RES A97 D16 (A14) *SU -601-286
Immobilisation of glucoamylase on insoluble polymeric matrix - 15302B/08

FIRM 28.09.73 FIRMENICH SA B02 C02 D13 E13 (D15) =J7 9001-790
Cocoa aroma flavouring mixt. - 26176W/16

FIRM 16.05.77 FIRMENICH SA D23 E17 =FR 2391-180
Bis:allylic ether(s) of propylene glycol - 88086A/49

*FISH/ 27.04.77 FISHER L D12 *US 4106-193
Rotary scraper with non-gouging flexible fingers - 15443B/08

*FISH= 20.02.76 FISHING FLEET DES D12 *SU -600-997
Loader and unloader for jars of preserves in autoclave baskets - 15154B/08

FMCC 11.02.74 FMC CORP D15 J02 =CA 1048-173
Gas diffuser, cutting off bubbles without turbulence or vena contracta - 56031W/34

FMCC 02.10.74 FMC CORP C03 D13 E13 (C04 D16) =CA 1048-029
Cyanuric acid purificn from aminotriazine impurities - 28688X/16

FMCC 30.09.75 FMC CORP D15 =CA 1048-015
Diffusing gas into liquid from rotating porous disc - 90502X/48

FMCC 09.07.76 FMC CORP D22 E36 J01 =US 4107-268
Humidity regulator and air purifier for a closed animal house - 04813A/03

FORT- 12.02.71 KOMB FORTSCHRITT LA D16 =DS 2106-597
Green malting plant - 56679T/36

*FOTI/ 07.09.76 FOTI D D15 *US 4139-471
Sewage treatment tank with three chambers - 15840B/08

*FOUR/ 29.06.77 FOURNIER H L D12 *US 4106-162
Hamburger patty mould - 15436B/08

FRAN- 11.07.77 ZUCKERFAB FRANKEN C03 D13 (D17) =GB 2002-216
Mfg. animal feed from sugar beet waste and molasses - 82181A/46

*FUJF 03.08.77 FUJI PHOTO FILM KK A89 D22 E13 G06 *GB 2002-530
Preserving solns. of hydrophilic colloid contg. viscosity improver - 14634B/08

*FUKO 01.09.70 FUJI OIL KK D13 E17 (D16) *J7 9001-784
Cheese-like food prepn. - 15085B/08

GAST- 08.09.76 GASTROCK PROTEIN C03 D13 =US 4139-646
Cotton seed treatment - 34443A/19

GENA 24.06.77 GAF CORP A14 B04 D13 (A96 A97) =US 4139-688
Prepn. of insoluble PVP homopolymers or copolymers - 00475B/01

*GENO 26.05.75 GENERAL FOODS LTD D13 *US 4107-344
Cooked dehydrated rice flakes prodn. - 15669B/08

*GENO 29.07.76 GENERAL FOODS LTD D13 *US 4107-339
Soluble coffee solids powder prodn. - 15665B/08

*GENO 24.01.77 GENERAL FOODS CORP A97 D13 E14 *US 4139-639
High temp.-stable chewing gum compsn. - 15909B/08

GERK 04.05.74 GERLACH E GMBH D16 =CA 1047-754
Tobacco foil mfr. - 78882W/48

*GFOO= 12.04.76 GEOR FOOD IND RES D13 *SU -600-992
Dried tea cutting machine - 15149B/08

GIVA 25.07.77 GIVAUDAN L & CIE SA D23 E13 (D13 D21 D25) =GB 2002-364
1,4-Epoxy-1,3,3-tri:methyl-2-cyclohexane prepn. - 12275B/07

GIVA 04.08.77 GIVAUDAN L & CIE SA D23 E17 =DT 2833-885
Tri:methyl-octanol(s) and di:methyl-nonanol(s) odorants - 12500B/07

GIVA 04.08.77 GIVAUDAN L & CIE SA D23 E17 =NL 7808-230
Tri:methyl-octanol(s) and di:methyl-nonanol(s) odorants - 12500B/07

*GIVA 11.08.77 GIVAUDAN L & CIE SA D13 E13 *GB 2002-380
4-Cyano-tetra:hydro-furan-3-one(s) and 4-hydroxy derivs. - 14604B/08

*GLOB- 03.08.77 GLOBOL-WERK GMBH A97 D25 *DT 2833-770
Cistern mounted lavatory cleaning agent - 14476B/08

GNZE 10.07.75 GUNZE KK A88 D15 J01 =J7 9001-672
Semipermeable membrane for back-permeation - 16991Y/10

*GOIS/ 14.09.78 GOIS J F A92 D15 *BE -870-466
PVC tank contg. filter to purify rain water for storage - 14194B/08

GOOR 16.05.77 GOODRICH B F CO A14 D22 F01 =FR 2391-244
Water absorbent compsn. for disposable nonwoven articles - 06200A/03

*GORD/ 06.07.76 GORDON R G A96 D22 (A11) *US 4107-426
Water repellent cellulose surfaces - 15698B/08

GRAC 02.08.77 GRACE W R CO B02 D16 =NL 7807-409
Tetra:cyclic antitumour agent quadrone - 87867A/49

GRAC 02.08.77 GRACE W R CO B02 D16 =WP 7900-081
Tetra:cyclic antitumour agent quadrone - 87867A/49

*GRIS/ 18.05.77 GRISEY R J D15 J02 *FR 2390-992
Aerator for treating liquids - 14512B/08

*GROT/ 10.10.77 GROTZ W D15 J02 *BE -871-091
Motorised rotary agitator to aerate liq. manure etc. - 14004B/08

HACK- 31.01.77 HACK FEINBACKWAREN D11 =DS 2703-900
gingerbread house components - 57013A/32

HAUN 06.04.73 HAUNI-WERKE KORBER KG D18 =DT 2366-248
Cigarette tightness testing rig - 76011V/44

*HAYA/ 13.06.77 HAYASHI M C03 D16 (D13) *J5 4005-090
Prepn. of fermentation prod. having deodorising effect - 14732B/08

*HAYB 13.06.77 HAYASHIBARA BIOCHEM B03 D13 E13 (D16) *J5 4005-070
Alpha-glucosyl-stevioside sweetener prepn. - 14731B/08

HENK 16.06.75 HENKEL KG AUF AKTIEN D22 E19 =US 4107-312
Disinfectant compsn. for recirculation toilets, pref. in areoplanes - 96284X/52

HENK 05.08.76 HENKEL KG AUF AKTIEN A92 D25 E16 =US 4139-475
Application of fabric softener to washed linen during drying - 10269A/06

HENK 20.12.76 HENKEL KG AUF AKTIEN D21 E13 =GB 1540-936
Treating hair with quat. hexa:methylene-tetramine salts - 44097A/25

HENK 27.06.77 HENKEL KG AUF AKTIEN B03 C02 D13 (C03) =DK 7802-506
Animal feeds contg. the antibiotic tylosin - 05435B/03

*HENK 28.07.77 HENKEL KG AUF AKTIEN A97 D25 E16 (E15) *DT 2733-969
Detergent compsn. for cold-washing textiles - 14300B/08

*HENK 28.07.77 HENKEL KG AUF AKTIEN D25 E16 *DT 2733-970
Alpha-cyano-fatty acid hydroxyalkyl-amide detergent components - 14301B/08

HENK 29.07.77 HENKEL KG AUF AKTIEN D25 E33 =GB 2002-335
Prepn. of cation-exchanging aluminosilicate(s) - 08024B/05

*HENK 01.08.77 HENKEL KG AUF AKTIEN D25 E16 *DT 2734-596
Detergents for cold-washing textiles - 14318B/08

*HENK 01.08.77 HENKEL KG AUF AKTIEN D25 E16 *DT 2734-597
Cold-washing textile detergent compsn. - 14319B/08

*HENK 01.08.77 HENKEL KG AUF AKTIEN A97 D25 E16 (A28 E13) *DT 2832-679
Textile detergent compsn. having controlled foam - 14451B/08

HENK 05.08.77 HENKEL KG AUF AKTIEN D15 E33 J01 =NL 7807-505
Mfr. of aluminosilicate cation exchangers contg. surfactants - 09982B/06

*HETO 26.04.76 AS HETEROORGANIC CMPNDS A97 D16 (A14) *SU -601-286
Immobilisation of glucoamylase on insoluble polymeric matrix - 15302B/08

HIES/ 20.05.77 HIESINGER E D15 J01 (D13 D16) =FR 2390-985
Filter with filter aid on support fabric between chambers - 68980A/39

HIGA/ 09.06.75 HIGASHIJIMA S D22 G04 =US 4106-478
Heat generating package, e.g. for medical use - 83065X/45

*HIRS/ 19.01.77 HIRSCHHORN L A96 D21 L02 *US 4107-348
Porcelain-metal dental restoration construction - 15672B/08

HISM 16.06.77 HISAMITSU PHARM KK A60 B05 D21 E19 (D25) =J5 4005-949
4-Iso:hexyl-cyclohexane-carboxylic acid derivs. - 03426B/02

*HITG 16.06.77 BABCOCK-HITACHI KK D15 *J5 4005-871
Multiple-effect evaporator for desalinating sea water - 14828B/08

*HLSI- 14.05.76 HLS LTD IND ENG D23 *IL --49-581
Liq. edible oil prodn. from animal or vegetable oils or fats - B/08

*HOFF 24.08.71 HOFFMANN-LA ROCHE INC B04 D16 *US 4107-157
Antibodies specific for 5-substd. barbituric acid derivs. - 15597B/08

*HOFF 12.08.77 HOFFMANN-LA ROCHE AG D23 E15 *GB 2002-382
2,2,4-Tri:methyl-cyclopent-4-en-1,3-di:one prepn. - 14605B/08

HOLB/ 02.06.77 HOLBEK K C03 D22 E12 F09 (E31 E32) =SF 7801-770
Wood preservative impregnated cellulose fibres - 87861A/49

HOMM/ 20.10.70 HOMMA Y B04 D16 =DS 2152-112
Antitumour and vaccine prepns - 29562T/19

HOOP- 09.07.75 HOOPMAN ONDERZOEK D14 J02 =DS 2546-975
Rotating drum mixer and spreader for e.g. animal feed - 08747Y/05

ICIL 01.07.75 ICI AUSTRALIA LTD A91 D15 =US 4139-499
Amphoteric polymer prepn. - 06866Y/04

ICIL 09.08.77 IMPERIAL CHEM INDS LTD D16 (D13) =GB 2002-417
Industrial aerobic fermentation - 11897B/07

*ICIL 15.08.77 IMPERIAL CHEM INDS LTD D15 H03 J01 *GB 2002-248
Coalescing appts. for removing oil from oil-water emulsion - 14574B/08

*INFL 30.07.73 INT FLAVORS & FRAGR INC D23 E17 *US 4107-217
Mixt. of 2-ethylene-trans-3-hexenal di:methyl acetal(s) - 15616B/08

*INFL 03.07.74 INT FLAVORS & FRAGR INC D13 E15 *US 4139-650
8,8-Di:methyl-octa:hydro-1,5-methano-1h-indenol - 15916B/08

INFL 21.01.75 INT FLAVORS & FRAGR INC C03 D13 E13 =GB 1541-020
3-Furyl-beta-chalcogen alkyl sulphides - 58110X/31

INFL 19.02.75 INT FLAVORS & FRAGR INC C02 D13 E13 =US 4107-184
3-Furyl alkyl disulphide cpds. - 68137X/36

*INFL 11.11.76 INT FLAVORS & FRAGR INC D23 E15 *US 4107-208
Hexa:hydro-tetra:methyl-2-acetyl-naphthalene cpds. - 15614B/08
INFL 03.03.77 INT FLAVORS & FRAGR INC D23 E15 (D13) =US 4107-209
Methyl-thio-butyryl-tri:methyl-cyclohexene and cyclo hexadiene - 67315A/38
INFL 31.03.77 INT FLAVORS & FRAGR INC D13 E17 (D23) =US 4107-197
Flavouring and aroma enhancers for foodstuffs and perfumes - 64861Y/36
INFL 16.06.77 INT FLAVORS & FRAGR INC D23 E13 (D13) =J5 4005-970
Cyclic oxazo ionone derivs. - 93105A/51
INFL 16.06.77 INT FLAVORS & FRAGR INC D13 E13 =J5 4005-971
2,4,6-Tri:isobutyl-1,3,5-trioxane - 56737A/31
INFL 28.07.77 INT FLAVORS & FRAGR INC D23 E15 =US 4107-066
Unsaturated-acetyl-di:methyl-cyclohexane cpds. - 21425A/11
INFL 28.07.77 INT FLAVORS & FRAGR INC D23 E15 (D13) =US 4107-093
Higher carbonyl cpds. having organoleptic properties - 52578Y/30
INFL 19.09.77 INT FLAVORS & FRAGR INC D13 E15 (D23) =US 4107-094
(3,3)-Dimethyl-(2)-butenyl norbornanol-(2) - 01891A/01
*INFL 07.03.78 INT FLAVORS & FRAGR INC D13 E15 (E13) *US 4139-649
Mixt. of 4-terpinenol propionate and 2-methyl-3 furan-thiol - 15915B/08
*INFL 08.03.78 INT FLAVORS & FRAGR INC B07 D13 E13 (B03) *US 4139-541
Maltol 2-methyl-pentenoate(s) - 15870B/08
INFL 08.06.78 INT FLAVORS & FRAGR INC D23 E15 =US 4139-484
Hydroxyethyl-bi:cyclooctene derivs. - 91452A/50
INMR 30.06.77 INST MERIEUX B04 C03 D16 =DK 7802-893
Bulk culture of viruses in suspension of cells and collagen fibres - 01906B/02
INNO- 18.01.74 INNOVATIVE PATENT D14 =US 4107-511
Automatic pressure cooking system - 49895V/27
*INSF 25.07.77 INST FRANCAIS DU PETROLE D17 E34 H01 (D16) *DT 2828-684
Extraction of oil by flooding with bio:polymer solns. - 14436B/08
INSP 30.09.74 INST PASTEUR D13 (D16) =IL --48-199
Food contg protein derived from osmo-sensitive bacteria - 29466X/16
*INTT 02.07.75 ITT INDS INC C04 D25 E12 M14 *CA 1048-055
Ammonium or alkali metal mannoheptonate prodn. - 14261B/08
*INTT 06.08.77 STANDARD ELEK LOREN D11 *DT 2735-622
Dough proving oven ventilating system - 14390B/08
*IRDL- 18.03.76 IRD LABORATORIES D17 E13 *IL --49-244
Glucose prodn. from starch - B/08
ITFE- 02.07.75 INT FEED IMPROV ASS C04 D16 (D15) #IL --47-620
Inactivated microorganism prodn. - 06537Y/04
IWAT/ 17.01.75 IWATA T D13 =J5 1082-762
Improving flavour etc. of Eutrema wasabi - 15088B/08
*IWAT/ 17.01.75 IWATA T D13 *J7 9001-791
Improving flavour etc. of Eutrema wasabi - 15088B/08

*JAPS 15.06.77 JAPAN SYNTHETIC RUBBER A14 D15 (A91) *J5 4004-986
Ultrahigh molecular polyacrylate prodn. - 14691B/08
*JEAN/ 16.05.77 JEANSOULIN R D14 *FR 2390-993
Manually operated salad mixer for household use - 14513B/08
JELK/ 17.05.77 JELKS JW C03 D13 #SF 7701-559
Increasing digestability of cellulosic plant material - 75799Y/42
*JETC- 01.08.77 JET-CERAMIC DENTAL D21 *WP 7900-076
Dental prosthesis working model prodn. - 15961B/08
JOHJ 16.01.75 DEVRO INC A97 D12 (A11 A32) =IL --48-846
Edible sausage skins - 58111X/31
*JOUL/ 21.10.77 JOULIN G D11 *BE -871-229
Mfr. of loaves of bread, esp. French sticks - 14242B/08
JUNG- 01.06.70 JUNGBUNZJAUER SPIRI D16 E17 =DS 2125-131
Citric acid by submerged fermentation - 75035S/47

KAKE- 10.06.77 KAKENYAKUKAKO KK B04 D16 =J5 4005-020
Insulin secretion stimulating protein(s) for diabetes treatment - 89669A/50
KALI 10.06.77 KALI-CHEMIE AG B04 D16 =SF 7801-821
Water-insoluble immobilised enzyme prod. prepn. - 63596A/36
*KAME- 06.06.75 KAMEDA SEIKA KK D11 *US 4044-166
Flat food with rectangular cavities - 15425B/08
KAME/ 17.05.77 KAMELMACHER E D15 J02 #FR 2390-989
Two phase mass transfer for water clarification - 72888Y/41
*KANE 11.06.77 KANEBO KK D13 *J5 4005-061
Mfr. of instant Shiruko (sweet red bean jam juice) - 14728B/08
*KANE 11.06.77 KANEBO KK D13 *J5 4005-062
Sugarless chewing gum - 14729B/08
KANE- 13.06.77 KANEBO FOODS LTD D13 =J5 4005-063
Powdery releasing compsn. for tacky foods - 00223B/01
KAOS 05.03.74 KAO SOAP KK C03 D15 (C01 C02) =J7 9001-768
Inorganic peroxide mixts. with e.g. (N)-acetyl phthalimide - 74573Y/42
KAOS 24.08.76 KAO SOAP KK D25 E11 =US 4139-485
Detergent compsns. contg. salts of mono alkyl or alkenyl phosphates - 45306Y/26
KAOS 01.10.76 KAO SOAP KK A97 D25 E19 (A25) =FR 2391-273
Aq. detergent mixt. for delicate fabrics - 27208A/15
KAOS 14.06.77 KAO SOAP KK A97 D25 E33 =J5 4004-908
Granular or powdery detergent contg. absorbed nonionic surfactant - 74487A/42
*KAOS 01.08.77 KAO SOAP KK D25 E13 (D16) *GB 2002-369
Dehydration purification of hydrated sophorolipid - 14599B/08
KAPP/ 16.05.69 KAPPUS F L D24 =DS 1924-980
Multi-layer soap tablets - 84991R/46
KATZ/ 01.07.75 KATZEN S C03 D13 =IL --49-753
Animal feedstuff from waste cellulose and/or lignin - 85161Y/48
*KAWJ 16.06.77 KAWASAKI HEAVY IND KK D15 *J5 4006-354
Treating waste water contg. suspended solids - 14976B/08
*KBMO= 03.03.76 KUIB MOTOR CONS WKS C03 D13 *SU -600-993
Animal feed manufacture - 15150B/08
*KDFR= 09.12.75 KRASND FRUIT SEED D14 *SU -600-999
Seeds separation from fruit - 15156B/08
KEND 29.08.74 KENDALL CO D16 =CA 1047-904
Determining bacteria content of liquids - 05620X/04
KERJ 20.05.77 KERNFORSCHUNGS JULICH D15 E31 K05 M25 =FR 2391-160
Uranium recovery from sea water by adsorption on lignite granules - 86377A/48
*KIBU- 15.06.77 KIBUN KK D12 *J5 4005-059
Prodn. of minced meat of fish and crustacea - 14727B/08
*KIEF/ 15.06.77 KIEFER B G D15 J01 *J5 4005-875
Rotational reverse osmosis process and appts. - B/08
KIMB 01.10.73 KIMBERLY CLARK CORP A96 D22 F04 (A11) =CA 1047-750
High absorption cellulose filaments - 24700W/15
KITA 11.12.76 KITASATO RES INST B04 C03 D16 =US 4107-297
Antibiotic AM-2282 obtd. by culturing Streptomyces - 44336A/25
*KITA/ 01.07.77 KITAMURA S D11 *US 4138-938
Two/way folded three/dimensional crackers - 15740B/08
*KJMA- 01.07.77 KJ MASKINFAB A/S D12 *DK 7702-943
Appts. for sawing off sharp ridges - B/08
KOBM 16.05.77 KOBE STEEL KK D15 J01 =FR 2390-982
Tubular membrane appts. with self cleaning action - 86475A/48
KOBP- 05.02.74 KOBENHAVENS PEKTINF A97 D13 =CA 1047-829
Gelled products of stabilised sour milk - 54317W/33
KOLE/ 19.07.77 KOLEHMAINEN S C03 D13 J04 =DT 2831-559
Determn. of somatic cell count in milk to detect mastitis - 08518B/05
KOLL/ 30.06.77 KOLLROSS G D12 =DK 7802-984
Machine to fold sausage casings while inflated - 78454A/44
KOLL/ 30.06.77 KOLLROSS G D12 =GB 2002-215
Machine to fold sausage casings while inflated - 78454A/44
KOLR/ 30.06.77 KOLROSS G D12 =NO 7802-283
Machine to fold sausage casings while inflated - 78454A/44
KONN 22.12.72 GIST-BROCADES NV B03 C02 D13 E13 (B02 D22) =SF 7802-488
Oxadiazolyacetic acid antibiotics - 51365V/28
*KRAV/ 02.09.76 KRAVITZ H L D13 *US 4107-346
Dietary salt compsn. - 15671B/08
KRUN 24.03.76 KRAFTWERK UNION AG D15 K07 =US 4139-420
Radioactive effluent treated with acid and basic washes - 70930Y/40
*KRUN 11.08.77 KRAFTWERK UNION AG D15 K07 *DT 2736-256
Radioactive liquid effluent disposal by evaporation - 14399B/08
*KUIV/ 26.05.77 KUIVELA K D15 *SF 7701-691
Separation of solids from flowing liquids - B/08
KURE 22.02.77 KUREHA KAGAKU KOGYO D16 (D13) #US 4106-988
Microbial food prepd. by culturing Methylomonas probus - 26299Y/15
KURS 26.03.71 KURARAY KK A14 C04 D22 (A97) =J4 7034-545
Gelatinous vinyl alcohol polymers - 32728T/21
KURS 26.03.71 KURARAY KK A14 C04 D22 (A97) =J7 9001-501
Gelatinous vinyl alcohol polymers - 32728T/21
KURS 05.11.71 KURARAY KK A60 B05 D23 E14 =DS 2250-065
Trimethylhydroquinone purification - 29031U/21
KYFF- 18.05.77 VEB KYFFHAUSER HUTT D13 =FR 2390-905
Stable, spreadable foodstuff prodn. - 63540A/36
KYOW 19.04.76 KYOWA HAKKO KOGYO D21 E16 =US 4139-610
Permanent wave compsn. - 79787Y/45
KYOW 19.05.77 KYOWA HAKKO KOGYO C B03 D22 E13 =FR 2391-222
Antibacterial amino-glycoside antibiotics XK-62-3 XK-62-4 - 89953A/50

LABO 16.03.76 LABOFINA SA A17 B07 D21 H08 =US 4107-225
Hydrogenation of poly(iso)butenes to white oils - 43548Y/25
*LACM- 24.03.75 LAC-MAC LTD D22 F07 *US 4106-120
Reversible surgical gown - 15427B/08
*LAND- 31.03.78 LANDSTINGENS INKOPS A96 D21 (D22) *BE -871-267
Disinfecting skin ointment based on alcohol - 14251B/08
LCAS 26.03.75 LAB CASSENNE D21 E17 =US 4107-333
Cosmetic compsns contg oleyl acetate - 77883X/42
*LEAG= 29.01.76 LENGD AGRIC INST A11 C03 D13 *SU -600-994
Animal feed having increased carbohydrate content - 15151B/08
LECT- 28.02.74 LECTROFOOD INC D13 =CA 1047-826
Packaged coated food product - 54129X/28
*LENI 27.03.75 LENINGRAD LENSOVET TECH D16 *SU -601-038
Sorbent for removal of trypsin from soln. - 15183B/08

LEPE 27.07.74 GRUPPO LEPETIT SPA B04 D16 =IL --47-854
Gardimycin antibiotics - 85017W/52
LICE 15.04.75 LICENCIA TALALMANY C02 D16 (D13) #IL --47-102
Non-thermal sterilisation of mushroom compost - 31011W/19
LIOY 17.09.75 LION FAT & OIL KK A97 D15 =GB 1541-130
Treatment of waste water contg. nonionic surfactant - 22217Y/13
LIOY 26.12.75 LION FAT & OIL KK A97 D25 E17 =US 4139-498
Conc. olefin-sulphonate soln. prodn. - 50647Y/29
LKBP 12.12.74 LKB PRODUKTER AB D16 J04 =DS 2556-072
Calorimetric monitor for micro-organic activity in fermentation - 48381X/26

*MADS/ 10.06.77 MADSEN E D12 *SF 7701-841
Sausage binder - B/08
MANS 16.05.77 MANNESMANN AG D15 M24 =FR 2391-167
Steelworks cooling water purificn. - 86369A/48
*MARL/ 16.05.77 MARLIERE Y G P D15 *FR 2391-161
Tank for waste water purificn. by flotation and coagulation - 14522B/08
*MARU- 10.06.77 MARUKOME MISO KK D13 *J5 4005-099
Treating miso to improve handleability - 14739B/08
MATC- 21.04.76 MATCON RADGIVENDE D12 =US 4138-769
Machine for removing shells from crustaceans - 57576Y/33
*MATE- 03.05.75 MATELINE AUTOMATION D11 *GB 1540-995
In/line pie making machine - 14552B/08
MATU 16.01.76 MATSUSHITA ELEC IND KK A88 D15 J01 =J7 9001-673
Reverse osmosis membrane - 62120Y/35
MEAT= 29.03.73 MEAT IND RES INST D12 =DS 2409-725
Automatic loading of freezer for meat or fish prods. - 73752V/42
MEDI- 20.06.75 MEDICAL PLASTICS PT D16 =IL --49-795
Agar and silica gel nutrient media cultivation flask - 02388Y/02
MEIJ 05.06.73 MEIJI KK D11 =J5 0012-263
Baked cookies with improved flavour, taste and touch - 15086B/08
*MEIJ 05.06.73 MEIJI KK D11 *J7 9001-785
Baked cookies with improved flavour, taste and touch - 15086B/08
*MEIJ 14.06.77 MEIJI KK B04 D16 *J5 4005-901
Antibiotic SF-2002 used to treat mycoplasma infections - 14850B/08
MERE 20.08.76 MERCK PATENT GMBH D13 =US 4139-642
Dietetic granular albumin food prod. - 14041A/08
MERI 25.11.74 MERCK & CO INC B02 C02 D13 (D16 D22) =IL --48-521
Broad spectrum antibiotic thienamycin - 31696X/17
*MERI 02.07.76 MERCK & CO INC A60 B05 C03 D22 *US 4139-559
1-Bis-di:methyl-nor-bornyl-pentyl-1,5,9 triazanonane prepn. - 15878B/08
MERI 01.08.77 MERCK & CO INC B04 D16 =DT 2833-545
Antigenic meningococcal polysaccharide with high mol. wt. - 82019A/45
MERI 01.08.77 MERCK & CO INC B04 D16 =NL 7807-419
Antigenic meningococcal polysaccharide with high mol. wt. - 82019A/45
MERI 05.08.77 MERCK & CO INC B04 D16 =NL 7807-635
Preserving vaccine from polysaccharide(s) of Neisseria meningitidis - 07792B/04
*MICH/ 02.04.75 MICHAELS E B B05 C03 D22 *US 4107-328
Antimicrobial compsn. of acid pH contg. betaine, amine oxide - 15659B/08
MILE 04.08.75 MILES LABORATORIES INC D13 =IL --49-305
Bland protein enriched grain gluten prepn. - 11559Y/07
*MILE 15.08.77 MILES LABORATORIES INC B04 D16 J04 *GB 2002-516
Device for liq. control soln. prepn. - 14632B/08
*MILE 07.10.77 MILES LABORATORIES INC D13 (D12) *BE -871-090
Simulated bacon product formed of fat and lean layers - 14203B/08
*MILY/ 29.11.76 MILYAKH G V D15 *SU -601-228
Sediment loosener for effluent sediments in containers - 15248B/08
*MINN 29.07.77 MINNESOTA MINING CO A96 D21 (A14) *DT 2833-711
Sun protection compsns. - 14474B/08
MITB 12.08.77 MITSUI SHIPBUILDING ENGG D15 J01 =DT 2834-770
Water filter basin bottom duct - 14576B/08
*MITB 12.08.77 MITSUI SHIPBUILDING ENGG D15 J01 *GB 2002-251
Water filter basin bottom duct - 14576B/08
MITN 11.12.75 MITSUBISHI GAS CHEM IND D16 E17 =J7 9001-796
(2,2)-Bis-hydroxymethyl-hydroacrylic acid prepn. - 54678Y/31
*MITO 15.06.77 MITSUBISHI HEAVY IND KK A88 D15 K07 *J5 4005-200
Concentrating liquid waste, e.g. radioactive waste - 14741B/08
*MITO 16.06.77 MITSUBISHI HEAVY IND KK D22 J01 *J5 4005-872
Continuous transferring bed absorption appts. - 14829B/08
*MITO 17.06.77 MITSUBISHI HEAVY IND KK D22 E36 J01 *J5 4005-865
Appts. for deodorising gas contg. hydrogen sulphide - 14823B/08
*MITP 14.06.77 MITSUBISHI PETROCH KK C03 D22 E14 F09 *J5 4005-005
Antimicrobial alpha-halo:carboxylic acid amide compsn. - 14704B/08
MITS 19.05.75 MITSUBISHI PRECISIO D15 M25 =J7 9001-666
Treatment of aq. soln. contg. metal salt - 01268Y/01
MITU 17.03.76 MITSUBISHI CHEM IND KK D16 E13 (D17) =US 4106-993
Glucose isomerase preservation - 69271Y/39
MIUR/ 27.07.77 MIURA Y A96 B04 D16 =DT 2832-536
Anticoagulant for blood or plasma - 10449B/06
*MIYA- 14.06.77 MIYAIRISAN KK D16 (D13) *J5 4005-092
Odourless preparation of living microorganisms - 14733B/08
MIYA/ 09.06.77 MIYATA T A96 D22 =J5 4005-019
Porous wound dressing mfd. from collagen gel - 74475A/42
MIYO 04.08.70 MIYOSHI YUSHI KK A97 D25 E19 =J7 9001-723
Washing compsns - 11870T/08
*MMMM- 10.08.77 MMM MUNCHEN MEDIZIN D14 *DT 2736-088
Bottled soln. sterilisation plant - 14396B/08
MOLM 12.08.70 MOLINS LTD A97 D18 (A11) =DS 2140-522
Slow burning cigarettes - 21632T/14
*MORI/ 20.05.77 MORINI G D18 *FR 2391-624
Hand pliers to extract wire nails from furs etc. - 14546B/08
*MOSE/ 13.08.77 MOSER J D22 E16 H07 (D15 E37) *DT 2736-646
Sterilising oily and aq. fluids with azide biocides - 14410B/08
MUND 16.05.77 MUNDIPHARMA AG A96 B04 D22 E19 =FR 2390-963
Storage-stable iodophor germicide compsns. prepn. - 63439A/36
MUND 16.05.77 MUNDIPHARMA AG A96 B04 D22 E19 =SF 7800-963
Storage-stable iodophor germicide compsns. prepn. - 63439A/36

NAAR 27.04.71 NAARDEN INT NV D23 E15 =DS 2221-949
6-propyl-3-cyclohexene -carbaldehydes - 74540T/47
NAAR 07.08.75 NAARDEN INT HOLLAND D22 E13 =US 4107-289
Substd. pyran cpds. prepn. - 14034Y/08
NAAR 22.07.77 NAARDEN INT NV D22 E19 =GB 2002-227
Chemically active deodorant compsn. - 10235B/06
NAKA- 15.03.73 NAKANO SUMISE KK D16 =J4 9117-696
Vinegar prodn. from mixt. of alcohol and white rice-bran liquid - 15089B/08
*NAKA- 15.03.73 NAKANO SU-MISE KK D16 *J7 9001-798
Vinegar prodn. from mixt. of alcohol and white rice-bran liquid - 15089B/08
NAKA- 16.03.73 NAKANO SUMISE KK D16 =J4 9117-697
Non-turbid vinegar prodn. - 15090B/08
*NAKA- 16.03.73 NAKANO SU-MISE KK D16 *J7 9001-799
Non-turbid vinegar prodn. - 15090B/08
*NAKA/ 14.05.69 NAKATA M D13 *J7 9001-782
Flavoured frozen soybean curd prepn. - 15083B/08
NALC 12.01.76 NALCO CHEMICAL CO D15 J04 =DS 2647-341
Ozonisation catalyst for treating waste water - 50618Y/29
NATR 25.06.74 NATIONAL RES DEV CORP B04 D16 =CA 1047-921
Immunological compsns contg liposomes as adjuvants - 78759W/48
NATT 25.03.76 NAT STARCH & CHEM CORP A11 D17 F01 =J7 9001-820
Water-insoluble starch fibres contg. amylopectin - 71065Y/40
NATY 18.10.74 NABISCO INC D13 =IL --48-251
Textuised vegetable proteinaceous flakes - 34323X/19
*NCAU= 11.08.75 N CAUCASUS PROTEIN D16 *SU -601-308
Fermenter fluid aerating turbine - 15324B/08
*NCAU= 09.12.75 NORTH CAUCASUS VINI D14 *SU -600-999
Seeds separation from fruit - 15156B/08
*NDON= 24.07.75 NORTH DONETS CHEM D14 J02 *SU -601-036
Lower power consumption planetary mixer - 15181B/08
NEST 06.09.74 SOC PRODS NESTLE D13 =CA 1047-828
Low-calorie edible creams prepn by homogenisation - 13046X/08
NEST 10.04.75 SOC PRODS NESTLE SA B04 D16 =IL --49-315
Enzyme immobilization on chitosan - 79606X/43
NEST 18.08.75 SOC PRODS NESTLE SA D13 =IL --48-450
Extracting caffeine from coffee, tea or from aqueous extracts there of - 39971X/22
NEST 29.07.77 SOC PROD NESTLE D13 =DT 2826-466
Removing caffeine and/or chlorogenic acid from aq. vegetable extracts - 86149A/48
*NEST 03.08.77 SOC PRODS NESTLE D13 *DT 2832-843
Vegetable protein extracts - 14456B/08
*NEST 29.09.77 SOC PRODS NESTLE SA D13 (D12) *BE -869-747
Textured food prod. similar to cooked meat - 14162B/08
*NIBU- 12.06.77 NIPPON BULK YAKUHIN D21 *J5 4005-048
Gelatin hydrolysate prepn. for cosmetics - 14723B/08
*NICH- 16.06.77 NICHIZO KK D15 *J5 4006-346
Removal of scale-forming solids from water e.g. in boiler - 14971B/08
NIEM/ 07.06.77 NIEMI A J D15 J04 =SF 7701-810
Control of pH in continuous flow using hydrogen ion evaluation - 00282B/01
*NIES 14.06.77 JAPAN METAL AND CHEM D15 J01 *J5 4006-348
Water purificn. to remove and recover impurities - 14972B/08
*NIIG 15.06.77 NIIGATA ENG KK A88 D15 *J5 4006-355
Compact appts. for treating waste water - 14977B/08
NIIG 29.06.77 NIIGATA ENG KK D12 =NO 7802-225
Denaturing flesh of aquatic animals esp. fish - 02459B/02
NIJH- 18.05.77 MACHINEF NIJHUIS G D12 =FR 2390-903
Electric shock stunning of slaughter animals esp. pigs - 84083A/47
NIKL/ 25.03.72 NIKLAS H D15 E33 =DS 2214-756
Town water clarifying - 60447U/41
*NIOF 15.06.77 NIPPON OILS & FATS KK D13 *J5 4004-906
Hard butter and highly stable liq. oil prepn. - 14640B/08
NISC 14.05.76 NISSAN CHEM IND KK D23 E17 =US 4107-219
Chain-forming terepene alcohol prepn. - 85076Y/48

*NISH/ 15.06.77 NISHI T D15 *J5 4005-868
Solar-powered device for treating heavy metal contg. water - 14826B/08

*NITO 14.06.77 NITTO BOSEKI KK A96 B04 D16 *J5 4005-096
Fixing enzyme or microbial body with betaine polymer - 14736B/08

NMHB 27.11.76 NORDISCH MASCH R BAADER D12 =GB 1540-971
Fish fillet skinning machine - 70842Y/40

NMHB 20.05.77 NORDISCH MASCH R BAADER D12 #FR 2390-904
Fish tail ends of equal weight - 70840Y/40

*NOEL/ 14.07.77 NOEL E M D11 *US 4106-400
Muffin griddle with cup and cover conveyors - 15457B/08

NOVO 07.07.76 NOVO INDUSTRI A/S D16 =US 4106-991
Enzyme granulate resisting abrasion - 04786A/03

NPDC 14.05.76 NATIONAL PATENT DEV CORP A14 D22 (A96) #IL --49-579
Water insoluble hydroxyethyl methacrylate hydrogels - 88385Y/50

*NTOK 17.06.77 NORITAKE KK D18 J01 M11 *J5 4005-869
Sintering and fixing chromium-contg. material e.g. sludge - 14827B/08

*NUTR 27.06.77 NUTRILITE PRODUCTS INC C03 D16 *US 4107-294
Insecticidal compsn. - 15650B/08

*OAKE- 27.07.77 OAKES E T LTD D13 *DT 2832-521
Porous chocolate prodn. using continuous mixer - 14447B/08

*OILS- 21.03.77 OIL SPILL RECOVERY D15 J01 *US 4139-470
Removal of floating contaminant from open body of water - 15839B/08

*OJIP 13.06.77 OJI PAPER KK D22 J01 (D16) *J5 4005-040
Deodorisation of liq. and/or gas by contact with fungi - 14718B/08

OKAZ- 24.11.76 OKAZAKI MFG KK D15 J03 #US 4107-021
Electrolytic cell for ionised water - 44238A/25

OKUN- 20.06.72 OKUNO KK D13 =J4 9020-343
Storage stable, high calorie and protein, liq. food prepn. - 15081B/08

*OKUN- 20.06.72 OKUNO KK D13 *J7 9001-779
Storage stable, high calorie and protein, liq. food prepn. - 15081B/08

OLIN 12.08.77 OLIN CORP A41 C04 D15 E16 (E35) =DT 2818-950
Hydrolysing urea contained in effluents - 45658A/25

OLYU 19.05.76 OLYMPUS OPTICAL KK D16 J04 =DS 2722-586
Pipette for culturing liquids - 85107Y/48

OREA 21.02.67 L'OREAL SA B05 D21 E19 =US 4139-635
Hair and skin treatment prepns - 73243T/46

OREA 29.07.76 L'OREAL SA A96 B04 D21 =US 4107-290
Anti-inflammatory polymers - 05010V/03

OREA 17.05.77 L'OREAL SA A96 D21 =FR 2390-950
Cosmetic compsns. contg. copolymers with tert. or quat. amine gps. - 84067A/47

OREA 17.05.77 L'OREAL SA A96 D21 E17 (E16 E36) =FR 2390-951
Lacquer compsn. for fixing hair contg. polymer and alcohol - 84066A/47

OREA 21.07.77 L'OREAL SA D21 E12 =GB 2002-362
Bis(2-thio-(N)-oxy-pyridyl) aluminium sulphonate s) prepn. - 06053B/04

OREA 28.07.77 L'OREAL SA B03 D21 E12 (D22) =DT 2833-013
Aluminium tris-2-pyridine-thiol-N-oxide - 08016B/05

*OREA 19.08.77 L'OREAL SA D25 E14 (E12) *BE -869-839
Hair colouring compsn. contg. direct colourants - 14188B/08

*OREA 19.08.77 L'OREAL SA D25 E14 (E12) *BE -869-840
Hair colouring compsn. contg. oxidn. dyes - 14189B/08

*ORIY 30.01.76 ORIENTAL YEAST KK B04 D16 J03 *US 4107-014
Coloured protein markers for gel isoelectric sepn. procedures - 15541B/08

OSAY 01.07.77 ENSO GUTZEIT OY D15 E14 F09 =NO 7800-609
Purifying waste waters, esp. sulphate pulp bleaching waters - 04344B/03

*OSTR/ 21.09.76 OSTROVSKAYA V M D15 J04 *SU -601-342
Test paper for micro-determn. of metals in waste water etc. - 15357B/08

*PAPC/ 14.11.75 PAPCHENKO A YA D14 *SU -600-998
Electrical plasmolyser for vegetable raw materials - 15155B/08

PASE 28.06.75 PASSAVANTW MICHELBACHER D15 J01 =GB 1541-050
Filter press plate with interplate buffer lug - 23977Y/14

PASE 01.08.77 PASSAVANTW MICHELBACHER D15 =NL 7807-685
Sewage aerator cowl - 12204B/07

*PAYG- 11.07.73 PAYGRO INC D16 *US 4139-640
Aerobic thermophilic decomposition of organic wastes - 15910B/08

*PEMB- 25.05.77 PEMBERTON C A & CO D12 *US 4106-174
Removing hangers from meat - 15439B/08

PERS 23.05.77 PERSONAL PRODUCTS CO A96 D22 =SF 7801-615
Sanitary pad contg. perfume avoiding perfume migration - 86106A/48

*PETL 14.02.74 PETROLITE CORP A14 D15 M14 (D22) *US 4139-718
Polyvinyl quat. amine(s) prepn. for corrosion inhibitors etc. - 15948B/08

PFIZ 05.05.70 PFIZER INC B03 D13 E13 (D23) =J7 9001-787
Alkmyl-substd 3-oxazolines used as flavouring agents - 75592S/48

PFIZ 13.10.76 PFIZER INC D13 (D16) =US 4107-334
Functional protein prepd. by precipitating protein then solubilising - 28752A/16

PFIZ 01.06.77 PFIZER INC B04 D16 =SF 7801-570
Animal growth promoting polypeptide antibiotic 46192 - 40248A/22

PHIG 03.08.77 PHILIPS GLOEILAMPEN NV B04 D16 J04 =DT 2832-997
Appts. for component concn. determn. in biological fluid - 12524B/07

PHIG 03.08.77 PHILIPS GLOEILAMPEN NV B04 D16 J04 =NL 7708-564
Appts. for component concn. determn. in biological fluid - 12524B/07

*PHIP 13.02.76 PHILLIPS PETROLEUM CO A88 D13 (A12) *US 4139-666
Powdered milk as anti-tack agent - 15925B/08

PIKO- 09.06.77 PIKOK INTER TRADING A96 D22 =SF 7801-816
Porous wound dressing mfd. from collagen gel - 74475A/42

PLAC 03.06.77 MAX PLANCK GES WISSENSCH A96 D22 =J5 4005-023
Transparent liq. gels e.g. of hydrophilic acrylic polymer and gelatir 91569A/51

*PLAN/ 02.08.76 PLANOVSKII A N D14 J08 *SU -601-545
Pneumatic dryer for dispersing material - 15397B/08

*PLAS/ 10.08.77 PLASSMANN S D11 *DT 2736-094
Dietetic bread stimulating intestinal activity - 14397B/08

POLA 26.07.77 POLAK'S FRUTAL WORKS INC D25 E19 =GB 2002-433
Quat. ammonium salt dispersants - 68716A/38

PROC 27.09.74 PROCTER & GAMBLE CO D21 E19 =CA 1047-932
Lustre imarting shampoo compsn - 45797X/24

PROC 06.06.75 PROCTER & GAMBLE CO A94 D22 F04 (A23 A96) =US 4107-364
Continuous mfr. of composite non woven matting - 94323X/51

PROC 25.06.76 PROCTER & GAMBLE CO A97 D25 (A25) =US 4107-067
Gelatinous detergent compsn. for direct use and for washing - 01987A/0

*PROC 22.03.77 PROCTER & GAMBLE CO D25 E34 (E33) *US 4139-486
Detergent compsns. contg. ortho- and pyrophosphate builders 15847B/08

PROC- 11.10.76 PROCESS ENG CO D16 =US 4139-350
Foam separator at outlet of fermentation vessel - 21639A/12

*PROJ- 17.08.77 PROJ CHEM VERFAHREN D17 *BE -869-780
Sugars and opt. cellulose and lignin extn. from vegetable material 14176B/08

*PROV/ 03.11.76 PROVISIONS EQUIP D14 J08 *SU -601-544
Liquid materials drying and agglomeration - 15398B/08

*PUHR/ 18.05.77 PUHRINGER J D15 *SF 7801-511
Separating water from organic viscous effluent - B/08

QPPP 15.07.76 KEWPIE KK D13 =US 4138-940
Strawberry dressing machine - 08607A/05

*QUAK 26.09.77 QUAKER OATS CO C02 D13 E13 (C03) *BE -869-783
Methyl-pyrid-2-yl-methyl mercaptan derivs. - 14177B/08

QUAK 26.09.77 QUAKER OATS CO C02 D13 E13 =US 4107-342
1,8-Di:hydroxy-2,9-di:thia-tri:cyclo-tetradecane(s) - 58673A/32

QUEN/ 10.08.77 QUENTIN G D17 =DT 2735-995
Purifying technical sugar solns. using ion exchangers - 89697A/50

RACO- 14.03.77 RACOR IND INC D15 J01 =US 4139-463
Oil water sepn. - 69213A/39

RALS 16.05.77 RALSTON PURINA CO C03 D13 =FR 2390-907
Palatable dog food contg. lysine(s) - 68950A/39

RALS 16.05.77 RALSTON PURINA CO C03 D13 =SF 7801-524
Palatable dog food contg. lysine(s) - 68950A/39

*RAMO- 04.08.77 RAMOT UNIV AUTH APP A96 B04 D16 (A11 A14) *DT 2833-902
Isocyanide derivs. of poly:hydroxy polymers - 14479B/08

RANG 01.06.77 RANK HOVIS MCDOUGAL LTD D16 =SF 7801-715
Aerobic fermentation acceleration - 91709A/51

RECA 04.02.74 RECHERCHES & IND THERAPE B04 D16 =CA 1047-922
Attenuated influenza B virus recombinants - 54367W/33

REGC 27.05.77 UNIV OF CALIFORNIA B04 D16 =SF 7801-675
Plasmid contg. gene from a higher organism - 70827A/40

RESE 26.03.76 RESEARCH CORP C01 D22 E12 =GB 1541-055
Sucrose organo-tin derivs. - 52230Y/30

RHEI- 28.02.75 RHEINTECH WEILAND D15 =IL --49-117
Biological converter for faecal matter in water - 56085X/30

RHON 10.07.75 RHONE-POULENC INDUSTRIES A25 D25 E19 F06 (A87) =US 4107-056
Hydrophilic polyacetal as antisoil agent for textiles - 05648Y/04

RHON 18.05.77 RHONE-POULENC INDUSTRIES A91 B04 C03 D13 =FR 2390-906
Pure protein(s) prodn. from milk and milk products - 84094A/47

RHON 03.06.77 RHONE-POULENC INDUSTRIES D25 E33 =SF 7801-728
Type 4A aluminosilicate prepn., esp. as detergent additive - 87857A/49

RHON 01.07.77 RHONE-POULENC INDUSTRIES D13 =DK 7802-973
Drying process for heat sensitive feedstuffs - 05449B/03

RHON 01.07.77 RHONE-POULENC INDUSTRIES D13 =GB 2002-245
Drying process for heat sensitive feedstuffs - 05449B/03

*RHON 25.07.77 RHONE POULENC INDS D17 E34 H01 (D16) *DT 2828-684
Extraction of oil by flooding with bio:polymer solns. - 14436B/08

RHON 04.08.77 RHONE-POULENC INDUSTRIES B02 C02 D13 =DT 2834-343
Antibiotic 35665 RP useful as animal growth promoter - 09974B/06

RHON 04.08.77 RHONE-POULENC INDUSTRIES B02 C02 D13 =NL 7807-991
Antibiotic 35665 RP useful as animal growth promoter - 09974B/06

RHWL 21.05.77 RH-WESTF ELEKTRIZIT AG D15 K06 =FR 2391-533
Processing nuclear power station evaporator concentrates - 86394A/48

RICH 22.07.75 RICHARDSON-MERRELL INC B02 C02 D22 =IL --49-720
Antibacterial penicillanic acid derivs. - 92453X/50

RICH 22.07.75 RICHARDSON-MERRELL INC B02 C02 D22 =IL --49-798
Antibacterial penicillanic acid derivs. - 92454X/50
*RIET/ 28.07.77 RIETZ E D16 *DT 2734-050
Rotting silo charging system - 14305B/08
ROCW 31.03.72 ROCKWELL INT CORP D15 M11 =CA 1047-966
Industrial effluent purification - 54148U/37
ROMO- 03.08.77 ROMO NP D15 =DT 2834-130
Multicompartment activated sludge treatment tank - 87870A/49
ROMO- 03.08.77 ROMO NP D15 =NL 7808-155
Multicompartment activated sludge treatment tank - 87870A/49
ROQF 15.09.76 ROQUETTE FRERES SA D13 E24 =FR 2390-910
Natural yellow dye for foods - 21793A/12
*ROTH/ 17.03.77 ROTH E N D12 *US 4138-768
Ground meat extruded onto refrigerated drum - 15726B/08
*RSHC 05.08.76 ROBERTSHAW CONTROLS CO D16 *US 4106-995
Device for inhibiting localised microorganism growth - 15535B/08
RUHN/ 14.02.76 RUHNKE S D15 =DS 2605-924
Difficult or corrosive sludge or sewage sludge removed - 59617Y/34

SAAR- 29.06.77 SAARBERG-FERNWAERME C04 D15 =DK 7802-921
High grade fertiliser prodn. - 02320B/02
*SADO/ 02.10.75 SADOULET M A A D15 *FR 2391-163
Air entrainment liq. jet aerator for purifying waste water - 14524B/08
*SADO/ 18.05.77 SADOULET M A A D15 *FR 2391-162
Outlet valve from settling tank for waste water - 14523B/08
SAGA- 04.11.76 SAGAPHA AG A97 D25 (A82) #US 4107-360
Conditioning deformable gelatin microcapsules contg. stain remover - 18218Y/11
SAKA 30.06.77 OTSUKA PHARM KK B02 D16 =DK 7802-127
Deca:hydro-naphthalene-spiro-benzofuran derivs. - 84059A/47
SAKA 30.06.77 OTSUKA PHARM KK B02 D16 =NO 7801-704
Deca:hydro-naphthalene-spiro-benzofuran derivs. - 84059A/47
*SAKA/ 02.04.75 SAKAMOTO K D13 *GB 1541-135
Dry powder contg. soybeans and unmilled rice - 14563B/08
*SAKB 12.08.77 OTSUKA KAGAKU YAKUHIN D23 E15 *DT 2824-841
2-Cyclopentenone derivs. with jasmine smell - 14429B/08
*SAKB 12.08.77 OTSUKA KAGAKU YAKUHIN D23 E15 *DT 2824-842
Novel 2-cyclopentenone derivs. - 14430B/08
*SAKB 12.08.77 OTSUKA KAGAKU YAKUHIN D23 E15 *DT 2824-843
Cyclopentanol derivs. - 14431B/08
*SAKB 12.08.77 OTSUKA KAGAKU YAKUHIN D23 E15 *DT 2824-844
2-(2-Pentynyl)-cyclopentanol derivs. - 14432B/08
*SAND/ 01.08.77 SANDERSON R S D22 *WP 7900-077
Sterilised storage container with temp. and pressure responsive valve - 15962B/08
SANM- 26.05.77 SANMATSU KOGYO KK B04 D17 E13 J01 (D15 E17) =SF 7801-662
Columnar chromatographic separation - 91666A/51
SANO 13.07.77 SANDOZ AG B04 C03 D16 =SW 7807-554
Isolating antigenic glyco:protein from para:myxovirus - 04043B/03
SANY 05.06.69 SANKYO KK D21 (D16) =US 4107-291
Invertase in prepns for dental hygiene - 90884R/49
*SATO/ 24.12.70 SATO S D11 (D16) *J7 9001-781
Fermenting and baking bread dough contg. flour, yeast and milk - 15082B/08
*SATO/ 13.06.77 SATO J D25 E17 (D21) *J5 4005-919
Sulphation of higher fatty acid mono:glyceride - 14859B/08
SCHC 29.11.74 SCHERICO LTD B05 C03 D22 =CA 1048-020
Antibacterial desoxystreptamines - 44034X/24
SCHR- 24.05.77 SCHREIBER-KLARANLAG D15 #US 4107-040
Cleaning rake arrangement for a drain channel grid - 65175Y/37
SCHU 03.06.77 SCHULKE & MAYR GMBH D22 E14 =SF 7703-961
Disinfecting agent contg. peracid in aq. or aq. alcohol - 23392A/13
SCHU/ 11.06.75 SCHUMACHER H D23 =IL --49-723
Stripping of impurities from oily liquids - 81267X/44
SCHU/ 16.06.75 SCHUMACHER H D23 =IL --49-764
Sepn. of relatively volatile impurities from oils - 81307X/44
SCHW- 28.07.77 VEB SYNTH SCHWARZHEIDE A96 D22 (A25) =GB 2002-288
Medical dressing prepd. from soft polyurethane foam - 86171A/48
*SCMZ 23.06.75 SCM CORP D13 *US 4107-343
Pourable, whippable emulsion - 15668B/08
SEKI 10.11.71 SEKISUI CHEMI IND KK D16 E16 (D15) =J7 9001-792
Enzymatic decompsn. of dimethyl-formamide and hydrolysis prods. - 67660X/36
*SELE- 29.10.76 SELECTIVE LICENSING D13 *US 4139-647
Fruit or vegetable puree prodn. under anhydrous conditions - 15913B/08
*SHEL 03.10.77 SHELL OIL CO D25 E17 *US 4139-566
Acid catalysed alkylene glycol alkylation with olefin - 15880B/08
*SHIO 12.10.78 SHIONOGI KK B02 C02 D22 E13 *BE -871-213
7-Aryl:malonamido-1-oxa-de:thia-cephalosporin derivs. - 14239B/08
*SHIS 09.06.77 SHISEIDO KK A96 D21 (A11) *J5 4005-049
Gel compsn. for nail enamels - 14724B/08
*SHMA 07.07.69 SHIMIZU MANZO SHOTE D13 *J7 9001-783
Devil's tongue powder prodn. - 15084B/08
SHOS 25.10.73 SHOWA SANGYO KK D11 =J5 0070-557
Corn cap or wafer prepn. - 15087B/08
*SHOS 25.10.73 SHOWA SANGYO KK D11 *J7 9001-786
Corn cap or wafer prepn. - 15087B/08
SHOS 08.01.76 SHOWA SANGYO KK D17 E13 (D16) =US 4106-987
Isomerisation of glucose to fructose - 62219Y/35
*SMHL 20.10.77 SIMON-HARTLEY LTD B04 D16 (D13 D15) *BE -871-171
Biological purificn. of waste water, fermentation of yeasts etc. - 14223B/08
SNAM 28.01.72 SNAMPROGETTI SPA D17 =J7 9001-795
Glucose isomerisation - 46008U/33
SNAM 18.05.76 SNAMPROGETTI SPA B01 D16 H04 =FR 2391-276
Microbiological conversions of steroids - 82981Y/47
SNAM 05.07.77 SNAMPROGETTI SPA D17 E13 (D16) =NO 7802-300
Fructose prepn. from glucose solns. - 01939B/02
SNAM 12.07.77 SNAMPROGETTI SPA D14 =SW 7807-745
Sterilising milk and other liquid foods with hydrogen peroxide - 04054B/03
SOLL- 12.09.75 SOLLICH KG A88 D13 =GB 1541-073
Chocolate filling moulding machine - 20244Y/12
SOLV 18.07.73 SOLVAY & CIE A14 D25 (A91) =US 4107-411
Water-soluble poly(alpha-hydroxy-acrylate) salts - 07496W/05
SORI 31.10.68 SOC RECH IND SORI B05 D16 =J7 9001-766
Enzyme polyalcohol aerosol compns - 41550F/00
SPAR- 21.06.74 SPARAMEDICA AG B02 D22 =IL --47-299
3-(Heterocyclylthio methyl) cephalosporins - 01980X/02
*SPOF 02.08.77 SPOFA SPOFENE FARM NP B02 C02 D13 *DT 2829-580
2-Formyl-quinoxaline-1,4-di:oxide-cyano-acetyl hydrazone derivs. - 14438B/08
SQUI 11.03.74 SQUIBB E R & SONS INC B04 D16 =CA 1047-953
Antibiotic ionomycin - 24076W/14
STAG/ 22.10.73 STAGE H D23 =DS 2352-859
Crude fatty acids treatment - 30854W/19
*STAG/ 12.08.77 STAGE H D23 *DT 2736-357
Tall oil distn. with prod. temp. control - 14400B/08
STAL 26.07.77 STALEY A E MFG CO D17 E13 #DT 2733-614
Non-compacting solid anhydrous dextrose - 86388Y/48
STAM 17.05.77 STAMICARBON BV D15 =FR 2391-168
Biological treatment of nitrogenous industrial wastes - 88094A/49
STAR- 31.08.76 STAR CHEMICAL INC A87 D25 E19 F06 =US 4106-901
Emulsifier-solvent scour compsns. - 09767B/05
STEP 08.04.74 STEPAN CHEMICAL CO D23 E15 #CA 1048-058
4-Oxobicyclo (10,4,0) hexadec-1(12)ene-12-ene - 47027V/25
*STEP/ 12.12.77 STEPHENSON E S D13 *US 4139-644
Edible cookie held on stick - 15911B/08
STER 25.02.76 STERLING DRUG INC B03 C02 D21 =US 4107-313
Bis-amino-pyridinium-alkylene or xylylene salts - 61184Y/35
*STER 11.08.77 STERLING DRUG INC D13 E24 *US 4139-645
Stable, red colourant compsn. for acidic foods - 15912B/08
*STER 27.12.77 STERLING DRUG INC D15 *US 4139-461
Removing unwanted slurried solids from reactor - 15832B/08
STOP- 24.02.76 STOPPANI L D15 E34 M25 =US 4139-460
Detoxication of residue obtd. in working chrome ores - 61449Y/35
STRI 10.06.74 SRI INTERNATIONAL B05 D13 E15 =CA 1048-060
1,4-Cyclohexadiene-1-carboxaldehyde syn-oximes - 80121W/48
SUDC 08.10.75 SUD-CHEMIE AG D17 E13 (D13) =DS 2545-112
Xylose recovery from annual plants - 12797Y/08
SUGA= 06.06.75 SUGAR BEET RES INST D15 J04 (D17) #DS 2525-306
Automatic metering of liq. or powder - 67035X/36
SUHL/ 08.07.77 SUHLING P D14 =SW 7807-084
Appts. for making batches of sliced food prod. - 04520B/03
SUMO 30.10.75 SUMITOMO CHEMICAL KK A88 D21 J01 (A14 A35) =US 4107-049
Semi-permeable membranes of acrylonitrile polymer - 34779Y/20
SUMO 11.07.77 SUMITOMO CHEMICAL KK B04 D16 =SW 7807-645
Potent antitumour and immunostimulating substance - 04521B/03
*SYNT 08.03.76 SYNTEX (USA) INC B02 C02 D22 E13 *US 4139-618
7-Substd.-acetamido-3-heterocyclyl:thio-propenyl 3-cephem(s) - 15903B/08
SYNT 20.05.77 SYNTEX (USA) INC D13 =FR 2390-961
Dietetic compsn. contg. purified cellulose and pectin - 84056A/47

TAKE 04.08.77 TAKEDA CHEMICAL IND KK B04 D16 (D22) =DT 2833-689
Antibiotic C-14482 A1, antibacterial and antitumour agent - 12493B/07
TAKE 04.08.77 TAKEDA CHEMICAL IND KK B04 D16 (D22) =NL 7808-129
Antibiotic C-14482 A1, antibacterial and antitumour agent - 12493B/07
*TAKG 15.06.77 TAKI KAGAKU KK A97 D15 E33 *J5 4006-349
Water treating agent for fluorine-contg. waste water - 14973B/08
TAKS 10.06.77 TAKASAGO PERFUMERY KK D23 E13 =J5 4005-050
Perfumes with natural aroma - 01335B/01
*TAKS 15.06.77 TAKASAGO PERFUMERY KK D23 E17 *J5 4005-906
Citronellal prepn. - 14852B/08
*TAKS 15.06.77 TAKASAGO PERFUMERY KK D23 E17 *J5 4005-907
Optically active citronellal prepn. - 14853B/08
*TAKS 08.08.77 TAKASAGO PERFUMERY KK D23 E15 *GB 2002-373
4-Hydroxy-4-methyl-cyclohex-2-en-1-one - 14601B/08

*TANA/ 15.06.77 TANAKA N A60 B07 D23 G02 (D21) *J5 4005-051
Powdery perfume compsn. used in plastics, paints, medicines, etc. - 14725B/08
*TANB 09.06.77 TOKYO TANABE KK B04 D16 *J5 4005-094
Urokinase prepn. from disinfected human urine - 14734B/08
TATL 28.05.76 TATE & LYLE LTD A11 D16 =DS 2723-165
Alginate type polysaccharides by culture of Azotobacter vinelandii - 68909Y/39
TATL 28.05.76 TATE & LYLE LTD A11 D16 =DS 2723-166
Alginate-type polysaccharides by culture of Azotobacter vinelandii - 68908Y/39
*TDCO 10.09.75 TELEDYNE INDUSTRIES D15 *US 4107-046
Water purifying filter cartridge with by/pass - 15558B/08
TEIJ 16.06.77 TEIJIN KK A97 D15 =J5 4006-352
Emulsion breaker with organic hydrophobic hydrophilic cpd. - 36934A/21
*TEIJ 16.06.77 TEIJIN KK D15 H05 J01 *J5 4006-353
Treating waste water contg. emulsified oil - 14975B/08
TEIN- 10.08.77 CENT TECH INT OLEAG D14 =GB 2002-221
Centrifugal disc husking machine for small seeds, e.g. rapeseed - 09971B/06
TENC 12.07.77 TENNECO CHEMICALS I D22 E13 G02 =SW 7807-723
Aq. pigment dispersion contg. polyoxymethylene oxazolidine biocide - 82193A/46
TENU/ 03.08.77 TENUTA A A92 D13 #DT 2734-908
Deep freezing tomatoes - 88294Y/50
*TESS/ 28.07.77 TESSMER K D18 *DT 2734-063
Finishing pelts by coating leather and pile - 14308B/08
TEXC 11.10.77 TEXACO DEV CORP A25 D25 E16 (A97) =US 4107-096
Amphoteric surfactants having good solubility at isoelectric point - 08033B/05
THOS 29.06.77 THOMASPHOSPHATFAB C04 D15 =DK 7802-921
High grade fertiliser prodn. - 02320B/02
*TOKE 16.06.77 TOKYO SHIBAURA ELEC LTD D22 E36 J01 (E17) *J5 4005-864
Appts. for deodorising gas with ozone - 14822B/08
*TOKE 17.06.77 TOKYO SHIBAURA ELEC LTD D22 E36 J01 *J5 4005-867
Ozone oxidn. type deodorising appts. - 14825B/08
*TOKU 17.06.77 TOKUYAMA SODA KK D15 J01 *J5 4005-876
Filter press-type electrodialyser frame - 14832B/08
*TOKZ 13.06.77 TOKYO ORG CHEM IND KK D22 E19 *J5 4005-041
Malodour masking compsn. - 14719B/08
TOXN 09.03.72 TOYO BREWING KK D16 E17 =J7 9001-794
Fermentative prodn of mannitol - 20304V/11
TOXO 15.06.76 TOYO SEIKAN KAISHA D13 =US 4139-651
Removing the membrane which covers orange segments - 11063A/06
*TOYM 09.06.77 TOYOBO KK D16 (D17) *J5 4005-095
Fixed glucose-isomerase prepn. - 14735B/08
*TOYM 13.06.77 TOYOBO KK D16 (D17) *J5 4005-097
Fixed glucose-isomerase prepn. - 14737B/08
*TOYM 13.06.77 TOYOBO KK D16 (D17) *J5 4005-098
Fixed glucose-isomerase prepn. - 14738B/08
*TSUK/ 27.11.67 TSUKAMOTO K B06 C03 D13 *J7 9001-777
Compsn. for increasing calcium and iron levels in blood - 15079B/08
TSZE 05.08.77 TATABANYAI SZENBANYAK D15 #NL 7708-718
Purifying dung water from cattle stables - 57918Y/33
*TURE/ 24.02.77 TURETSKY I D15 J01 *US 4107-047
Water filtering and purifying cartridge - 15559B/08

*UCOA= 14.05.74 UKR COAL ENRICH BRI D15 J01 *SU -601-023
Water clarification sludge thickener - 15168B/08
UGIN 05.10.76 PROD CHIM UGINE KUH C03 D13 =DS 2744-352
Compsns. for enriching cellulosic animal feeds - 21538A/12
UGIN 08.07.77 UGINE KUHLMANN D15 =SW 7807-648
Denitrification of biological effluents - 08436B/05
*UKVO= 18.07.75 UKRVODOKANALPROEKT D15 J01 *SU -601-025
Cylindrical gravitation liquid settler distributor - 15170B/08
UNIC 15.07.74 UNION CARBIDE CORP D15 E35 =CA 1048-175
Removing ammonium ions from water - 13330X/08
UNIC 28.06.77 UNION CARBIDE CORP A97 D12 =DK 7802-891
Food casings providing brown smoke colour - 02455B/02
UNIC 30.06.77 UNION CARBIDE CORP D12 =DK 7802-962
Stuffing horn assembly with flow control device - 02456B/02
UNIC 30.06.77 UNION CARBIDE CORP D12 =NO 7802-261
Stuffing horn assembly with flow control device - 02456B/02
UNIL 08.04.71 UNILEVER NV D13 E17 =J7 9001-788
Cheese product - 70322T/44
UNIL 12.07.72 UNILEVER NV D13 E13 =J7 9001-789
Food flavouring agents - 08645V/05
UNIL 18.01.73 UNILEVER LTD D13 =CA 1047-832
Fat compsns for margarine - 56223V/31
UNIL 20.12.73 UNILEVER NV A97 D13 =CA 1047-827
Simulated fruit capsule extruded into liquid hardener - 44387W/27
UNIL 10.03.75 UNILEVER LTD C03 D23 E17 (D13) =GB 1541-017
De-waxing triglyceride oils - 74334X/40
UNIL 18.05.77 UNILEVER NV D25 =FR 2391-274
Detergent compsn. prepn. from alkali metal and calcium carbon 82159A/46
UNIL 18.05.77 UNILEVER NV D25 =FR 2391-275
Detergent powder sachet for washing fabrics - 82160A/46
UNIL 01.07.77 UNILEVER NV A97 D25 E19 (A25) =DK 7802-991
Nonionic washing compsns. suppressing colour transfer - 01918B/
*UNIL 22.08.77 UNILEVER NV D25 E34 *BE -869-806
Aq. liq. detergent compsn. prepn. for washing clothes etc. - 14186
UNIL 26.07.78 UNILEVER LTD A96 D21 =GB 2002-228
Sprayable hair lacquer compsn. - 08019B/05
UNIO 18.01.77 UCB SA B02 C02 D13 =US 4139-628
Spiro-thiopyran or-pyran penicillin derivs. - 53860A/30
*UNIV 15.08.77 KANSAS STATE UNIV R D15 J01 *GB 2002-250
Granular bed fluid filter - 14575B/08
*UNIX 10.10.77 UNISEARCH LTD B01 D23 *BE -871-137
Wool wax lanolin prepn. from wool degreasing extract - 14214B/0
*UNTC 12.08.77 ECODYNE CORP D15 *US 4107-038
Appts. for grit sepn. from liquid sewage - 15553B/08
UNTC 17.10.77 ECODYNE CORP D15 =BE -871-170
Clarification tank with circumferential inlet trough - 89470A/49
*UPJO 29.12.71 UPJOHN CO B03 C02 D21 E13 *US 4139-619
Topical compsn. for stimulating growth of mammalian hair - 15904
*UPJO 29.06.77 UPJOHN CO B04 D16 F09 (D22) *US 4107-296
Antibiotic rubradirin C - 15651B/08
UPJO 16.11.77 UPJOHN CO B05 C03 D16 =US 4106-994
Antibiotic steffimycinol, prepn. - 25013A/13
*USDA 27.04.76 US SEC OF AGRICULTURE D13 *US 4107-340
Removing corn from the cob - 15666B/08
USDA 15.02.77 US SEC OF AGRICULTURE A60 C03 D22 G02 =US 4 192
Antimicrobial (2)-benzoxy-ethoxy-ethyl furoate - 37975Y/21
*USDA 15.02.77 US SEC OF AGRICULTURE B07 C02 D13 E13 (B03 D25) *US 4107-425
Anomerically pure 1-alpha and 1-beta-D-glucosyl ester(s) - 15697B/
*USSA 08.04.77 US SEC OF THE ARMY D13 *US 4107-335
Freeze-dried salad dressing - 15662B/08
UYBE- 21.02.75 BEN-GURION UNIV D15 E37 J04 (E14) =IL --46-677
Reagent for nitrate ion determination - 70722X/38
UYBE- 02.12.75 BEN-GURION UNIV D23 H07 =IL --48-585
Modification of jojoba oil - 51160Y/29
UYFL- 19.05.77 UNIV OF FLORIDA D22 L01 M13 =FR 2391-175
Metal-coated biologically active glass - 78321A/44
*UYMA- 20.10.77 UNIV MANCHESTER INT B04 D16 (D13 D15) *BE - 171
Biological purificn. of waste water, fermentation of yeasts 14223B/08

*VARO- 04.08.77 VAROSEPITESI TUDOMA D15 *DT 2828-361
Biological surface water purificn. - 14435B/08
*VART 02.08.77 VARTA BATTERIE AG D14 *DT 2734-756
Knife for cutting deep frozen food - 14327B/08
VEOS 28.06.77 VER OSTERR EISEN & STAHL D15 J02 =DK 7802-890
Sewage aeration device - 02213B/02
*VINE 05.12.74 VINELAND LAB LTD B04 C03 D16 *IL --46-189
Colour coded poultry vaccine - B/08

WATE- 19.05.77 WATER RESEARCH CENT D15 J02 =FR 2390-988
Sewage treatment with prior vacuum degasification - 89956A/50
WELE 26.01.77 BELL TELEPHONE LAB D15 J03 #US 4107-721
Electrolytic cell for ionised water - 44238A/25
WELL 14.06.77 WELLCOME FOUNDATION LTD B04 D16 =SF 7801-8
Thymidine phosphorylase - 88218A/49
*WESS 12.10.77 WESTFALIA SEPARATOR AG D12 (D15) *DS 2745-85
Abattoir waste treatment - 14269B/08
WIST- 15.06.77 WISTAR INSTITUTE B04 D16 =DT 2826-075
Viral antibody prodn. using hybrid cells - 74495A/42
WIST- 15.06.77 WISTAR INST B04 D16 =SF 7801-818
Viral antibody prodn. using hybrid cells - 74495A/42
*WITC 06.09.77 WITCO CHEMICAL A26 D25 E11 (A97) *US 4139-546
Anionic silicone defoamer for use in laundry detergent com 15873B/08
WITT- 05.11.71 WITTELSBACHER AUSGL C03 D13 =DS 2155-150
Fodder granules - 28969U/21
*WOLF 13.08.77 WOLFF WALSRODE AG A97 D15 F09 (A23) *DT 2 651
Water-soluble basic polymer with polyethylene glycol units - 1441
*WOTS/ 05.08.77 WOTSCHKE M D15 *DT 2735-327
Caravan kitchen waste disposal - 14374B/08

YAMA- 22.06.76 YAMATO SCALE CO D14 =US 4139-092
Unit load chain conveyor partic. for continuous food ster 25744A/14
*YAMA/ 09.08.77 YAMAMURA Y A96 B04 D16 *GB 2002-229
Antitumour compsn. - 14567B/08

*YOKO- 14.06.77 YOKO YAKKA KOGYOSHO D15 J01 *J5 4006-348
Water purificn. to remove and recover impurities - 14972B/08
YOST 26.04.75 YOSHIHARA OIL MILL KK D13 =J7 9001-780
Vegetable foaming agent for foodstuff - 96829X/52

*ZANA- 20.06.76 ZAN-AL MANAGE SERV D15 J03 *IL --49-839
Continuous water purificn. process - B/08

550-F BD
E -732-170 Q00
T 1938-392 R19
B 1236-707 S24
W ---8-202 T32
A -909-674 T39
L -149-376 X24
9001-766 B08

991-R D
T 1924-980 R46
S 1924-980 B08

884-R D
T 2028-285 R49
L 7008-094 R49
R 2045-856 S19
B 1278-146 T24
A -913-533 T46
S 4107-291 B08

069-S D
-756-507 S13
T 2046-895 T05
L 7014-093 T06
R 2109-084 T38
S 3693-322 T41
B 1321-299 U26
A -939-605 V03
S 2046-895 X15
L -155-456 A07
9001-481 B08

035-S DE
-767-569 S47
T 2125-131 S50
L 7107-389 S50
7001-343 T05
2095-690 T19
S 3741-869 U28
B 1342-311 V01
H -556-911 W05
A -973-495 W37
L -152-929 Y20
S 2125-131 B08

592-S BDE
2120-577 S48
6006-926 T02
2090-802 T14
B 1282-665 T29
A -923-133 U14
9001-787 B08

370-T ADE
2139-074 T08+
3719-613 U12
B 1361-627 V31+
3850-853 V50+
5013-805 W25
6018-961 X28
2139-074 X36+
9001-723 B08

532-T AD
2140-522 T14
2140-522 B08

81-T DE
-773-687 T16
7113-876 T17+
7011-823 T25
7106-764 T29
2102-476 T33
2111-179 T40
2122-841 T51
2102-476 U32
1340-370 U50
-952-538 V34
-563-808 W34
-566-948 W43
3923-695 W51
9001-699 B08+

62-T BD
2152-112 T19
2111-719 T40
1365-950 V36
-993-357 X32
3987-164 X44
2152-112 B08

28-T ACD
2146-129 T21+
2107-711 T32
1342-152 U52
4042-479 V50
3875-302 W15+

CA -980-035 X01+
J4 7034-545 B08
J7 9001-501 B08

43910-T D
BE -777-334 T27
NL 7118-081 T29
DT 2157-907 T31
FR 2120-907 T49
ZA 7107-829 U27
GB 1370-670 V42
CH -564-601 W34
US 3940-220 X10
CA -997-904 X43
DS 2157-907 B08

56679-T D
DT 2106-597 T36
DS 2106-597 B08

70322-T DE
NL 7204-791 T44
BE -781-846 T47
DT 2216-388 T47
FR 2132-783 U08
J4 8048-669 U37
ZA 7202-221 U52
GB 1381-737 W05
US 3865-952 W08
OE 7203-078 W50
CA -987-165 X18
CH -576-751 X29
NL -153-425 Y28
DS 2216-388 A50
J7 9001-788 B08

73243-T BDE
NL 7205-451 T46
DT 2219-631 T47
BE -782-479 T48
FR 2133-992 U08
US 3849-576 V48+
GB 1391-802 W17
GB 1391-801 W17
CH -561-061 W21
US 3950-542 X17+
US 3976-781 X36+
OE 7203-506 Y27
US 4035-492 Y29+
CA 1024-445 A06
US 4085-217 A23+
US 4139-635 B08+

74540-T DE
DT 2221-949 T47
NL 7105-711 T47
FR 2149-051 U21
US 3812-059 V22
GB 1383-942 W07
CH -566-389 W43
J4 7039-644 A51
J7 8044-539 A51
DS 2221-949 B08

80572-T D
DT 2225-976 T51+
FR 2140-125 U13
CH -536-794 U29
CA -963-187 W10+
GB 1393-028 W19+
DS 2225-976 Y46+
US 4060-574 Y49+
US 4107-240 B08+

28622-U DEH
J7 3014-954 U20
J7 9001-621 B08

28969-U CD
DT 2155-150 U21
DS 2155-150 B08

29031-U ABDE
DT 2250-065 U21
FR 2158-424 U34
J4 8052-729 U47
GB 1357-280 V25
CH -554-823 V46
J7 6026-426 X36
DS 2250-065 B08

46008-U D
NL 7300-963 U33
BE -794-432 U33
DT 2303-872 U35
FR 2169-105 U47
ZA 7300-606 U48
J4 8082-084 V02

DL -102-411 V10
GB 1361-963 V31
CS 7300-668 W39
CH -569-793 X02
HU T011-099 X12
IL --41-242 X18
OE 7300-725 X20
RU --61-188 Y02
J7 9001-795 B08

46019-U DJ
NL 7301-059 U33
DT 2303-657 U42
FR 2169-266 U47
GB 1408-235 W40
US 3956-127 X21
CA -997-995 X43
US 4028-244 Y24
DS 2303-657 A44
BE -870-622 B08

51953-U D
BE -795-706 U36
NL 7302-260 U37
DT 2305-494 U37
FR 2177-756 V01
GB 1423-780 X06
DT 2365-850 X39
US 3986-890 X44
CS 7301-214 X51
CA 1010-803 Y22+
DL -126-992 Y45
CH -594-053 A02
HU T014-703 A15+
CH -603-795 A37
CA 1048-017 B08+

54148-U DM
BE -797-438 U37
DT 2316-238 U43
FR 2178-895 V02
J4 9015-247 V15
GB 1374-726 V47
CA 1033-686 A28
CA 1047-966 B08

60447-U DE
DT 2214-756 U41
DS 2214-756 B08

05010-V ABD
NL 7309-151 V03+
DT 2333-306 V03
BE -801-678 V04+
BE -801-677 V04
FR 2190-454 V13+
DT 2333-211 V15+
FR 2197-023 V21
J4 9054-550 V31
J4 9058-195 V32+
US 3946-035 X14+
GB 1442-640 X29+
GB 1443-454 X30
CH -578-021 X34+
OE 7305-786 X36+
CH -579-599 X42+
US 3992-356 X48
OE 7507-951 Y05+
US 4003-990 Y05+
CH -590-302 Y36
SW 7708-537 Y44+
SW 7709-915 Y50
CA 1023-086 A02
CA 1027-293 A11+
US 4107-290 B08+

08645-V DE
NL 7309-647 V05
BE -802-277 V05
DT 2335-277 V06
FR 2192-101 V14
J4 9051-263 V29
ZA 7304-623 W14
OE 7306-099 W27
US 3950-565 X17
GB 1434-194 X19
CA 1008-869 Y18
CH -587-260 Y22
US 4070-381 A06+
J7 9001-789 B08

20304-V DE
J4 8096-787 V11
J7 9001-794 B08

39947-V DE
BE -809-651 V22+
NL 7400-443 V30

FR 2213-766 V45
DT 2400-721 V49
ZA 7400-187 W37
DK 7504-856 X11
DK 7504-855 X11
DK 7504-854 X11
GB 1460-581 Y01
GB 1477-823 Y26
SW 7702-038 Y31
US 4048-300 Y38
CA 1023-667 A04
CA 1028-826 A16
US 4139-599 B08

47027-V DE
US 3816-534 V25
DT 2417-976 W43
NL 7404-923 W44
J5 0132-135 W51
GB 1422-089 X04
FR 2267-301 X05
CA 1048-058 B08+

47180-V DE
BE -810-890 V26
DT 2406-833 V35
US 3843-442 V44
FR 2217-349 V49
ZA 5607-409 W10
J5 0040-782 W24
GB 1401-946 W32
IL --44-196 Y26
CA 1022-865 A02
ZA 7400-956 W10
DS 2406-833 B08

49895-V D
US 3818-819 V27
US 4107-511 B08+

51365-V BCDE
NL 7317-432 V28
DT 2364-129 V31
BE -809-037 V34
FR 2211-232 V42
J4 9094-695 V46
PT --61-089 W04
HU T010-406 W38
DK 7502-800 W42
DK 7502-799 W42
DK 7502-798 W42
DT 2365-705 X04
FR 2289-171 X36
NO 7602-440 X38
NO 7602-441 X38
GB 1459-392 X52
SW 7611-135 Y13
SW 7611-134 Y13
OE 7310-725 Y48
OE 7607-049 Y48
OE 7607-048 Y48
J5 3073-565 A31
J5 3077-088 A32
OE 7604-066 A44
SF 7802-488 B08

56223-V D
NL 7400-606 V31
BE -809-954 V33
DT 2401-944 V33
SF 7400-137 V45
FR 2214-416 V46
J4 9105-807 V50
ZA 7400-262 W37
OE 7400-340 X20
GB 1455-581 X47
US 4016-302 Y15+
CH -595-771 A12
CA 1047-832 B08

63065-V DE
BE -813-503 V36+
NL 7404-849 V43+
DT 2415-283 V44+
NO 7401-284 V48+
SW 7404-443 V49+
DK 7401-858 V50+
SF 7401-065 W01+
FR 2224-544 W05+
J5 0009-602 W13
PT --61-675 W20+
ZA 7401-886 X03
US 3979-340 X38
GB 1466-155 Y09+
CA 1016-833 Y38+
OE 7402-714 Y39
US 4107-095 B08

73752-V D
NL 7402-685 V42
DT 2409-725 V43
FR 2223-646 W04
SU -475-493 X19
US 3955-376 X21
GB 1459-586 X52
NL -155-652 A07
DS 2409-725 B08

76011-V D
DT 2317-295 V44
FR 2224-100 W05
US 3962-906 X26
GB 1468-226 Y12
CA 1010-677 Y22
DT 2366-248 B08+

78224-V D
J4 9071-184 V45
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J7 9001-793 B08

87226-V ADEM
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NL 7406-595 V51
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CA 1047-755 B08

07496-W AD
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CA 1047-830 B08

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NL 7414-171 W44
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OE 7409-396 X46
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IL --46-874 A39
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24076-W BD
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GB 1494-449 Y49
CA 1047-953 B08

24700-W ADF
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J5 0059-519 W29
ZA 7404-801 W37

BR 7408-095 X03
GB 1488-676 Y41
IT 1022-527 A30
CA 1047-750 B08

26176-W BCDE
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FR 2245-298 W27
J5 0058-271 W29
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US 4006-261 Y06
CH -586-017 Y18
NL -156-032 A13
CA 1042-437 A48
J7 9001-790 B08

30854-W D
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DS 2352-859 B08

31011-W CD
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GB 1494-913 Y50
IL --47-102 B08+

34225-W D
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OE 7400-536 X28
US 3975-469 X35
CH -579-948 X42
GB 1462-005 Y03
HU T013-376 Y29
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CA 1048-172 B08

39240-W CD
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FR 2258-127 W45
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CA 1047-784 B08

44387-W AD
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NL 7416-558 W28+
DT 2459-898 W28+
J5 0095-184 W39+
FR 2255-101 W41+
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GB 1507-445 A15+
OE 7410-052 A22+
IT 1027-131 B06+
CA 1047-827 B08+

54317-W AD
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DK 7500-384 W43
FR 2259-539 W47
J5 0123-852 W48
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GB 1459-498 X52
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54367-W BD
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NL 7501-028 W34
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J5 0107-122 W42
DK 7500-097 W44
SF 7500-260 W44
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GB 1439-742 X25
OE 7500-766 Y01
HU T012-818 Y07
IL --46-446 A09
CH -596-316 A15
CA 1047-922 B08

56031-W DJ
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FR 2260-375 W48
US 3927-152 W52+

US 4022-854 Y20+
US 4024-618 Y22+
GB 1503-163 A10
CA 1048-173 B08

58721-W DE
BE -825-800 W36+
NL 7502-125 W37+
DT 2507-007 W37+
J5 0117-931 W46+
FR 2262-021 W50+
DL -118-275 X18+
CH -584-675 Y16
GB 1483-857 Y34+
US 4139-560 B08+

72784-W AD
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J5 0132-119 W51
FR 2267-112 X05
US 3997-458 X52
CA 1028-954 A16
US RE29-909 B08+

78759-W BD
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DT 2528-411 X07
FR 2276-062 X16
J5 1026-218 X16
ZA 7504-051 X35
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GB 1502-774 A09
US 4117-113 A40
CA 1047-921 B08

78882-W D
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DS 2421-652 X38
US 3983-884 X42
GB 1475-637 Y22
CA 1047-754 B08

80121-W BDE
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BE -830-890 W51
NL 7506-766 X01
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SW 7506-441 X07
J5 1007-155 X10
DK 7502-618 X12
FR 2273-801 X13
ZA 7503-217 X24
GB 1476-556 Y24
CA 1048-060 B08

83418-W D
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PT --62-019 W51
FR 2288-478 X34+
GB 1467-873 Y12+
CA 1047-831 B08+

84801-W BCD
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US 3960-667 B08+

85017-W BD
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NL 7508-828 X07
NO 7502-531 X13
SF 7502-118 X19
DT 2533-447 X09
DL -119-613 X28
SW 7508-501 X31
DK 7503-370 X18
FR 2279-415 X20
PT --64-103 X33
HU T012-253 X43
GB 1470-407 Y15
US 4022-884 Y20
OE 7608-520 Y22
OE 7505-724 Y22
J5 2111-503 Y44
SU -563-921 A21
IL --47-854 B08

01980-X BD
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DT 2527-291 X03
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SW 7506-908 X08
J5 1013-793 X12
DK 7502-719 X14
FR 2275-215 X15
SF 7501-815 X15
ZA 7503-086 X24

BR 7503-782 X30
DL -121-113 X36
PT --63-932 X48
OE 7504-769 X50
HU T012-916 Y10
GB 1471-804 Y17
J5 2083-696 Y34+
PT --63-932 Y43
OE 7609-767 A22
SU -589-921 A49
IL --47-299 B08

03845-X BD
BE -830-640 X03
NL 7507-389 X03
DT 2430-380 X04
NO 7502-208 X09
SW 7507-203 X09
DK 7502-872 X14
FR 2276-061 X16
J5 1026-219 X16
PT --63-949 X38
OE 7504-835 Y09
US 4024-242 Y21
J5 2083-927 Y35+
GB 1517-011 A27
IL --47-509 B08

03897-X BD
BE -831-786 X03+
DT 2518-546 X32
NL 7505-412 X33
SW 7505-411 X37
NO 7501-680 X38
DK 7502-069 X43
SF 7501-746 X44
FR 2319-379 Y19+
GB 1492-445 Y46+
SW 7807-571 A46
IL --47-177 B08

05620-X D
BE -832-875 X04
NL 7510-197 X12
DT 2538-014 X13
SW 7509-518 X17
US 3952-729 X19
FR 2282-844 X24
BR 7505-412 X34
ZA 7505-444 X35
GB 1471-117 Y16
US 4040-909 Y33
US 4105-500 A51+
CA 1047-904 B08

05919-X AD
FR 2266-743 X04+
DL -117-477 X14+
DT 2504-081 X33
BR 7502-008 Y02+
GB 1495-598 Y51+
US 4106-898 B08+
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11415-X ABD
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BE -831-648 X08
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DK 7503-320 X18
J5 1035-497 X19
SF 7502-090 X19
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DS 2435-260 X34
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OE 7505-662 Y05
HU T013-288 Y23
GB 1514-219 A24
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13046-X D
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CH -588-823 Y29
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CA 1047-828 B08

13330-X DE
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J5 1034-886 X19
GB 1510-018 A19
CA 1048-175 B08

22921-X D
DT 2539-629 X13
DK 7503-971 X23
J5 1054-976 X26
GB 1516-333 A27
CA 1047-952 B08

24838-X BCD
DT 2540-129 X14+
NL 7510-794 X14+
FR 2284-599 X26+
J5 1054-927 X26+
ZA 7505-813 X37
ZA 7505-812 X37+
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J5 2083-579 Y34+
GB 1517-218 A28+
CH -600-765 A28+
CH -602-001 A33
IL --48-073 B08+

28688-X CDE
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NL 7511-555 X17
SW 7511-095 X21
J5 1063-182 X29
FR 2286-819 X29
US 3969-352 X30
BR 7506-388 X42
ZA 7506-199 X44
US 4029-660 Y25
GB 1524-567 A37
CA 1048-029 B08

29466-X D
NL 7511-440 X16
DT 2543-647 X18
DK 7504-410 X26
FR 2286-191 X28
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GB 1532-972 A47
IL --48-199 B08

31696-X BCD
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SW 7513-175 X28
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J5 1073-191 X32
DK 7505-280 X34
SF 7503-305 X35
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J5 2083-792 Y34+
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CS 7507-936 Y49
GB 1498-087 A03
HU T015-482 A41
IL --48-521 B08

34323-X D
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BE -834-596 X19
NL 7512-242 X19
SW 7510-905 X23
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SF 7502-902 X31
DK 7504-696 X31
FR 2287-856 X33
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J5 2003-855 Y08
CH -598-774 A24
GB 1522-702 A34
CS 7507-029 A38
US 4103-034 A44
IL --48-251 B08

39971-X D
BE -835-556 X22+
NL 7513-874 X24+
SW 7512-893 X28+
NO 7503-925 X29+
DT 2548-916 X34+
DK 7505-289 X35+
DL -121-266 X36+
J5 1082-760 X36+
FR 2292-433 X41+
PT --64-438 X41+
BR 7507-897 X41+
ZA 7507-059 Y01
GB 1516-208 A26+
SU -576-897 A36
OE 7508-976 A40+
CS 7507-787 A41+
CH -604-552 A41+
IL --48-450 B08

44034-X BCD
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SW 7513-330 X33+
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DK 7505-313 X35+
SF 7503-318 X35+
FR 2292-482 X41+
PT --64-527 X44+
ZA 7507-397 X48
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J5 2000-244 Y07+
J5 2097-942 Y39+
OE 7508-950 Y44
HU T014-683 A15+
GB 1528-930 A42+
CA 1048-020 B08+

44105-X ABDE
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DK 7600-144 X41
GB 1475-251 Y22
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FR 2357-253 A15
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45797-X DE
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GB 1513-968 A24
CA 1047-932 B08

48032-X ABCD
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DK 7603-380 X48
FR 2299-356 X49
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ZA 7600-493 Y35
GB 1502-082 A08
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US 4131-648 B02+
US 4138-344 B07+
IL --48-799 B08

48381-X DJ
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SW 7415-590 X31
FR 2294-437 X43
US 4054-056 Y43
GB 1504-556 A12
DS 2556-072 B08

54129-X D
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CA 1047-826 B08

54224-X D
BE -838-716 X29
US 3971-856 X32
NL 7600-920 X39
DT 2608-782 X39
J5 1112-543 X47
DK 7600-879 X48
SF 7600-394 X48
FR 2302-695 Y02
ZA 7600-339 Y07
GB 1511-950 A21
IL --49-015 B08

56085-X D
BE -838-963 X30+
DT 2508-749 X38
NL 7601-914 X38+
SW 7602-033 X42+
DK 7600-650 X47+
FR 2302-280 Y01+
DT 2544-177 Y15
US 4028-245 Y24
DT 2559-900 A14
OE 7600-774 A18+
DT 2559-951 A27+
GB 1522-412 A34+
IL --49-117 B08+

58110-X CDE
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NL 7600-530 X32+
J5 1098-268 X42+
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US 3989-856 X46+
GB 1541-020 B08+

58111-X AD
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SW 7600-330 X37
DK 7600-062 X41
BR 7600-236 X44
SF 7600-083 X44
FR 2297-780 X47
ZA 7600-253 Y38
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US 4138-503 B07+
IL --48-846 B08

61708-X BCDE
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BE -837-970 X33
FR 2299-315 X49
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GB 1526-481 A39
DS 2503-582 B08

63258-X DJ
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GB 1490-926 Y44
CA 1048-174 B08

67035-X DJ
DL -121-397 X36
DT 2525-306 Y01+
HU T012-948 Y10+
DS 2525-306 B08+

67660-X DE
J5 1082-781 X36+
J7 9001-792 B08+

68137-X CDE
NL 7600-856 X36+
DT 2604-340 X38+
US 4098-910 A36
GB 1538-073 B03+
US 4107-184 B08+

70722-X DEJ
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US 4003-706 Y05
IL --46-677 B08

72175-X BD
BE -839-324 X39
NL 7602-671 X40
DT 2609-766 X40
NO 7600-681 X45
SF 7600-674 X48
J5 1118-701 X49
DK 7601-079 X49
FR 2304-351 Y03
SW 7603-165 Y04
DL -124-121 Y21
ZA 7601-370 Y26
GB 1483-142 Y33
CH -603-792 A37
SU -581-881 A43
IL --49-125 B08

72411-X ABCD
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BE -839-309 X39
NL 7602-415 X39
J5 1112-596 X47
SW 7602-117 X48
DK 7600-954 X49
FR 2303-555 Y03
ZA 7601-358 Y13
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HU T014-117 Y45
GB 1500-847 A07
IL --49-158 B08

72412-X ABCD
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NL 7602-416 X39
SW 7602-118 X43
J5 1112-595 X47
DK 7600-960 X49
FR 2303-556 Y03
ZA 7601-359 Y13
US 4031-207 Y26
HU T014-118 Y45
GB 1500-846 A07
SU -584-800 A49+
IL --49-159 B08

74334-X CDE
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BE -839-399 X40
NL 7602-488 X40
NO 7600-789 X44
BR 7601-409 X45
J5 1112-810 X47
SF 7600-598 X48
DK 7601-010 X49
FR 2303-849 Y03
DL -123-892 Y12
SW 7603-132 Y14
PT --64-880 Y36
US 4049-686 Y39
ZA 7601-405 Y46
GB 1541-017 B08

77883-X DE
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BE -839-999 X42
NL 7603-236 X42
SW 7602-709 X46
BR 7601-829 X47
DK 7601-342 X51
J5 1136-840 Y02
FR 2305-172 Y04
ZA 7601-613 Y32
PT --64-947 Y36
OE 7602-090 Y39
CH -598-824 A24
GB 1520-997 A32
US 4107-333 B08

79606-X BD
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J5 1128-489 X52
FR 2306-997 Y06
GB 1476-741 Y24
DS 2522-484 Y32
CH -596-233 A15
US 4094-743 A32
IL --49-315 B08

81267-X D
BE -842-785 X44
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FR 2313-954 Y13
DS 2525-976 Y29
US 4088-542 A26
GB 1521-153 A33
IL --49-723 B08

81307-X D
BE -842-956 X44
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FR 2314-748 Y14
US 4094-748 A32
GB 1522-417 A34
DS 2526-944 B03
IL --49-764 B08

83065-X DG
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FR 2314-453 Y13
J5 2113-383 Y44
GB 1503-435 A10+
CH -596-830 A15
US 4106-478 B08+

90502-X D
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SW 7610-747 Y20
BR 7606-426 Y26
FR 2326-224 Y27
CA 1048-015 B08

92453-X BCD
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US 3994-876 X50
NL 7608-062 Y07
DT 2632-019 Y07
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SW 7608-157 Y13
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DK 7603-130 Y19
ZA 7603-205 Y26
IL --49-720 B08

92454-X BCD
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US 3994-877 X50
NL 7608-063 Y07
DT 2632-018 Y07
J5 2014-797 Y11
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SW 7608-158 Y13
FR 2318-631 Y18
DK 7603-129 Y19
ZA 7603-411 Y26
GB 1491-178 Y45+
IL --49-798 B08

94323-X ADF
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DT 2625-236 Y01
BR 7603-640 Y06
DK 7602-500 Y08
SW 7606-367 Y11
J5 2021-479 Y13
CH -600-017 A28
FR 2382-535 A49
US 4107-364 B08

94585-X D
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SW 7605-072 Y02
J5 2001-085 Y07
FR 2311-498 Y11
DL -124-458 Y21
GB 1540-879 B08

96284-X DE
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NL 7605-694 Y01
DT 2526-964 Y03
J5 2001-021 Y07
FR 2314-733 Y14
GB 1499-789 A05
CH -600-889 A28
US 4107-312 B08

96829-X D
J5 1128-447 X52
J7 9001-780 B08

01268-Y DM
J5 1134-374 Y01
J7 9001-666 B08

02388-Y D
DT 2627-245 Y02+
NL 7606-674 Y02+
FR 2316-327 Y15+
US 4121-976 A44+
IL --49-795 B08+

05580-Y AD
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NL 7604-327 Y04
DT 2529-444 Y05
SW 7604-127 Y07+
NO 7601-523 Y08+
J5 2006-707 Y09
DK 7602-189 Y12+
SF 7601-456 Y12+
FR 2316-326 Y15
ZA 7602-982 Y19
PT --65-249 Y21+
DL -124-657 Y23
BR 7604-054 Y29
DT 2605-502 Y34
DT 2605-420 Y36
DT 2609-807 Y38+
OE 7505-120 Y44
CH -606-406 A48
IL --49-394 B08

05648-Y ADEF
BE -844-006 Y04
NL 7607-636 Y05
DT 2630-935 Y06
SW 7606-305 Y08
NO 7602-388 Y09
J5 2010-398 Y10
SF 7602-008 Y12
DK 7603-125 Y13
FR 2317-315 Y16
ZA 7604-077 Y32
BR 7604-493 Y33
DL -128-389 A08
CH -598-292 A19
GB 1512-318 A22
DL -131-476 A32
OE 7605-079 B01
US 4107-056 B08

06537-Y CD
J5 1142-590 Y04
IL --47-620 B08+

06548-Y D
J5 1142-860 Y04
DT 2639-045 A10+
FR 2362-793 A21+
GB 1527-766 A41
US 4139-456 B08

06866-Y AD
NL 7607-168 Y04+
DT 2629-146 Y06+
J5 2017-594 Y12+
FR 2316-265 Y15+
ZA 7603-763 Y26
GB 1501-307 A07+
J7 8008-755 A17+
US 4139-499 B08+

08747-Y DJ
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FR 2317-001 Y16+
DT 2546-975 Y19+
US 4100-617 A37+
DS 2546-975 B08+

11559-Y D
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J5 2018-847 Y12
ZA 7601-884 Y17
FR 2320-062 Y20
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CS 7605-073 A50
IL --49-305 B08

12797-Y DE
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SW 7611-092 Y21
J5 2051-037 Y22
SF 7602-624 Y24
FR 2327-315 Y28
OE 7606-873 Y44
DS 2545-112 B08

14034-Y DE
NL 7608-720 Y08+
DT 2636-202 Y09+
J5 2038-029 Y18+
FR 2320-111 Y20+
GB 1518-420 A29+
US 4107-289 B08+

16991-Y ADJ
J5 2008-986 Y10
J7 9001-672 B08

18218-Y AD
BE -847-977 Y11
NL 7612-441 Y22
DT 2551-061 Y22
J5 2068-214 Y29
FR 2331-482 Y33
DS 2551-061 Y39
CH -603-404 A37
US 4107-360 B08+

20244-Y AD
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DK 7604-101 Y23
US 4059-378 Y48
GB 1541-073 B08

20376-Y D
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FR 2322-829 Y23
CS 7505-998 Y49
US 4139-457 B08

22217-Y AD
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US 4057-495 Y46
GB 1541-130 B08

23977-Y DJ
FR 2315-303 Y14
US 4052-314 Y41
GB 1541-050 B08

26299-Y D
J5 2028-988 Y15
DT 2708-112 A36+
FR 2381-825 A48+
US 4106-988 B08+

27183-Y ABDE
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14201-B DE
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14203-B D
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14204-B DJ
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14214-B BD
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14223-B BD
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14225-B ADG
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14229-B D
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DT 2833-902 B08

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WP 7900-077 B08+

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=173 56031W D15J02 + P5
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DS 2745
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• 050 14305B D16
• 063 14308B D18
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SW 7805-818 B02
DK 7802-289 B03
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US 4106-174 B08
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800-890 26.05
E US73 383-579
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E US76 713-471
US 4107-217 B08+
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E US75 564-454
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15659B-BCD
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L US78 899-003
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824-214 12.08
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14565B-D
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826-180 19.08
E US71 213-743
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US 4107-208 B08+
15614B-DE
836-776 26.09
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14177B-CDE
837-117 28.09
US 4107-037 B08
15552B-DJ
838-506 03.10
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15880B-DE
839-199 04.10
E US76 736-879
US 4139-647 B08+
15913B-D
839-779 06.10
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14201B-DE
840-123 07.10
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14203B-D
840-940 11.10
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847-390 28.10
E US77 761-836
US 4139-639 B08+
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854-088 23.11
E US75 589-497
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US 4107-343 B08+
15668B-D
859-339 12.12
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US-78
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15840B-D
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CENTRAL PATENTS INDEX
CLASSIFIED ALERTING BULLETIN

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WEEK B09
23 APRIL 79
15967B - 17995B

ABSTRACTS

INDEXES

- **II – PATENTEE**
- **V – BASIC NUMBER**
- **VII – PATENT NUMBER**
- **VIII – PRIORITY CONCORDANCE**

Section D:

FOOD
DETERGENTS

COUNTRY	PUB. DATE(S)	NUMBER RANGE
BELGIUM		
-Delayed	20 FEB - 26 FEB 79	869,863 - 869,995
-Non Delayed	15 FEB 79	871,271 - 871,489
BRAZIL	13 FEB 79	7,801,326 - 7,803,625
CANADA	13 FEB 79	1,048,201 - 1,048,700
SWITZERLAND	15 JAN 79 + 31 JAN 79	608,337 - 608,926
CZECHOSLOVAKIA	30 NOV 78	6,902,963 - 7,803,052
DENMARK	5 FEB 79	7,700,201 - 7,803,982
W.GERMANY		
-DAS	22 FEB 79	1,425,407 - 2,825,435
-OLS	22 FEB 79	2,709,145 - 2,836,514
FRANCE*	22 DEC 78 (BOPI 26 JAN 79)	2,391,633 - 2,392,583
UNITED KINGDOM	28 FEB 79	1,541,211 - 1,541,470 2,002,621 - 2,003,010
JAPAN		
-Unexamined	—	48,036,759 - 53,028,783
	19 JAN 79 - 25 JAN 79	54,006,701 - 54,010,400
-Examined	1 FEB - 7 FEB 79	79,002,001 - 79,002,480
NETHERLANDS	12 FEB - 18 FEB 79	7,708,728 - 7,808,435
NORWAY	5 FEB 79	7,702,404 - 7,804,144
AUSTRIA	15 FEB 79	7,001,483 - 7,805,817
RES. DISCLOSURE	FEBRUARY 79	178,001 - 178,047
SOVIET UNION	—	135,754 - 602,494
SWEDEN	12 FEB 79	7,704,313 - 7,808,017
UNITED STATES		
-Reissues	20 FEB 79	Re29,913 - Re29,918
-Patents	20 FEB 79	4,139,912 - 4,141,081
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*Printed patents actually published early - mid February, 1979

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Arrangement of Abstracts

See Appendix I for definition of 'Major' and 'Minor' Countries.

'MAJOR' COUNTRIES – An alerting abstract of every basic and examined equivalent document is provided except for equivalents from Canada, East Germany and Switzerland. The abstracts are arranged in CPI class order and within any one of the 135 classes are in country and patent number order.

'MINOR' COUNTRIES – Basic headings are included in sequence with the entries from the 'Major' countries.

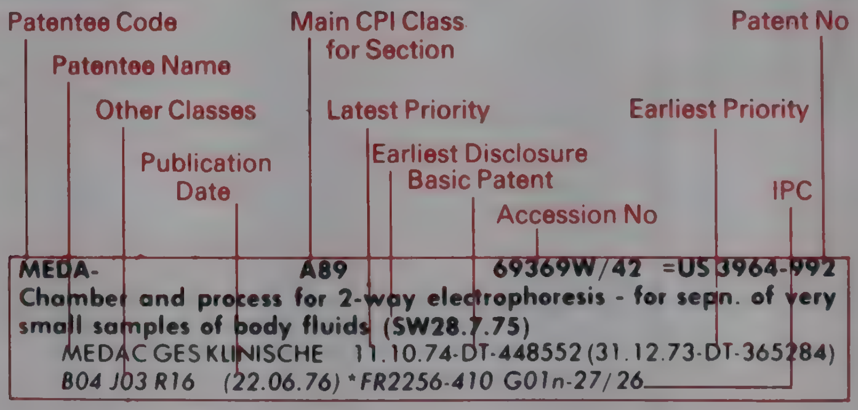
CPI Section Headings

See inside cover for further details.

A	Polymer Chemistry
A+	Polymer Applns.
AE	Polymer & General Chemistry
B	Pharmaceuticals
C	Agricultural Chemistry
D	Food, Disinfectants, Detergents
E	General Chemistry
E+	General Chemistry Applns.
F	Textiles, Paper, Cellulose
G	Printing, Coating, Photographic Chemistry
H	Petroleum
J	Chemical Engineering
K	Nucleonics, Explosives, Protection
L	Refractories, Ceramics
M	Metallurgy

Typical Abstract Heading

See CPI/WPI Instruction Manual No. 1A for explanation of the various flagged descriptors.


Patentee Code
Patentee Name
Other Classes
Publication Date
Main CPI Class for Section
Latest Priority
Earliest Disclosure Basic Patent
Accession No
Patent No
Earliest Priority
IPC

MEDA- A89 69369W/42 =US 3964-992
Chamber and process for 2-way electrophoresis - for sepn. of very small samples of body fluids (SW28.7.75)
MEDAC GES KLINISCHE 11.10.74-DT-448552 (31.12.73-DT-365284)
*B04 J03 R16 (22.06.76) *FR2256-410 G01n-27/26*

Copies of Specifications may be ordered from our PATENTS SUPPLY DIVISION.

D1: FOOD; FERMENTATION

D11 : BAKING

LUCN/ ★ D11 B/09 ★CS 7800-671
Surfactant additive for bakery products
LUCNY M 02.02.78-CS-000671
(30.11.78) A21d-02/14

BABW ★ D11 16166B/09 ★DT 2736-549
Thermal treatment of viscous material e.g. gluten - in injection drier through two-jet nozzles in particle laden hot air
BABCOCK-BSH AG 13.08.77-DT-736549
Q76 (22.02.79) A21d-02/38 F26b-03/12

In the thermal treatment of pasty and viscous material of the consistency of soft rubber, e.g. wheat gluten, the material is injected in a dryer into a flow of hot air, laden with already dried particles of 10-500 µ particle size. Monopumps (RTM) take the material at 1.5-5 bar to a two-jet nozzle, where compressed air at 2.5-7 bar effects the injection into the hot air stream which flows at 20-30 m/s velocity.

The arrangement results in a gently and brief drying action of the wheat gluten. If the air cooling is not sufficient to prevent all deposit formation, water can be readily fed to the nozzles. 13.8.77. as 736549 (13pp39)

WOOD/ ★ D11 16277B/09 ★DT 2835-278
Decorative icing machine - with pump feeding flexible hose and nozzle and with pressure relief valve for return (NL 13.2.79)
DEWITT WOODY G 11.08.77-US-823613
(D13) (22.02.79) A21c-09/04 A23g-03/28 A23p-01

A machine to apply fancy icing and decoration to confectionery and pastry, consists of a pump unit which is connected at its intake to a storage tank for the decoration material. Its delivery is linked to a flexible hose with a squirting nozzle at the end and also through a pressure relief valve to a return pipe into the tank.

The arrangement saves the manual work of squeezing an extrusion bag and of refilling it in intervals. It requires only one hand for operation and leaves the other for manipulating the pastry. 10.8.78. as 835278 (14pp39)

TAKE/ ★ D11 16291B/09 ★DT 2836-241
Bread prodn. in kneading and baking oven - with baking tin lifting table, paddle-mixer and heating units
TAKEUCHI S 19.08.77-JA-099833
(22.02.79) A21c-01/02 A21d-08/06

Bread is produced in an oven in which a baking tin with the flour, baking powder, yeast and other ingredients is mounted on a vertically movable table. Water, preheated in the oven, is also added. The tin can be raised and stirring paddles mix the contents. After lowering for fermentation, the tin is raised again for the dough kneading. The tin is finally lowered to bake the bread loaf.

This produces tasty bread, partic. for households, without any necessity for kneading by hand. It enables unskilled persons to bake bread of uniformly good quality independent of ambient temp. fluctuations. 18.8.78. as 836241 (24pp39)

RADI/ ★ D11 16298B/09 ★FR 2391-689
A soft pad for supporting biscuits during buttering - comprising biscuit crumbs beneath film covering a sheet support
RADIGOIS J M 04.10.76-FR-029993
A97 P28 (26.01.79) A47j-47

A plaque for supporting biscuits while applying butter comprises a rectangular piece of cardboard waxed paper or plastic film covered with a layer of powdered biscuit enclosed by a flexible plastic (cellophane) film. The support adapts to the shape of the base of the biscuit to inhibit cracking or skidding during buttering. The support utilises broken biscuit material and can be printed with e.g. advertisements. 4.10.76 as 029993 (3pp515)

THOM/ ★ D11 16358B/09 ★GB 1538-360
Low calorie diet bread - contg. added gluten, protein, alpha-cellulose flour and edible gum
THOMPSON J B 02.03.77-US-773499 (27.05.76-US-690501)
A97 (17.01.79) A21d-02/26 A21d-10 A21d-13/06

Dough compsns. for breadmaking contain per 100 pts. wheat flour 3-9 pts. added vital wheat gluten, 5-12 pts. edible protein, 10-20 pts. alpha-cellulose flour and 0.5-6 pts. edible gum. The protein is esp. low fat soy flour, or soy flour with non-fat dried milk. The cellulose pref. has particle size 25-50µ. The gum is a synthetic cellulose ether, esp. NaCMC, or guar gum or tragscanth.

The prod. has fewer calories, higher protein content and fibre content than conventional breads or diet breads. 23.5.77 as 021626 (18pp955)

UNIL D11 75689X/41 =GB 1538-428
Prepn of cooked food prods in packages - with second cooking when required for consumption after long storage
UNILEVER LTD 26.03.75-GB-012753
*A92 +Q31 Q34 (17.01.79) *BE-839-929 A21d-15/04*

Packaged baked goods are produced having improved shelf-life, comprises baking goods enclosed in a foil package, providing an aseptic barrier while permitting vapour to escape during baking, cooling and hermetically sealing and heat-pasteurisation.

Pref. baking is at min. interior temp. of 90°C for > 30 mins. to ensure complete sterility of interior of prod., esp. 120-160°C for 1 hr. Temp. is permitted to fall by 20-30°C during baking. A water activity of prod. is realised < 0.95.

Esp. used to package part-baked bread, buns, cake etc. made from dough or pastry prepd. from flour. 24.3.76 (4pp931)

SUGA- ★ D11 16365B/09 ★GB 1541-212
Appts. for forming confectionery cases - with chocolate casing on inner and outer surfaces of edible base
SUGARCUP BISCUIT CO 23.11.74-GB-050828
(D13) (28.02.79) A21c-15

An edible container for a confection comprises a self-supporting base and walls of a solid coherent baked edible material, coated on both sides with a continuous chocolate coating. The container is produced in an appts. which includes a conveyor belt having a first rober positioned over a first run of the belt. This coats the insides of articles on the belt with chocolate.

The articles are inverted by a tripping mechanism downstream of the first rober. A second rober is positioned over a second run of the conveyor and this coats the outer side of the inverted articles. A final stretch of the conveyor is used for drying the coatings. 3.11.75 (-pp295)

MOMI ★ D11 16373B/09 ★GB 1541-457
Appts. for producing roll cake - with toothed wheels rolling sheet of cake material
MORINAGA & CO LTD 28.05.75-JA-063922
(28.02.79) A21c-15

A Swiss roll type of cake is produced by advancing a sheet of the cake material from a lower to an upper level and simultaneously gradually turning the sheet from a horizontal to a vertical position. The vertical sheet is stopped at its upper level and is released so that it falls into a rolling-up device.

This comprises guide toothed wheels carried by a rotatable shaft, and first, second and third toothed wheels carried by respective first, second and third shafts. The shafts are all parallel and rotatable in the same direction.

The toothed wheels cooperate to roll-up the sheet prior to discharge.

The appts. is used to produce a cake of the Swiss roll type. The method replaces a manual process. 15.4.76 as 015692 (7pp295)

UPRO= ★ D11 17548B/09 ★SU -602-149
Bread-making ingredients mixer - has mixer-conveyor unit as hubs of wheel on vertical shaft, with curved plates, on its central section
UKR PROV EQUIP RES 11.06.75-SU-143496
(27.03.78) A21c-01/06

Mixing machine comprises a chamber to process the ingredients, in the lower part of which the mixing/conveying unit is positioned horizontally on a drive shaft, plus recirculation pipes with nozzles. Batch mixing of the dough and aeration are made more intensive by making the mixing/conveying unit as hubs of a wheel placed on a vertical shaft, in the central part of which are fastened curved plates and, in the peripheral part, vanes.

Each of the latter is provided with vertically-positioned end plates; at the level of the upper edges of the curved plates a supporting/guiding disc is mounted, with a rotating head fastened to the bottom of the chamber. The rotating head is fitted with a cone, and a screw is put into the cavity of the head to improve the transportation of the dough through the recirculating pipes.

Braverman, I.M. Bul. 14/15.4.78. 11.6.75. as 143496 (6pp29)

UPRO= ★ D11 17549B/09 ★SU -602-150
Biscuit-dough blanks patterning equipment - has series of intermeshing gears and cams and rollers to actuate rod bearing needles
UKR PROV EQUIP RES 27.02.74-SU-001668
(27.03.78) A21c-11/12

Device is used during the production of biscuit products, comprises a supporting surface holder, hollow shaft with a rod fastened to it and, fitted into the holder, a pricking attachment, consisting of a ring and a rod with a pattern holder on its end, made up of pricking needles. Construction is improved and operational reliability increased by fixing the hollow shaft into the holder so that it can rotate about the vertical axis.

On the lower end of the hollow shaft is a disc with cams and, to the lower end of the rod, a bracket is fastened. This is firmly connected to the rings and has symmetrically-arranged holes to allow rods to pass through. These rods are spring-loaded and the pattern holders with their needles are mounted on the rods so that they move axially and are provided with springs.

Mirmilshtein, I.M. Bul. 14/15.4.78. 27.2.74. as 001668 (4pp29)

SEYM/ ★ D11 17934B/09 ★US 4140-804
Prepn. of cake with internal and external icing - by using carbonated cola drink to give porous cake and effervescent icing
SEYMOUR J J 23.06.77-US-809082 (14.05.76-US-686296)
(20.02.79) A21d-13/08 A23g-03

Prepn. of an edible, cake-like food (I) which has an exceptionally highly porous texture inside, and an edible coating on the outside that extends through holes into the inside, is claimed.

Flour and sugar are mixed, and butter milk, baking soda, eggs, and vanilla are mixed in a separate bowl. A mixt. of carbonated cola drink, cocoa, butter or margarine, and marshmallow in a saucepan is heated to the point of boil (not boiled) when a rapid increased effervescence of the cola occurs. The flour-sugar is added to heated mixt. and blended with it. The butter milk-contg. mixt. is then blended in when an instantaneous vigorous reaction occurs which produces CO_2 and foams the mixt. The mixt. is removed from the heat source and blended for a further 2-3 mins. It is then placed in a greased, floured baking pan and baked for 30-40 mins. at 350°F, holes (nail-like size) are punched in the top of the cake extending to $\sim\frac{1}{2}$ inch. from the botton, and $\sim\frac{1}{2}$ inch apart.

A mixt. of carbonated cola drink, butter or margarine, and cocoa is heated to the point of boil so that vigorous effervescence occurs. The mixt. is removed from the heat and confectioner's sugar is stirred in (effervescent foaming continues). The hot foaming mixt. is poured over the top of the cake and the hot icing is forced into the holes (by a suitable levelling pressure), when the foaming action forces the icing throughout the highly porous structure. Finally the remaining hot icing is applied to the outer surfaces of the cake.

Inside the unique cake the icing is entrained in the highly porous structure and retains a moist, candy-like consistency. Outside the cake, the icing hardens to a glaze. 23.6.77 as 809082. (4pp478)

KLIN/ ★ D11 · 17931B/09 ★US 4140-800
Freeze-dried sour dough bread starter - prepd. by inoculating flour water mixt. with Lactobacillus sanfrancisco
KLINE L 13.06.77-US-805681
(D16) (20.02.79) A21d-08/04

A freeze-dried sour dough starter is prepd. by inoculating a suspension of flour and water in the wt. ratio 1:1 to 2.5:1 with Lactobacillus sanfrancisco to provide an initial count of $\geqslant 5 \times 10^6$ viable cells per g. of suspension, incubating the suspension, adding $\geqslant 6\%$, based on wt. of final flour culture mixt. of a disaccharide stabiliser, then freezing the mixt. and drying it.

The starter provides high levels of viable cells, and allows the prodn. of sour dough bread without the maintenance of a mother sponge. 13.6.77 as 805681. (23pp955)

D12: MEAT; FISH PROCESSING

RASC/ ★ D12 B/09 ★CS 7801-539
Collagen sheet prodn.
RASCHIK P 11.03.78-CS-001539
A11 (30.11.78) A22c-13

RASC/ ★ D12 B/09 ★CS 7801-664
Collagen sheet prodn.
RASCHIK P 16.03.78-CS-001664
A11 (30.11.78) A22c-13

MOME= ★ D12 17464B/09 ★SU -533-100
Roasting meat by infrared irradiation - in two stages followed by treatment with hot air to improve prod. quality
MOSC MEAT DAIRY IND 08.05.75-SU-131684
(25.05.78) A23l-01/31

Meat is roasted by a two-stage infrared irradiation followed by treatment with hot air. The first stage is carried out with 2-10μ rays (λ_{max}= 3.5-3.8μ); the intensity is 6500-7000 W/m^2, time 2-5 mins. The second stage is carried out with 0.76 - 3.5μ rays (λ_{max}=1.04μ); the intensity is 3600-4000 W/m^2; time 40-45 min.

The final treatment is carried out with air heated to 110-115°C, for 15-20 min. Opt. additional air treatment (110-115°C for 5-8 min.) is carried out between the i.r. irradiation stages to avoid overheating. By this method, the process is accelerated, the quality of the product is improved, and the quantity is increased.

Zhukov, N.N., Kazyulin, G.P., Rogov, I.A. et al. Bul. 23/25.6.78. 8.5.75. as 131684 (2pp70)

POLA= ★ D12 17489B/09 ★SU -576-88
Fish lateral bones detector - has ionising emitter and receivers t
position outline of bones and fish prior to severing of the head
POLAR SEA FISH ECON 08.07.75-SU-155616
(22.05.78) A22c-25/14

Bone detector consists of a source of ionizing radiation, detectors, and a conveying unit. The precision with which the coordinates of the bones are determined, and the yield of edible fish production is increased by providing a sensor for the presence of the holding devices on the fish, logic AND scheme and memory, comparison, power, and matching units.

The detectors are distributed on a curve which duplicates the shape of the shoulder bones of the fish, and are connected by means of the matching, power and comparison units to the input of the memory unit. The output of the latter is linked to the logic AND scheme, the input being simultaneously sub-connected to the fish-engagement presence sensor, via a time-matching unit.

Popkov, G.V., Zhogov, N.M., Lebedev, V.A. et al. Bul 23/25.6.78. 8.7.75. as 155616(4pp29)

HAND- D12 77338T/49 =SU -602-100
Sausage-making machine - with mechanisms for portion control filling and twisting between links
A HANDTMANN METALLG (HAN -) 29.04.71-DT-121006
*(03.03.78) *DT2121-006 A22c-11/08*

Sausage-making machine with mechanisms for portion control, filling and twisting between links, in which the dispensing and filling operations of the individual links are separated by a short pause, many times less than the individual filling time, the twisting off operation being carried out in overlap with the filling operation. The pause duration is at most a quater of the filling time, esp. the new filling operation commences with virtually no break after completion of the preceding filling operation The twisting operation may likewise be continuous but with variable speed the minimum being at the middle of the filling phases and the maxima equispaced between minima.

ations of filling and twisting; is ensured.

Muller, J. Bul. 13/5.4.78. 28.4.72. as 777761 (5pp)

LERO= ★ D12 17550B/09 ★SU -602-151
Sausage making and cooking installation - has cylinders containing cells into which extruded sausages are placed and rolled through cooking stages
LENGD ROSREMMEKHPRO (LEME=) 04.01.76-SU-307830
(27.03.78) A22c-11

Production line for sausages, has attachments for shaping and heat-treatment, as well as means for conveying the sausages between operations. Productivity is increased and quality of the products is improved by making each means for the inter-operation conveyance as a container in the form of a mesh cylinder, with a collection of cells into which the sausages are placed.

The latter are formed by rods, connected by discs, the edges of which have guiding flanges. The edges of the discs of the container also have holes so that rods can be passed through, the number of holes for them corresponding to the number of cells.

Bagdasaryan, M.A., Revenko, V.P., Kornyushko, L.M. Bul. 14/15.4.78. 4.1.76. as 307830 (5pp29)

BALM/ ★ D12 17551B/09 ★SU -602-152
Water-separator for fish-water-air pulp - twists flow through pipe with perforated corrugations to prevent clogging by fish
BALMASOV V P 01.08.76-SU-389222
(27.03.78) A22c-25/02

Water-separator, includes a casing, inside which is a perforated pipe, and inlet and outlet pipes. The water is more completely separated from the fish by adding helically-arranged corrugations to the outer surface of the pipe and arranged with the holes between them. A closed flow of pulp is created by installing spray nozzles in the inlet pipe, in order to supply a gaseous or liquid medium.

Balmasov, V.P., Vinokurov, D.Ya., Chulkov, D.F. Bul 14/15.4.78. 1.8.76. as 389222 (2pp29)

TEKH= ★ D12 17552B/09 ★SU -602-153
Internal-organs removal from fish sections - during filleting, using disc knives to form sections and vibrating table to separate parts
TEKHRYBPROM EXP PRO 04.02.76-SU-323963
(21.03.78) A22c-25/14

Fish-filleting device, for processing fish to be used in minced preparations and fish conserves, consists of a unit to divide the fish into portions, with a block of disc knives and perforated vibrating table hinge-mounted on supports, to remove the internal organs from the fish pieces. The quality with which the internal organs are removed is increased by mounting the vibrating table so that it vibrates transversely.

The table also has lateral vertical mesh walls. The supports are fastened in pairs and are inclined relative to one another. The meshes in the meshed walls have dimensions smaller than the cross-section of the smallest lumps of fish. The vibrating table also slopes in the lengthwise direction.

Evdokimov, K.V., Korzhov, V.N., Kravtsov, A.D. et al Bul. 14/15.4.78. 4.2.76. as 323963 (3pp29)

TEKH= ★ D12 17553B/09 ★SU -602-154
Fish smoking oven transporter - with carrying rod ends fitting slots in chain conveyor hangers with rigidly fixed sides
TEKHRYBPROM EXP PRO 23.08.76-SU-398828
(27.03.78) A23b-04/04

A transporter for fish strung on carrying rods comprises an endless chain conveyor having pivotably mounted hangers with rod carriers. To improve oven throughput and reliability, the sides of the hangers are rigidly fixed on bars, and each carrier consists of two plates fixed in parallel on the bars and having inclined slots with round end seats.

Attachment of parts to the bars prevents skewing and chain vibration, eliminates the need for guides and increases conveyor life. The rod length is utilised to the maximum and the slots prevent rods falling out. Such arrangement improves loading mechanisation.

Kravtsov, A.D., Sidorovich, V.V., Slavinskii, N.F. et al. Bul. 14/15.4.78. 23.8.76. as 398828 (3pp1358)

MARI= ★ D12 17555B/09 ★SU -602-156
Nutritive protein hydrolysate prepn. - from defatted killer whale meat by enzymatic hydrolysis, useful as dietary supplement
MARINE FISH OCEANOG 09.08.76-SU-391986
(D16) (27.03.78) A23j-01/02

The protein hydrolysate in the form of flour is prepd. from meat of a killer whale by comminuting the meat; subjecting it to enzymatic hydrolysis; inactivating the ferment, sepg. the hydrolysate by filtration; defatting the product and drying.

This method is improved by effecting the hydrolysis with fermentation preparation 'Protelin'(RTM) having an activity of 1000-1100 unit/g. used in a ratio of 1:20-1:40 w.r.t. the proteins. The temp. is 52-53°C. The duration of the process is 6h. Before the filtration, the hydrolysate is cooled and treated with HCl to pH 2.0-2.6 to effect coagulation of the pigments. The product is suitable for medical nutrition etc.

Popov, N.G., Mrochkov, K.A., and Kaverzneva, E.D. Bul. 14/15.4.78. 9.8.76. as 391986 (4pp70)

ARMO ★ D12 17707B/09 ★US 4139-926
Sterilisation of rotating meat saw - and arcuate guard using jets of hot water
ARMOUR CO 14.06.77-US-806468 (26.01.76-US-652405)
P62 (20.02.79) A22b-05/20 B26b-25

Animal carcasses supported from an overhead rail pass a cutting station. One of the carcasses is contacted by the rotating blade of a cutting saw to sever the carcass at the cutting station. Water under pressure and ≥180°F is projected against the blade after it is removed from the one carcass to sterilise it prior to contact with a second carcass.

Pref. the cutting saw includes a guard which is also sterilised by heated water. The water is discharged from nozzles arranged about the guard. Pref. the blade is rotated as the water is directed at it.

The sterilisation step is used on a carcass processing line to reduce the risk of cross contamination. 14.6.77 as 806468. (4pp295)

See Also

D13 J7 9002261 D14 SU 602155

D13: OTHER FOODSTUFFS

MEAC ★ D13 15978B/09 ★BE -869-890
Aseptic packaging of acid foodstuffs - using plastic containers of low oxygen permeability which are sterilised in hot aq. liq.
MEAD CORP 22.08.77-US-826352
A92 Q31 (22.02.79) A23p B65b

Pre-formed plastic containers, resistant to permeation of oxygen, are immersed in a liq. sterilisation bath to eliminate all air for 1 second to 3.5 minutes at 60-96°C. The sterilising agent is essentially water. The containers are removed and the agent drained off. They are filled with a foodstuff of high acid content (pH < 4.6) which has been pre-sterilised, then sealed with a sterilie lie. The opera tions steps are performed in a closed space filled with a sterile inert gas e.g. N_2. The sterilising water can contain small quantities of a natural organic acid such as citric, malic, fumaric, succinic, adipic or tartaric acids, to give a pH of 2-4. The foodstuff is pref. cooled before being fed into the container.

The lid of is pref. semi-rigid and metallic. The containers are pref. made of acrylonitrile/styrene or acrylonitrile/methyl methacrylate copolymers, the acrylonitrile composing > 50% of the copolymer, PET, PVdC, or PVA polyvinylidene chloride, or polyvinyl alcohol. The process can be used for packing juice, fruit and vegetables with pH < 4.6, as well as sauces, purees, fermented milk products such as yoghurt, jellies, vinegar, etc. 22.8.78 as 869890 (22pp1331)

AMHP ★ D13 15979B/09 ★BE -869-891
Edible, sprayable, lecithin vegetable oil compsn. - contains pure ethanol to reduce viscosity and give a single phase
AMERICAN HOME PROD CORP 22.08.77-US-826481
(22.02.79) A23d-05 A23p

The compsn. comprises 3-12% lecithin and 1-15% pure ethanol (95-100°) the remainder being a liq. vegetable oil; when 95° ethanol is used the max alcohol concn. is 8% in compsns. cong. 12% lecithin and 5% in compsns. contg. 3% lecithin. A partic. compsn. has a max. water contents of 0.6% and 0.4% at 12% and 3% lecithin, and contains 73-96% vegetable oil.

The compsns. are used in cooking by spraying using a pump or compression, without aerosol. The ethanol enables higher lecithin concns. at the same viscosity. It also enables a single phase system which is non adherent, being superior in w.r.t. known compsns. The ethanol also avoids solid sepn. on storage encountered with lecithin/oil compsns. 22.8.78 as 869891 (25pp597)

INRG ★ D13 16009B/09 ★BE -869-990
Obtaining food proteins from vegetable materials esp. soya - by treating with alkaline hydrogen peroxide to solubilise and isolating
INST NAT RECH AGRON 01.09.77-FR-026621
(26.02.79) A23j

The process comprises treating the vegetable material with hydrogen peroxide in a reaction medium at pH 8.5-11.5 to solubilise the proteins insolubles are sepd. and the protein soln. is acidified to pH 6-8.5 to ppte. undesired material; The insolubles are sepd. and to the clarified soln. at least one peroxydose type enzyme is added to destroy H_2O_2 and opt. peroxides present; At least one anti-oxidant is added and the soln. is treated to separate and recover the proteins in a known manner.

The process is esp. applied to soya and enables products without undesirable tastes, indigestible material, or secondary effects. 25.8.78 as 869990 (39pp597)

NEDR- ★ D13 16020B/09 ★BE -871-324
Whey based products prepn. from milk serum from cheese or caseinate - by multistage continuous controlled process
NEDRE NORRLANDS PRO 28.10.77-SW-012167
(15.02.79) A23c

The process using serum from milk of cows, goats or other domestic animals, comprises (a) concn. of the serum pref. by evapn. in several stages to a 40-80% solids content (b) proportioning and addn. of heat insensitive materials; (c) pH adjustment to 5.8-6.4, pref. 6-6.2; (d) heating at 90-105°C, pref. 96-100°C to ppte. the serum milk proteins; (e) keeping hot for a sufficient time and temp. to ensure product quality; (f) addn. of heat sensitive materials such as flavourings and preservations; (g) homogenisation of the pptd. proteins; (h) cooling to below 30°C, pref. 15-20°, and (i) sorting the product.

Compared with present processes, the less work and energy and less working volume are required . Better working conditions and better quality more uniform prods. are provided. 17.10.78 as 871324 (14pp597)

LYCK ★ D13 16027B/09 ★BE -871-364
Enzyme hydrolysis of whole grain esp. wheat - using an endopeptidase and an amylase and sepg.
LYCKEBY STARKEISEFORADIN 22.08.78-SW-008870 (18.10.77-SW-011742)
(15.02.79) A23l

The process in which substantially all the nutritionally important protein constituents are in water-soluble form and opt. all the starch is in water-soluble hydrolysed from in the presence of fats, salts, vitamins and minerals, comprises the following. The crushed grain is treated in any order or simultaneously to the following steps. (a) enzymatic hydrolysis in aq. medium using an endopeptidase to give a protein hydrolysate contg. 50-60% of peptides made up of ⩾ 25 amino acid residues, 35-45% of peptides comprising 5-20 aminoacid residues and 4-8% of peptides with ⩽ 4 aminoacid residues. The protein is recovered after filtration. (b) enzymatic hydrolysing other enzymes to give water-soluble products pref mono- and di-saccharides; (c). sepg. bran and other insolubles and (d) if desired, concentrating the prods.

Process is applied e.g. to barley, oats, rye, corn, rice and esp. wheat the prods. being used in foods. The process overcomes previous process disadvantages due to the tendency of protein, bran, germ and starch granule to agglutinate, the sepn. of fractions requiring large amts of water and much plant capacity. 18.10.78 as 871364 (+1.11.77-SW-012341) (26pp597)

FORM/ ★ D13 B/09 ★CS 7606-219
Complex granules and pellets prodn. for farm animals
FORMAN L 27.09.76-CS-006219
C03 (30.11.78) A23k-01/08

BARI/ ★ D13 B/09 ★CS 7800-039
Feedstuff protein concentrate prodn. - from leather prodn. waste
BARINKA J 02.01.78-CS-000039
C03 (D18) (30.11.78) A23k-01/10

SELE/ ★ D13 B/09 ★CS 7800-988
Continuous prodn. of cheese specialities
SELECKY J 15.02.78-CS-000988
P13 (30.11.78) A01j-25/12

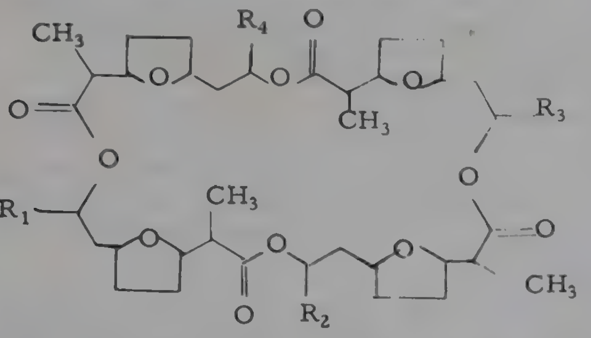
MULL/ ★ D13 16085B/09 ★DS 2752-01
Puffed cereal prodn. - by superheated steam in static pressur vessel and shock discharge into silo
MULLER E 22.11.77-DT-752017
(22.02.79) A23k-01/14 A23l-01/18

Puffed cereal and vegetable products (popcorn) for use as food and fodder are produced by treating the raw material with its 12 - 15% moisture content in a stationary pressure vessel by superheated steam at 12 - 16 atm No external heat is applied and no mechanical stirring is required during the retention time of ½ to 2 minutes. Afte the pressure has been released, the product is dried, if required.

Process results in a partic. high percentage of hydrolysed starch and in excellent digestibility. Increase of t growth rate in the case of animal food has been high because of the 80 - 90% utilisation factor. 22.11.77 as 752017 (4pp39).

NIPK ★ D13 16289B/09 ★DT 2835-936
Animal e.g. cattle, sheep or pigs growth promotion - by administering macrotetrolide antibiotics esp. nonactin, monactin, dinactin, trinactin, tetranactin or polynactin (NL 20.2.79)
NIPPON KAYAKU KK (CHUS) 18.08.77-JA-098996
B02 C02 (22.02.79) A23k-01/17 A61k-31/33

The growth of domestic animals is promoted by administering to the animals an effective amt. of one or more macrotetrolide antibiotics of formula (I) (where R_1, R_2 R_3 and R_4 are each lower alkyl).



(I)

Pref. antibiotics (I) are nonactin (I; R_1-R_4=Me), monoactin (I; R_1=Et, R_2-R_4=Me), dinactin (I; R_1=R_2=Et, R_3=R_4=Me), trinactin (I; R_1-R_3=Et, R_4=Me) and tetranactin (I; R_1-R_4= Et), and the polynactin complex (a mixture, the main components of which are dinactin, trinactin and/or tetranactin). Dosage for growth promotion is 0.01-100 mg/kg/day, pref. administered orally in the form of a mixture with feed contg. 0.5-1000 ppm (I). 17.8.78. as 835936 (18pp280)

WYSS ★ D13 16295B/09 ★FR 2391-656
Prepn. of rapidly dissolving vegetable prods. e.g. peas - by grinding, treating aq. suspension with amylase and drying
ESCHER WYSS SA 25.05.77-CH-006433
(26 01.79) A23l-01/20

The vegetables are first dry ground so that the outer parts (exosperm) are disintegrated and inseparable from the flour. A suspension of the flour with α-amylase is prepd. in water which is continuously treated by a short cooking period, a reaction phase to at least partly degrade the starch under the effect of the α-amylase and then a drying phase. The process is carried out in an appts. comprising a grinding appts. an appts. for preparing the suspension, a steam injection cooking appts, a continuous reactor passage, a single cylinder drier and circulation means between the stages.

Examples of vegetables are haricot beans and peas. C.f previous processes this is simpler, cheaper, requires no manual labour and gives a better quality prod. 24.5.78 as 015439 (8pp597)

GENO D13 76696A/43 #GB 1538-387
Coffee flavour-aroma for soluble coffee prodn. - is obtd. by treating the residue from previous percolation process with steam and condensing the volatiles
GENERAL FOODS CORP 18.04.77-DT-717092 (14.04.77-GB-015658)
*(17.01.79) *DT2717-092 A23f-01/04*

A natural enhancing constituent is obtd. from coffee by steaming spent coffee grounds under sufficient conditions to generate volatile coffee-enhancing constituents.

Spent coffee grounds are pref. those obtd. after aq. extraction in a percolator. The volatile constituents are then condensed at 40-50°F and added to coffee.

Method is simple and does not degrade the coffee extract. 14.4.77 as 015658 (4pp997)

NATY D13 04416B/03 =GB 1538-390
Non-sugar contg. coating compsn. for food prod. esp. cereals - contains white pyro:dextrin and oil applied as aq. syrup
NABISCO INC 08.04.77-US-785948 (22.04.76-US-679249)
*(17.01.79) *FR2386-269 A23l-01/34*

Sugarless coating compsn. for foodstuffs comprises a white pipodextrin and an edible oil- or fat-derived oleaginous material. Compsn. is free of mono- or di-saccharides and other low mol. wt. polysaccharide sweeteners and has a low dextrose equiv. wt.

The oleaginous material tenderises the compsn., which opt. further contains a sugarless sweetener. 20.4.77 as 016434 (7pp997)

NEDR- D13 02503A/02 =GB 1538-392
Low-calorie mayonnaise-type dressings prepn. - from buttermilk, egg yolk, vegetable oil, acid, water, sugar, salt, condiments and thickeners
NEDRE NORRLANDS PRO 18.06.76-SW-007012
*A97 (17.01.79) *DT2726-969 A23l-01/24*

Low-calorie mayonnaise prod. consists of buttermilk, egg yolk, edible oil, edible acid, water, sugar, salt, thickener and >1 of spices, mustard and pepper. The fat content is ≯30%.

It can be made from sour buttermilk by heat-treating at 40-90°C in a vacuum; forming a finely divided suspension of protein particles and heat-treating at 50-300 bars; quickly cooling to < 20°C; homogenising and pasteurising or sterilising.

Prod. has good storage and chemical stability and contains important nutrients. 15.6.77 as 025037 (6pp997)

KUNZ/ D13 84362X/45 =GB 1541-239
Tilting pressure vessel for steam peeling unit - can be charged without damaging soft fruit such as peaches or tomatoes
KUNZ P 15.04.75-DT-U11814
*(28.02.79) *NL7603-991 A23n-07*

A pressure vessel for a steam vessel includes a container with lid, the container being rotatably mounted on a base, the interior of the container being connected to a steam source, and a portion of the container near the lid opening having a asymmetrical configuration so that opposite side walls in a plane perpendicular to the rotational plane have different inclinations with respect to the opening.

Pref. the asymmetrical portion is of oblique frustoconical shape and the remainder is cylindrical. 9.3.76 as 009297 (5pp1376)

USRU D13 47960X/25 =GB 1541-272
Clear elastic gels for desserts - based on carrageenans
UNIROYAL LTD 24.03.75-CA-222872
*A11 (A97) (28.02.79) *US3962-482 A23l-01/04 C08l-05*

Water-soluble compsn. which produces a clear, elastic, water gel comprises potassium-sensitive carrageenan (I) in the form of an alkali metal or ammonium salt, and a non-toxic, water-soluble potassium salt (II) other than potassium carrageenate in amt. of 10-110 wt.%, based on wt. of (I). Compsn. contains ≯0.01 wt.% of polyvalent metal cations based on combined wt. of (I) and (II).

Compsn. is used for prepn. of dessert gels having good unmoulding and shape-retaining properties. 24.3.76 as 011831 (10pp931)

JOHJ D13 22245Y/13 =GB 1541-461
Dry powder mixt. for prepn. of hypotonic drinks - contg. electrolytes and sweetening agents (BE220377)
JOHNSON & JOHNSON 23.09.75-US-615338
*(28.02.79) *DT2642-632 A23l-02/38 A61k-33*

A hypotonic drink comprises Na ions, K ions, Cl ions and phosphate ions and a sweetener, and has an osmolarity of 80-200 mOsm. Pref. drink contains 10-35 mEq/l Na ion, 0.5-20 mEq/l K ions, 10-35 mEq/l Cl ion, 1-15 mEq/l phosphate ion and 1-54 m moles/l sweetener.

The drinks are characterised by rapid gastric emptying into the system allowing good availability of water and electrolytes to the system, and are used to treat heat related illnesses. 22.9.76 as 039277 (5pp982)

ZOJA ★ D13 16374B/09 ★GB 2002-631
Extn. process for recovery of phospholipid(s) from animal organs - to obtain high purity prod. for pharmaceutical use
AESCULAPIUS LAB CHI 04.08.77-IT-026475
B05 E11 (28.02.79) A61k-35/12

Phospholipids (I) are obtd. (a) soaking ground and homogenised animal tissues in cold acetone, (b) filtering the tissues and extracting them with acetone under reflux, (c) extracting the residual tissues with EtOH in vacuo in a stream of N_2, and evaporating the EtOH extract is evapd., and (d) treating the residue in Et_2O is with acetone to ppte (I).

Procedure is simple and economical and gives (I) a high-purity, esp. for therapeutic use, e.g. in treating hypercholesterolaemia. (I) of lower purity have been used in foodstuffs as viscosity reducers, emulsifiers, antioxidants etc. 18.7.78 as 030177 (6pp1248)

TOXW ★ D13 16497B/09 ★ J5 4006-888

Oxygen absorbent used to treat foods and for sterilisation - comprises sulphide, polysulphide or hydrogen sulphide of alkali metal, solid catalyst material and organic solvent

TOYO INK MFG KK 20.06.77-JA-072256

E36 G04 (19.01.79) B01d-53/16

The compsn. comprises (A) $\geqslant 1$ sulphide, polysulphide or hydrogen sulphide of alkali metal; (B) solid material having the catalytic activity for the absorption of oxygen by (A), and (C) organic solvents opt. with water. The compsn. can absorb oxygen even at below 0°C. It is used for prevention of formation of stain and decompsn. of foods and sterilisation.

Examples of (B) are C black, active C, charcoal, coke, Fe carbide, sulphate of Fe, Ni and Co, activated clay and sulphonated anthraquinone deriv. The solvent is e.g. an alcohol, glycol ether pyridine or ethyl acetate. The wt. ratio of (A)/(B)/(C) is 100/1-1-500, e.g. (20-200)/1-1000, e.g. (10-300). 20.6.77 as 072256. (3pp42)

DIAT- ★ D13 16773B/09 ★ J5 4008-186

Antioxidant used for preserving food etc. - comprises diatomaceous earth contg. adsorbed caustic alkali and mixed with talc, alkali metal carbonate and L-sorbic acid

DIA TOKKYO PROJECTK 22.06.77-JA-074592

E36 G04 (22.01.79) A23l-03/34 B01d-53/16

Deoxygenating agent is composed of a diatomaceous earth contg. adsorbed caustic alkali and mixed with talc, alkali metal carbonate and L-sorbic acid. The diatomaceous earth is e.g. immersed in conc. NaOH soln. e.g. 33% soln., and is contacted with L-sorbic acid, anhydrous alkali metal carbonate to improve the deoxygenating power, and talc to prevent elution of alkali. The deoxygenating agent can be processed to tablets, and is placed in air-penetrating box to be placed in a sealed container along with food prod. It is useful for preservation of food prods., leather prods., clothes, etc.

In an example, 45 g. of 33% NaOH soln. were adsorbed into 90 g. diatomaceous earth, and mixed with 65 g. talc, 50 g. anhydrous sodium carbonate and 50 g. L-sorbic acid, then tabelled. 3 g. of the deoxygenating agent thus produced, when tested in 200 ml. air, showed oxygen adsorption of 18.5% after one day, and 20.4% after 2 days, and 20.7% after 3 or more days. 22.6.77 as 074592. (3pp43)

SHOS ★ D13 16905B/09 ★ J5 4008-738

Meat-like textured vegetable protein prepn. - by mixing vegetable protein in water, extruding at high temp. and pressure, seasoning and oil smoking

SHOWA SANGYO KK 20.06.77-JA-072220

(23.01.79) A23l-01/34

The method comprises kneading vegetable protein and water, extruding the mixt. through die under high temp. and high pressure in lump form, sheet form or bar form, immersing the obtd. textural or structural protein in seasoning soln. and treating at 10 -150°C by oil-smoking.

Protein food having texture like animal meat can be prepd. inexpensively. When seasoning soy for roast meat is applied, food like roast pork can be obtd. and by freeze-drying, a highly preservative food can be obtd.

The common salt content in the seasoning soln. is pref. $>1\%$ ($>1.5\%$). Pref. raw onion and/or raw garlic is added for preventing bean smell prod. 20.6.77 as 072220 (6pp15)

AKIY/ ★ D13 16906B/09 ★ J5 4008-751

Removing the bitterness and odour of garlic - by desalting, immersing in hot water, cooling and then seasoning

AKIYAMA M 21.06.77-JA-073578

(23.01.79) A23l-01/21

The method comprises (1) desalting garlic, (2) immersing it in water at 70-80°C for 3 mins., (3) cooling it, (4) immersing it in a mixed seasoning soln. contg. water, amino acid-soy bean paste, sugar, lactic acid, sodium glutamate etc., for 48 hrs. and (5) immersing it in a finishing seasoning soln. contg. soy, amino acid-soy, sodium glutamat sodium inosinate, lactic acid, broth essence, 'mirin', colourant, antiseptic, sugar, water, etc., for 10 hrs.

Allyltrisulphide is decomposed by immersion in hot water. After the treatment, the garlic is packaged in bags or bottles and is heat-sterilised. 21.6.77 as 073578 (2pp5)

YASU- ★ D13 16907B/09 ★ J5 4008-76

Collagen protein-based food prodn. - by forming soln. contg aminoacid(s) by decomposing protein protease, adding gelatin carrageenan, egg white, etc., heating and solidifying

YASU KAGAKU KOGYO 22.06.77-JA-074982

(23.01.79) A23l-01/32

The method comprises prepg. a tasty soln. contg. amino acids such as proline, alanine, glycine, etc. as the major components by decomposing collagen protein with proteas adding gelatin, carrageenan, egg white, sorbite, minced meat and opt. water and other seasonings to the tasty soln., heating the mixt. and solidifying it.

The tasty soln. prepd. has a moisture content of 20-30% To 150-250 pts.wt. of the tasty soln. 10-40 pts.wt. of powdery gelatin, 10-20 pts.wt. of carrageenan, 50-150 pts wt. of egg white, 50-150 pts.wt. of sorbite and 100-200 pts wt. of minced meat are combined. The mixt. is heat-treated at $>70°C$, poured in moulds and solidified to thin plates < 5mm. thick. They are dried to moisture conten < 15 w/w% and opt. are roasted and cut in fine pieces.

The delicious food which is similar in taste and texture to the cuttle-fish food, is prepd. 22.6.77 as 074982. (4pp5)

QPPP ★ D13 16908B/09 ★ J5 4008-76

Prepn. of dry yolk compsn. - by adding non-volatile alkali and suga to liq. yolk and drying

Q.P. CORP 17.06.77-JA-071673

(23.01.79) A23b-05/02

The method comprises combining non-volatile alkaline agent and sugar in liq. yolk and drying the mixt. The non-volatile alkaline agent is e.g. Na_2CO_3, Na phosphate and NaOH.

Compsn. can be dissolved in water easily and the yolk dispersion does not suffer from sedimentation and sepn. 17.6.77 as 071673. (4pp5)

KANE ★ D13 16909B/09 ★ J5 4008-76

Prepn. of caramel with liq. centre - by maturing and saccharifying caramel contg. gelatin and foaming protein; extruding into pipe filling with liq. centre; cooling and mouldin

KANEBO KK 20.06.77-JA-073770

(23.01.79) A23g-03

Process comprises (a) maturing and saccharifying caramel contg. gelatin of low bloom degree and foaming protein; (b) extruding the caramel in hollow pipe form; (c) simultaneously supplying and filling the liq. centre in the hollow pipes continuously; (d) cooling it rapidly; and (e) simultaneously moulding it into the desired form.

Leakage is prevented. Specifically the caramel is composed of processed milk such as condensed milk, skimmed condensed milk, etc., sugar, millet jelly and edible oil such as palm oil, etc. and gelatin and foaming protein are combined in the caramel to include air bubbles in the caramel with the object of improving the texture, preventing the sepn. of oil and keeping proper extending property and mould-sepn. property. 20.6.77 as 073770. (6pp5)

KAJI/ ★ D13 16910B/09 ★ J5 4008-76

Calcium enriched soft drink - contains calcium citrate, malate lactate or tartrate

KAJI H 15.06.77-JA-069999

(23.01.79) A23l-02/38

The soft drink is combined with Ca salt of the organic aci e.g. Ca citrate, malate, lactate, tartarate, etc. The drink can supply large amts. of Ca to growing children.

The drink can be prepd. by mixing 3 pts. of Ca salt (a mixt. of Ca citrate, malate and lactate of 1:1:1), 3 pts. o sugar, 4 pts. of natural fruit juice and 90 pts. of water, and adding natural apple vinegar to make pH 4.0. 15.6.77 as 069999. (2pp5)

KANF ★ D13 16911B/09 ★J5 4008-768

Decolourisation of stevia extract - by ultrafiltration of extract followed by addn. of slaked lime to filtrate

KANEGAFUCHI CHEM KK 22.06.77-JA-074852

B03 E13 (23.01.79) A23l-01/22 C07h-01/08 C07h-15/24

The method comprises (1) ultra-filtering the extract of stevia using the ultrafiltration membrane which has the pores that can hold stevioside < 10% and pepsin > 80%, (2) adding slaked lime 1-30w/w% to the filtrate, and (3) removing the high molecular colouring components by adsorption on slaked lime.

The stevia extract obtd. by extracting dry leaves of Stevia rebaudiana bertoni with water, alcohol, etc., contains black brown impurities. Removal of the impurities can be effected with use of less slaked lime. By concentrating the refined extract pale yellow powder is obtd. and by recrystallising it from methanol soln. white crystalline stevioside having purity > 95% can be obtd. 22.6.77 as 074852. (5pp5)

KANF ★ D13 16912B/09 ★J5 4008-769

Concentrating soln. of stevioside by reverse osmosis - using amphoteric ion exchange membrane

KANEGAFUCHI CHEM KK 22.06.77-JA-074853

B03 E13 (23.01.79) A23l-01/22 C07h-01/08 C07h-15/24

Method comprises concentrating the extract of Stevia by reverse osmosis using an amphoteric ion exchange membrane which has a checking rate for stevioside > 90% and a checking rate for calcium chloride < 20%. Pref. the extract of Stevia is pretreated by ultrafiltration, adding slaked lime to the filtrate to adsorb impurities, removing the slaked lime by filtration, etc. and neutralising the clear soln. with acid.

The soln. is refined as well as being concentrated. From the conc. soln., highly pure stevioside can be recovered by crystallisation. Process uses less energy than that using reduced pressure and freezing. No heating is required. 22.6.77 as 074853. (3pp5)

DAUC ★ D13 16913B/09 ★J5 4008-770

Stabilising crystalline neopurpuratin red-purple colourant - by adding antioxidant or reducing agent to improve resistance to heat and light

DAIICHI PHARM KK 23.06.77-JA-074668

E24 (23.01.79) A23l-01/27

Neopurpuratin is red/purple crystalline powder prepd. fermentatively, and its aq. soln. shows a clear red/purple colour. It is non-toxic, has excellent extending property and can be easily fermented. The stabilised neopurpuratin can be used as a colourant for foods, such as soft drinks, pickled vegetables, milk drinks, fruit jelly, etc.

The (in)organic reducing agent or antioxidant is e.g. alkali(ne earth) metal salt of sulphurous acid, thiosulphuric acid, etc., ascorbic acid, araboascorbic acid, cysteine, glutathione, reducing sugar, caramel, oxalic acid, their salt, their ester, etc., in an amt. of 0.01-100 pts. wt. per pt. wt. neopurpuratin at pH 2-8. 23.6.77 as 074668. (4pp5)

ONOD/ ★ D13 16914B/09 ★J5 4008-772

Medicinal material prodn. from water oats, bulrush and lotus - involves adding animal bone, exposing to sunlight, steaming, cooling, fermenting and drying

ONODERA H 20.06.77-JA-073123

B04 (23.01.79) A23l-01/34 A61k-35/78

Method comprises (1) pressing a mixt. of water oats, bulrush and lotus (pref. in wt. ratio 10:4:2), (2) adding animal bone rich in nitrogen, phosphorus, potassium and calcium, (3) exposing the mixt. to sunlight, (4) sprinkling the obtd. extract on fine pieces of the mixt. of water oats, bulrush and lotus, (5) steaming for 8-10 hrs. in a pan, (6) cooling by spreading on a straw mat, (7) preserving for 3 months in a cellar constructed of red clay to ferment useful microbes, (8) drying under sunlight until completely dry and (9) cutting into fine pieces or pulverising.

Prod. is added to water and applied as a drink. 20.6.77 as 073123. (2pp5)

KIKK ★ D13 16915B/09 ★J5 4008-785

Mfr. of protein hydrolysate with high free glutamic acid content - by reacting protein during or after hydrolysis, with lactic acid bacteria and glutaminase under specific salt concn.

KIKKOMAN SHOYU KK 21.06.77-JA-072824

(D16) (23.01.79) A23l-01/20 C12k-01

Protein hydrolysate is obtd. by hydrolysing protein with protease. After or during the hydrolysis, lactic acid bacteria and glutaminase are reacted with the protein material with stirring at 30-35°C under a specific salt concn. governed by the hydrolysis temp. The free glutamic acid content in the hydrolysate is increased.

The protein hydrolysate which is excellent in taste and flavour and has high free glutamic acid content, is prepd. with high dissolving and availing rate for nitrogen and high amino acid converting rate without putrefaction and acidification regardless of that the process is practised under relatively low salt concn. 21.6.77 as 072824. (13pp5)

AJIN ★ D13 16921B/09 ★J5 4008-796

Rapid brewing of syoyu - using solid cultured prod. of Aspergillus mould opt. autolysed or matured

AJINOMOTO KK 20.06.77-JA-073045

(23.01.79) A23l-01/23

The method comprises (1) adding sugar, common salt and the precursor of the fragrant components selected from (a) a solid cultured prod. of Aspergillus mould; (b) the autolysed prod. of (a); (c) the matured prod. of (a), and (d) their insoluble lees, in the enzymically decomposed prod. of soy bean protein, (2) effecting major fermentation aerobically using yeast, and (3) effecting after-fermentation anaerobically using yeast.

Substances (a), (b), (c) and (d) contain the precursor for the fragrant components of 'syoyu' and that by combining them in 'syoyu' material, 'syoyu' showing excellent taste and flavour like natural 'syoyu' can be prepd. by rapid brewing (e.g. in 10-14 days). 20.6.77 as 073045. (5pp5)

TAKE/ ★ D13 17118B/09 ★J5 4010-174

Highly nutritive feedstuff prepn. - by culturing edible mushroom mycelium in rice or wheat straw medium and heating to leach active components into the straw

TAKEUCHI M 17.06.77-JA-071756

C03 (D16) (25.01.79) A23k-01

Prepn. of feedstuff comprises prepg. a culture medium mainly from rice straw or wheat straw; inoculating a seed culture of edible mushroom in order to culture mycelium; and heating the culture medium spread with mycelium at 40-60°C to cause catalytic reaction and thereby to leach the active component in the mycelium into the culture medium.

Since the active components in the mycelium are leached into the culture medium, the feedstuff obtd. has very high nutritive value, and is esp. suitable for cows and horses. The amt. of soy bean or corn can be reduced to half the amt. previously used. As seed culture of edible mushroom there is pref. used Pleurotus, since it spreads on a medium in a short time. The active components include, e.g., enzymes, polysaccharides, polypeptides, 18 kinds of amino acids, vitamin B_2, B_{12}, D_2, etc. Cultivation is conducted under aerobic conditions and is also conducted after sterilisation of the medium. 17.6.77 as 071756. (3pp108)

SHIO/ ★ D13 17119B/09 ★J5 4010-175

Animal feedstuff prepd. from chaff - by pulverising, mixing with molasses, rice bran, water and microorganism and fermenting

SHIOZAWA S 25.06.77-JA-075841

C03 (D16) (25.01.79) A23k-01

Process comprises compacting chaff using a high pressure compressor; pulverising using a hammer mill to break the chaff tissue; and fermenting the chaff under addn. of fermenting microorganism. Since the chaff tissue is broken by the high pressure compressor and hammer mill, it can be readily hydrolysed by the fermenting microorganisms. Specifically, 1000 kg. of the chaff treated as above, 30 kg. of rice bran, 10 kg. of molasses and 100 g. of microorganism are mixed, and water is added until the water content is 60%. The mixt. is fermented. The temp. is 40°C after 6 hrs., 60°C after 10 hrs. and 70-75°C after 24 hrs. In order to keep the high temp. fermentation, the mixt. is stirred and fermented for 12 hrs. to complete the fermentation. Matured feedstuff having sweet fragrance is obtd. which is added to general cpd. feedstuff in an amt. 20-30%. 25.6.77 as 075841. (3pp108)

MITB ★ D13 17120B/09 ★J5 4010-195
Fish feedstuff prepn. - involves pulverising mixt. of (defatted) soybean, water, buffer and microorganism cells, and adding vitamin(s), minerals and salt
MITSUI SHIPBUILDING ENGG (HABU-) 16.06.77-JA-071520
C03 (25.01.79) A23k-01/18

Prepn. comprises (a) pulverising a mixt. of soybean, defatted soybean, water, buffer and microorganism cells to prepare an emulsion; (b) sepg. the impurities such as cellulosic material from the emulsion by filtration; (c) adding to the filtrate complex attracting substance, vitamins and mineral mixt.; (d) gelating the mixt. by addn. of salt; (e) freezing and modifying the gel to make it sponge-like; and (f) melting and dehydrating the melted prod.

The complex attracting substance is, e.g., dried powder of fish intestines, activated sludge, wheat gluten, egg, seaweed, starch, fatty acid, etc. The emulsion is gelated by addn. of a magnesia component, and the gel is then frozen to make the tissue sponge-like.

In use, the frozen prod. is melted and dehydrated to use as raw bait, or the dehydrated prod. is dried to use as dry bait. The feedstuff has a high nutritive value, can be readily digested and promotes the growth of fish and does not cause pollution of water. 16.6.77 as 071520. (4pp108)

DIAC- ★ D13 17175B/09 ★J5 4010-290
Powdered iron bonded to base sheet, used to remove oxygen - from containers for storing foods or clothes
DIA CHEMIFA KK 27.06.77-JA-076294
E36 J01 (25.01.79) A23l-03/34 B01d-53/16

The oxygen removing agent is obtd. by bonding a solid powder type oxygen removing agent on one surface or both surfaces of a base sheet, and, if necessary, setting thereon a water contg. sheet wetted with a salt soln. The agent consists of iron powder contg. 1-8-3.8wt.% carbon (calcd. as iron carbide).

The agent is enclosed with foods, clothes, or wools to be stored in a non-porous bag or a box. 27.6.77 as 076294. (3pp51)

DIAC- ★ D13 17176B/09 ★J5 4010-291
Powdered iron bonded to base sheet, used to remove oxygen - from containers for storage of food or clothes
DIA CHEMIFA KK 27.06.77-JA-076295
E36 J01 (25.01.79) A23l-03/34 B01d-53/16

Oxygen removing agent is obtd. by striking a solid powder type oxygen removing agent consisting of iron powder into one surface or both surfaces of a flexible sheet, the iron powder contg. 1.8-2.8wt.% of carbon (calcd. as iron carbide).

The agent is enclosed with foods, clothes, or wools to be stored in a non-porous bag or a box. 27.6.77 as 076295. (3pp51)

MOMO/ ★ D13 17287B/09 ★J7 9002-259
Granulation of powdery foodstuffs, e.g. instant coffee or aminoacid - by mixing powder with alcohol to form paste, granulating and vacuum drying
MOMOSE T 30.08.73-JA-097486
(05.02.79) A23f-01/08 A23l-01/20 A23p-01

Method comprises mixing powdery food (e.g. aminoacid, instant coffee, etc.) with high purity alcohol of suitable water content, granulating the paste and vacuum drying the granules. Pref. water content is a few percent to 10%. Highly hygroscopic, difficult to granulate powders can be granulated. 30.8.73 as 097486 A23p-1/00; A23f-1/08; A23l-1/205 (5.2.79) MOMOSE, T. (3pp83) (J5 0047885)

KYOW ★ D13 17288B/09 ★J7 9002-260
Improving flavour of fish paste or salty or pickled foods - by adding collagen hydrolysate consisting mainly of aminoacid(s)
KYOWA FERMENTATION KK 12.11.73-JA-126224
(05.02.79) A23l-01

Method comprises adding collagen hydrolysate consisting mainly of aminoacids to fish paste foods, salt-rich foods or pickled foods. The additive removes unpleasant fish smell, neutralises acrid saltiness and sourness and provides excellent flavour when added in an amt. of 0.1-5wt. %. 12.11.73 as 126224 A23l-1/00; 1/205; 1/212 (5.2.79) KYOWA FERMENTATION KK (5pp83) (J5 0076252)

TENS- D13 15544Y/09 =J7 9002-26
Extracting odourless, nutritive animal essences - by enzymi
decomposition of edible animal meat
TENSEI SUISAN KK 01.07.75-JA-080519
*(D12) (05.02.79) *J52007-458 A23l-01/31*

Meat, bone, skin, etc. of edible animals such as chicken cow, pigs, etc. are cut to suitable size, and are put in a reacting pan. The materials are heated at > 60°C and decomposed by adding protease at 50-60°C keeping pH 9.0-10.0 with stirring.

Proteins are decomposed to protease and the material are reacted with acid-resisting protease at 50-60°C, kee -ing pH 5.0-6.0. Proteins are decomposed to peptide. The materials are then heated to 90°C to inactivate the enzymes.

Finally decomposed material is separated into oil, fa aq. soln., bone, etc. by a tri-layer centrifuge, and the aqueous solution, the liquefied protein is filtered. The filtered soln. is concd. under vacuum at < 70°C to obtain animal essence of moisture content 30%. 1.7.75 as 0805 A23l-1/313 (5.2.79) TENSEI SUISAN KK (2pp) (J5 200745

KIKK ★ D13 17289B/09 ★J7 9002-2
Enzymic decomposition of fish prod. to obtain seasoning -
heating with satd. or superheated steam under pressure, ar
rapidly releasing pressure
KIKKOMAN SHOYU KK 13.11.75-JA-135688
(05.02.79) A23l-01/32

Method comprises heating fish product of water content 10% by saturated steam or superheated steam under pre of ≥1 Kg/cm² for ≤15 min. and rapidly releasing the pressure to expand the product. 13.11.75 as 135688 A23l-1/325 (5.2.79) KIKKOMAN SHOYU KK (4pp83)(J5 206125

UNIC D13 24418X/14 =J7 9002-2
Grinding condiment esp. mustard at cryogenic temp. - for scum-fr
fine powder, avoids prior ageing or husking
UNION CARBIDE CORP 17.09.74-US-506863
*P41 (05.02.79) *BE-833-465 A23f-01/06 A23l-01/22*

Condiments such as mustard, pepper, coffee, cocoa, et are ground to a grain size < 0.2mm, suitable for easy dispersion in water, by mixing. The condiment with a cryogenic refrigerant, partic. liquefied nitrogen, and th processing in a grinder to below 0.2mm. Vapourised refrigerant is sepd. from the ground condiment which is then agitated at above -73°C until a sufficient quantity of essential oil exuded by the condiment has coated the surfaces of the powder grains to produce a powder which wi form an aq. dispersion with little or no scum.

The condiment is pref. mustard. Agitation is pref. in a high intensity mixer with helical blades. At cryogenic temps. the grinding does not release essential oils to fo a sludge which blocks the grinder. Grinder can be carri out without ageing or husking the condiment. 16.9.75 as 111014 (clg. 17.9.74-US-506863) A23l-1/221, A23f-1/0 (5.2.79) UNION CARBIDE CORP. (5pp) (J5 1054966)

STRK ★ D13 17305B/09 ★NL 7708-
Prepn. of concentrates of vegetable and animal prods., e
tomatoes - by evapn. of the material, sepn. into solid and
fractions, conc. of the liq. fraction and remixing with the opt. dri
solid fraction
STORK FRIESLAND BV 08.08.77-NL-008756
(12.02.79) A23l-01/06 A23p-01 B01d-01

The comminuted vegetable or animal material is first ev -orated by heating. The prodn. is then sepd. into a low v -cosity liq. fraction (I) contg. no undissolved cell compo ents, and a solid material fraction (II). The fraction (I) then evaporated to form a concentrate (III) and the solid material (II) is opt. dried. The concentrate (III) is then mixed with the opt. dried solid material to form the fina concentrate.

The evapn. stage before sepn. into liq. and solid fra ions replaces the pasteurisation stage of prior art proce

-es. This reduces energy consumption and plant investment costs. The process is esp. useful for making tomato concentrates. 8.8.77 as 008756 (14pp513)

GONZ/ ★ D13 B/09 ★OE 7701-770
High value and easily digestible protein prodn. - from animal horn, hoof, nails, hair, feathers and/or blood
GONZALEZ-SICILIA M 15.03.77-OE-001770
(15.02.79) A23j-01/10

KOMA/ ★ D13 17342B/09 ★SU -229-485
Vanillin and heliotropin, prepn. - by oxidn. of 3,4-substd. propenyl benzene cpds. in polar organic solvents and exposure to nuclear radiation
KOMAROV P N 31.07.67-SU-175842
E14 (D23 E13) (12.05.78) C07c-47/52

3-4-substd. propenylbenzenes, namely iso-eugenol (I) and iso-safrole (II), are oxidised with oxygen contg. gases (e.g. oxygen) under the effect of nuclear radiation in solns. of polar organic solvents. The latter include: ethanol dimethylsulphoxide and acetic acid. The process is simple provides a fast reaction rate, and ensures an almost quantitative yield of the final prods. Thus, oxidn. of (I) gives vanillin (III) (widely used in confectionery). Heliotropin (IV) (a valuable raw material in perfume mfr.) is produced by oxidn. of (II).

Under comparable reaction conditions, the rate of oxidn. of (I) in solns. is somewhat faster than that of (II); in both cases the oxidn. rate does not change by increasing the gas feed rate from 2 to 36 litres and depends on the nature of the solvent. The reaction proceeds easily in ethanol and acetic acid solns. and less easily in benzene. The reaction rate depends appreciably on temp. but also varies with a change in concn. of (II). For the reaction in acetic acid soln. the optimum concn. of (II) is approximately 3.0 mole/litre.
Komarov, P.N., Baranova, N.M., Atarik, V.D. et al.
Bul. 22/15.6.78. 31.7.67. as 175842 (2pp48)

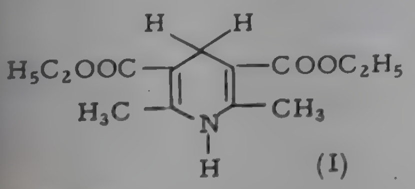
VOAG= D13 09804A/05 =SU -549-136
Protein-enriched animal feed dressing - contg. Proteomyces fungal culture and additional bran and carbamide
VORON AGRIC INST (BOEV/) 04.01.73-SU-866394
*C03 (01.06.78) *SU-549-136 A23k-01/16*

Enriching feed in proteins in the form of yeasts is improved by using a prepn. contg. a culture of fungus Proteomyces and bran and carbamide serving as a growth medium for the fungus. The prepn. is introduced into a feed after a preliminary soaking with water for 12-14h.

The ratio of the prepn. to the feed is pref. 1:10. By this method the yeast content of the product is increased.
Boeva, L.I., Pereslavtsev, A.A. Bul. 23/25.6.78.
4.1.73. as 866394 (2pp)

ALOR= ★ D13 17512B/09 ★SU -594-980
2,6-Di:methyl-3,5-di:carbethoxy-1,4-di:hydro-pyridine - used as cow-feed additive to increase fertility and milk prodn.
AS LATV ORGANIC SYN (LFOD=) 04.01.76-SU-314030
C02 (03.04.78) A61k-31/44

Fertility and milk prodn. stimulant for cows cpd. of formula (I):



(I)

This cpd. is inexpensive; it has low toxicity. It is used as feed additive.

Cpd. (I) was added to a composite feed in an amt. of 50-100g/t. The fertility was increased by 100%. The monthly milk prodn. rose to 4868 and 6461 kg. respectively (control 3837 kg); the fat content was 4.02-3.80% (content 3.88%); the vitamin A content rose to 0.29-0.36µg/g (control 0.24µg/g); the carotin content rose to 0.24-036µg/g. respectively (control 0.16µg/g). These figures relate to the first month of the experiment.
Spruzh, Ya. Ya., Lutinskii, S.Ya. Dubur, G.Ya. et al.
Bul. 8/28.2.78. 4.1.76. as 314030 (4pp70)

LERE= ★ D13 17546B/09 ★SU -602-144
Roller-screw press butter-processing machine - has mixing chamber and rotor with disc and central exit pipe forming annular gap to allow butter to pass
LENGD REFRIG IND 10.08.76-SU-394994
P13 (27.03.78) A01j-17

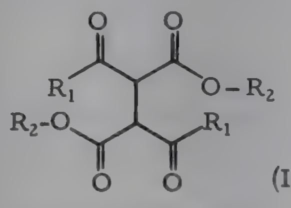
Butter-processing equipment, includes a roller press, screw press, chamber to mix the butter with the liquid phase, and an electric motor. The process is intensified by providing the mixing chamber with a rotor and disc having central exit pipe. The disc is positioned so that it can move. There is also an annular gap between the rotor and the body. The rotor is hollow and perforated, and the disc is mounted parallel to the end surface of the rotor, the latter having its own individual electric motor.
Berezko, V.A., Temkin, S.G. Bul. 14/15.4.78.
10.8.76. as 394994 (4pp29)

GENO ★ D13 B/09 ★SW 7708-438
Fine grinding of roast coffee beans - using a process to preserve the aromatic material of the beans
GENERAL FOODS CORP 21.07.77-SW-008438
(12.02.79) A23f-01/02

Process comprises (a) cooling of the roast beans to a temp below zero Celsius, (b) compressing of the cooled beans to break down the majority of the cells in the beans, and (c) fine grinding the compressed beans to a required particle size distribution. 21.7.77 as 008438 (-pp1183)

FRIT- D13 13243Y/08 =US 4140-134
Aromatising compsns. contg. dialkyl diacyl succinates - used to improve taste of sweets, fruit, tobacco, pharmaceutical syrups (NL080277)
FRITZSCHE DODGE OLC 22.06.76-US-698741 (06.08.75-US-602301)
*B05 E17 P15 (D18 E15) (20.02.79) *DT2634-510 A24b-03/12 A24d-01/18*

A smoking compsn. comprises a smoking material and ≥ 0.0001wt.% of a dialkyl α,β-diacyl succinate of formula (I).



(I)

In (I), R_1 is <6C alkyl and R_2 is < 7C alkyl cyclopentyl or cyclohexyl.

(I) increases sweetness of tobacco and provides softer tasting smoke; it may also be used in cough syrups etc. A specific (I) is dimethyl-α,β-diacetyl succinate.
22.6.76 as 698741. (4pp964)

DTUR/ ★ D13 17777B/09 ★US 4140-344
Extraction of organic matter from marine sediment - using an organic liquid to separate it, the liquid then being distilled off and condensed
DE TURVILLE C M D 30.08.77-US-829135
C03 E19 H09 Q42 (C04) (20.02.79) E02f-03/88

Organic matter is extracted from a marine sediment by recovering the marine sediment in the form of a slurry in sea water. Organic matter is extracted from the slurry with an organic liq. The organic liq. is sepd. from the organic matter by distillation in a distillation column. The distilled organic liq. is condensed in a condenser.

The organic matter recovered can be used as a fuel or could be further refined and processed to obtain gaseous and liq. fuels, organochemicals or proteins and carbohydrates. 30.8.77 as 829135. (13pp1345)

SERV- ★ D13 17820B/09 ★US 4140-543
Emptying and cleaning tomato paste storage drum - using pressurised gas jet and water sprays
SERV-A-PORTION INC 15.08.77-US-824787
P43 (20.02.79) B08b-09

A viscous prod. is cleaned from a cylindrical drum which has a central bung hole in one end wall. The drum is supported with the bung hole facing downwardly. The prod. is emptied through the bung hole using a gas stream which is introduced to the drum near its upper end. Residual prod. is washed away using a liq. spray which is introduced from a vertical pipe extending upwardly through the bung hole with its axis parallel to that of the drum.

The pipe includes spaced nozzles which each spray the liq. in a conical jet. The supported drum is rotated about the spray pipe while the liq. is directed towards the interior walls of the drum for washing. 15.8.77 as 824787. (6pp295)

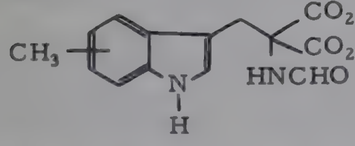
BOSS/ D13 65570A/37 =US 4140-649
Rinsing agents for cleaning foodstuffs - contg. surface active agents, sequestering agents, redox agents, buffers and preservatives
BOSSERT E 05.03.77-DT-709750
*C03 (20.02.79) *DT2709-750 +C11d-07/60*

Non-toxic and hypotonic compsn. is added to washwater to eliminate contaminants and pollutants from the surfaces of food and fodder and to freshen the latter. Compsn. contains 1-10wt.% anionic surfactants of sulphate, ether sulphate, sulphonate, sulphoacetate, sulphosuccinate, sarcosinate or protein condensate; 0.1-4wt.% nonionic surfactants of polyoxyethylene adduct; 1-25wt.% sequestering agent; 1-4wt.% reductone; 5-30wt.% buffer; 0.1-0.5wt.% preservative; remainder to 100wt.% stabilisers, processing additives, extenders and diluents.

Esp. useful for ridding raw food materials of pesticides, heavy metals, microorganisms, etc. associated with environmental pollution, while at the same time freshening the materials. 16.6.77 as 807181 (+27.9.76-US-729920) (5pp931)

HOFF D13 00013A/01 =US 4140-697
Optically pure (D)-tryptophan and its derivs. prodn. - by asymmetric hydrogenation of indole substd. acylamino-acrylates useful as sweeteners
HOFFMANN-LA ROCHE INC 22.06.76-US-698573 (09.11.77-US-849734)
*B02 E13 (20.02.79) *BE-855-904 C07d-209/20*

Tryptophan derivs. of formula (I) (where R_1 and R_2 are 1-6C alkyl) are claimed. The pref. cpd. is 2-formamido-3-(6-methyl-3-indolyl)-2-carbethoxy-propionic acid ethyl ester.


(I)

Cpds. (I) are useful as intermediates for non-nutritive tryptophan sweeteners which are suitable for use e.g. by diabetics.

9.11.77 as 849734, Div. ex 4073795. (15pp927)

HOYE- D13 65257X/35 =US 4140-736
Gas-liquid mixing system for aerating stream of ice cream base - has air under press at constant air-material ratio
HOYER O G A/S 10.02.75-DK-000484
*(20.02.79) *DT2601-762 B01f-03/04*

Appts. for mixing a mass in liq., cream or paste form flowing through a main conduit with a pressurised gas flowing through a branch conduit, includes an expansion nozzle and an air pump inserted between the nozzle and the main conduit.

The gas flowing through the branch conduit is expanded in the expansion nozzle at a critical ratio. The suction side of the air pump is connected to the nozzle and the pressure side of the air pump is connected to the main conduit.

Pref. a non-return valve is provided through which the pressure side of the air pump is connected to the main conduit. 2.2.76 as 654393. (4pp1363)

FRIY ★ D13 17932B/09 ★US 4140-801
Potato prods. having good colour characteristics - by fermenting before dehydration
FRITO-LAY INC 27.06.77-US-810411 (07.07.75-US-593271)
(20.02.79) A23l-01/21

Potato prods. of good colour characteristics are prepd. as follows: (a) potatoes (reducing sugar (I) content 1wt.%; (I):total sugar ratio $\nless$ 0.6; H_2O content $\nless$ 10wt.%) are fermented in the presence of sufficient H_2O; (b) fermented potatoes are dried at 95-180° to H_2O content < 10wt.%; (c) the resulting potato flakes may then be fried.

Fermentation before dehydration gives potatoes which show a good rate of (I) decline during fermentation. On subsequent rehydration and frying, the prepd. potatoes have a reduced tendency to brown (because of (I) redn.), and have a less yeasty or fermentation taste than potatoes which are fermented after drying. Prepd. potato prods. are stable to storage. 27.6.77 as 810411. (7pp478)

GERB ★ D13 17933B/09 ★US 4140-802
Sterile barley malt flour prodn. - with unimpaired enzymatic activity, by treatment with aq. isopropanol, washing, drying and milling
GERBER PRODUCTS CO 26.08.77-US-828589
(20.02.79) A23l-01/20

Enzymatically-active barley malt flour is made by first treating malt with aq. isopropanol (I) to destroy bacteria at < the enzyme heat-deactivation temp. Aq. (I) is then removed, the malt washed to remove residual (I) to < 50 ppm., dried without heat-deactivation of its enzymes, then milled. Treatment with (I) is esp. at room temp. for ¼-24 hrs., esp. with 25-70% aq. (I) for 15-180 mins.

Bacteria, including coliform as well as mesophilic organisms, are destroyed without detriment to the enzymatic activity. 26.8.77 as 828589. (3pp1251)

CANA D13 45615Y/26 #US 4140-803
Proteinaceous snack foods prodn. from non-oilseed legumes - by grinding to flour, slurrying, drying into sheets and frying as flakes or strips
CANADIAN PAT & DEV LTD 16.05.74-CA-200077 (18.04.75-US-569551)
*(20.02.79) *GB1477-753 A23l-01/20*

Prepn. of puffed or expanded chip-like, protein rich snack from a legume flour which forms sticky pastes or doughs at solids content 45-70wt.%. Method comprises (a) slurrying a finely-ground non-oilseed legume-base flour (I) with aq. liq. to give non-sticky prod. (solids content < 45wt.%); (b) feeding slurry to rotating heated drum to pick up successive layers of slurry and build up a sheet of ⩾0.3mm., the temp. of drum being such that sheet is dried and the starch in it is gelled; (c) removing dry sheet and cutting to smaller pieces and (f) fat frying at >170°C.

(I) used contains ⩾50wt.% non-oilseed legume and ⩾30-wt.% starch, and has protein content to give ⩾12wt.% protein in final prod. Prod. has light easily chewed texture and finely bubbled structure. 30.9.77 as 838316. (5pp963)

EDWA/ ★ D13 . 17935B/09 ★US 4140-805
Alfalfa or clover extraction to separate lipid(s) - and treating the residue with a base and further processing to obtain food products
EDWARDS G W 11.03.77-US-776861
A60 C03 E19 (A41 D23) (20.02.79) A23l-01/28

Process comprises extracting Alfaalfa or Clover with an organic solvent to separate lipids, and leave a solvent insol. residue which is contacted with an aq. alkali base, and the insol. residue is sepd. The solvent for extn. is a mixt. of (i) lower alkanol with a lower alkanone; (ii) a lower alkanol with a lower alkanoic acid; or (iii) a lower alkanol, alkanone and alkanoic acid.

The lipids which are sepd. are useful as plasticisers in polymers or copolymerised with monomers or polymers, and can be used in the polymer-plastic and coating fields. The insoluble residue from the base are further processed into food prods. suitable for human and animal use. 11.3.77 as 776861. (7pp957)

ALFA D13 41024W/25 #US 4140-806
Sepn of skimmed milk from milk or cream - using filter sheet with pores below 10 microns dia
ALFA-LAVAL AB 07.03.74-SW-003019 (27.02.75-US-553641)
*P13 (20.02.79) *BE-825-076 A23c-09*

In sepn. of skim milk from liq. milk prods. contg. butter fat globules (e.g. milk and cream) using a filter in which majority of pores have dia. of 0.2-10μ (pref. ⩽ 1.0μ), th milk is passed along one side of the filter at 0.5-20m/sec while passing skim milk through the filter to the other side under a pressure drop of ⩾0.2 kp/cm^2. A cream enriched prod. is obtd. from the milk, which is then recycled over the filter surface.

Method provides an alternative to centrifugal methods. Cream obtd., having a fat % of e.g. 15% can be concd. further to e.g. 50%, suitable for butter prodn. 27.1.76 as 652755. (5pp963)

BRAV/ ★ D13 17936B/09 ★US 4140-807

Freezable confection with chewy, non-icy consistency - contains stabiliser, preservative, flavour, sweetener and acid, useful e.g. for puddings

BRAVERMAN A 29.08.77-US-828929
A97 (20.02.79) A23l-01/04

Edible, flavoured confection free of xanthan gum comprises (a) stabiliser (I) to suspend and stabilise solid particles giving a chewy prod. when frozen; (b) 0.08-0.2wt.% preservative (II); (c) flavour; (d) 20-38wt.% sweetener; (d) water to give a density of 20-40° Brix and (e) acid to pH 3-5.

The compsns. are storage stable at room temp. without syneresis and are opaque. Pref. (I) are 0.3-0.4wt.% low-methoxy pectin contg. ⩾a trace of polyvalent metal ions or 0.15-0.5wt.% carrageenan, both opt. together with 0.1-0.45(0.2-0.35)wt.% carboxymethylcellulose.

The frozen prods. are chewy and non-icy and can be flavoured with a wide variety of flavours. They are useful for making puddings, pie fillings and dessert toppings which do not require refrigeration. 29.8.77 as 828929. (7pp1251)

NEDR- D13 02503A/02 =US 4140-808

Low-calorie mayonnaise-type dressings prepn. - from buttermilk, egg yolk, vegetable oil, acid, water, sugar, salt, condiments and thickeners

NEDRE NORRLANDS PRO 18.06.76-SW-007012
*A97 (20.02.79) *DT2726-969 A23l-01/24*

Low calorie food prod. of mayonnaise-type having fat content < 30wt.% contg. egg yolk, edible oil, edible acid, water, sweetener, salt, spices and thickener contg. 25-75wt.% treated sour buttermilk treated to temps. and pressure to remove undesirable aromatic components.

Pref. prod. contains 45-55wt.% treated sour buttermilk. Buttermilk is treated at 50-70°C at 0.12-0.3 bar pressure. Treated buttermilk is formed into finely divided suspension of protein particles and cooled quickly to <8°C. Residual ingredients are added at <8°C and prod. homogenised and sterilised.

Prod. has adequate protein, easily digestible carbohydrates and important vitamins B plus low fat content. 16.6.77 as 807117. (3pp931)

GENO ★ D13 17937B/09 ★US 4140-809

Frozen soup concentrate of plastic consistency - contg. water insoluble solids and solutes in defined ranges

GENERAL FOODS CORP 11.02.77-US-767710 (04.06.70-US-043569)
(20.02.79) A23l-01/40

Frozen soup conc. contains (a) 20-40% of water soluble solids which are NaCl, saccharides esp. monosaccharides or sucrose, non-fat milk solids, monosodium, glutamate, and/or hydrolysed vegetable protein; (b) 10-40% water insoluble material, which is cooked vegetable and/or meat particles, fat and flavour enhancers; (c) the total water content both bound in the solids and free, is 40-60%. The mixt. has a plastic consistency in the temp. range 0-15°F.

The compsn. is spoonable for individual servings, and has excellent flavour and texture when made up. The compsn. is not pasteurised in its packaging. 11.2.77 as 767710 (+4.2.76-US-655314) (5pp955)

UNIL D13 23361A/13 =US 4140-810

Frying fat compsn. contg. proteose-peptone - is used to make more stable sauces with water

LEVER BROTHERS CO 24.09.76-GB-039817
*(20.02.79) *BE-859-020 A23d-05*

Frying fat compsn. for prepn. of gravy having improved phase sepn. stability has ⩾90wt.% triglyceride fat, protease peptone in amt. to improve phase sepn. stability contg. cheese whey derived material having wt. ratio peptone to proteinaceous material with isoelectric point 4-6 of ⩾0.2; 0.1-1% phosphatides.

Pref. compsn. contains additional ⩽3wt.% common salt, ammonium salt, citrate or phosphate, and ⩽3wt.% water. Pref. wt. ratio of peptone to proteinaceous material is ⩾0.5, esp. 0.8-1.2. Cheese whey is ≯5wt.%, peptone is ⩾0.01wt.%, esp. 0.02-0.3wt.%. Triglyceride is ⩾95wt.%.

Gravy so prepd. has pleasant brown-coloured sediment of conventional gravies, but without the disadvantage of phase sepn. 22.9.77 as 835620. (3pp931)

MORG D13 26440A/14 =US 4140-811

Momen Tofu prepd. from soybean milk - by adding coagulant to form a curd and dehydrating

MORINAGA MILK KK 11.08.76-JA-094952
*(20.02.79) *J53020-451 A23l-01/20 +A23j-03*

Mfr. of rough textured soya bean curd comprises (a) sterilising soya bean juice of solids content 3-12wt.% by heating at ⩾120°C to destroy spore-forming bacteria to < 10/-ml. of juice and then cooling the juice, (b) adding a coagulant to form a coagulum at 20-90°C, (c) dehydrating the coagulum to a water content of 78-90wt.%, (d) packing the coagulum into a container and hermetically sealing the container and (e) heating at 60-135°C to pasteurise the coagulum.

Large quantities of curd can be produced continuously. The prod. has longer shelf life than conventional curds and has good flavour and body. Controlled elasticity can be imparted to the prod. 10.8.77 as 823273. (8pp992)

STAD ★ D13 17938B/09 ★US 4140-812

Texturing protein material with soluble spacing agent - esp. sodium chloride which is removed after heat setting, useful for synthetic meat prodn.

STANDARD OIL CO (IND) 03.08.77-US-821349
(20.02.79) A23j-03

A proteinaceous material (A) of ⩾15wt.% protein and normally without texturising properties is texturised by mixing with a proteinaceous texturising agent (B) which sets when heated, and a non-toxic spacing agent (C).

The mixt. is formed into shape with the necessary amt. of liq., then dried and heated so that it remains non-dispersible in the solvent subsequently used to dissolve out (C). (C) is esp. a salt and is removed by soaking in water. (A) is esp. unicellular protein material, specifically Candida utilis, and (B) is a protein concentrate or isolate, or gelatin.

Prod. is used in foods, esp. meat substitutes. (A) is given the texture of muscle fibre without having to form it into fibres. 3.8.77 as 821349. (3pp1251)

ROBE/ ★ D13 17989B/09 ★ZA 7705-432

Animal foodstuff and/or medicine - comprises alkali metal chloride, alkaline earth metal sulphate, alkali metal salt of edible organic acid and alkali metal bi:carbonate

ROBERTS T M B 09.09.77-ZA-005432
B06 C03 (B05) (16.10.78) A23l-01 A61k-17

WESS ★ D13 17994B/09 ★ZA 7706-952

Appts. for sepg. fruit pulp from seed kernel and skin - comprises a rotor surrounded by a screen and having radial members with hammer heads

WESTFALIA SEPARATOR AG 22.11.77-ZA-006952
P62 +P41 (31.08.78) A23n-01 A23n-04/10 B02c-13/18 B25d-01/02

See Also

D11 DT 2835278
D15 SU 597648
D16 J7 9002265
D23 J5 4008605
D11 GB 1541212
D16 DT 2736180
D17 J5 4008736
D15 BE 869978
D16 J5 4009184
D22 DT 2735805

D14: FOODSTUFF MACHINERY

WAUT/ ★ D14 16018B/09 ★BE -871-318
Flower bulb washing appts. - comprises two contacting cylinders with spiral wound perforated hose to convey and wash
WAUTERS M 17.10.78-BE-871318
(15.02.79) A23n

Flower bulbs or similar spherical objects are fed from a hopper onto a pair of parallel cylinders rotating the same sense with a means of conveying the bulbs along the cylinders to a collection chute. During the conveying of the bulbs, they are caused to continuously rotate and may be subjected to a wash spray. In the preferred form, the longitudinal conveying is achieved using a spiral on one of the cylinders. The spiral may be formed by a perforated rubber hose through which the wash water is pumped. The surface of the cylinders is made of a material which will not crush the bulbs. The feed hopper is pref. a downwardly inclined vibrating chute mounted on leaf type springs.

The device is used for washing the soil from flower bulbs, a process currently carried out by hand. It is capable of removing soil from between the bulb and its outer layer of skin without causing any damage to the bulb itself.
17.10.78 as 871318 (F1)(11pp1370)

OHKA- D14 63342Y/36 =DS 2707-809
Pellets or granules coated in revolving drum - with slit wall permitting discharge in one rotational direction
OHKAWARA MFG KK 27.02.76-JA-021335
*J04 P42 (22.02.79) *DT2707-809 A23g-03/26 B01f-09/02 B05b-13*

An installation for coating the particles of a granulate has a processing drum rotating on an axis inclined to the vertical inside a housing and a stationary spray nozzle. The wall of the drum is formed by a number of curved sections spaced out radially and overlapping each other. Inside the housing, two sealing rails offset at an angle to each other work with the wall of the drum to divide the cavity between drum and housing into two - one connected to the gas inlet and the other connected to the gas outlet. The charge is ejected by reversing the rotation of the drum so that the particles fall through the cavities between the overlapping plates into an outlet funnel.

The design of the wall makes possible considerable savings, partic. of the time necessary to dismantle when the charge is unloaded. 23.2.77 as 707809 (6pp1045).

EICH/ ★ D14 16155B/09 ★DT 2736-362
Pills and sweets coating machine - with endless conveyor, deflector and run/off area for prod. recycle
EICHLER J 12.08.77-DT-736362
B07 P33 (22.02.79) A23g-03/20 A61j-03/06

A machine to coat pills or sweets and to produce tiny sweets called nonpareil is fitted with a conveyor for the material with a deflector at the discharge end. The material is returned over a run-off tube with slots for hot or cold air to the trough at the charging end of the conveyor.

This reduces the time required for the operation to be completed in the machine (moisture extraction or cooling) and makes it possible to produce nonpareil continuously.
12.8.77. as 736362 (5pp39)

ANON ★ D14 17310B/09 ★RD -178-005
Homogeniser for liq. food and additive - splits stream into two parts, one of which enters mixing cylinder spirally while the other enters axially
ANONYMOUS 20.01.79-RD-178005
*J02 (10.02.79) B01f-00/**

The appts. homogenises a mixt. formed by injecting small intermittent doses of an additive into a main stream. After dosing with the additive, the main stream is split into two roughly equal streams. The first stream is introduced tangentially into a cylindrical container, where it follows a spiral path and emerges axially from the centre of the container. The second stream is indroduced axially into the container at various points distributed over the cross-section of the container. The inlet and outlet pipes may be allowed to communicate via a small hole, so that the co -tainer can be completely emptied after sterilisation by steam.

The appts. is self-ventilating, self-draining and can be sterilised, and is suitable for mixing small doses of vitamins, enzymes or flavourings into liq. foods. (958)

KULA= D14 32103U/23 =SU -510-16
Revolving freezer - with radially movable freezer plates
VEB KULAUTOMAT (KNO /) 25.04.72-DL-162554
*J07 Q75 (11.05.78) *DL--97-049 +A23b-04/06 F25d-13/06*

A revolving freezer, esp. for foodstuffs, comprises a hollow shaft which conducts the refrigerant and a series of radial plate heat exchangers around the circumference at uniform intervals, which thus constitute freezing boxes between them.

These plate heat exchangers are free to move radially a sufficient distance to accommodate the freezing expansion of the foodstuffs in the boxes and to permit the frozen blocks to be released. The plates are trapezium shaped in the plane of the rotor, so that the boxes between them are rectangular. Such arrangement ensures 100% utilisation of heat-exchanger surface.
Knodel, O. Bul. 13/5.4.76. 6.4.73. as 902741 (4pp)

HEAT= ★ D14 17495B/09 ★SU -580-42
Finely disperse material thermal treatment - using double sectiona heat exchanger with heat pipes
HEAT MASS EXCHANGE 08.06.76-SU-369605
J08 Q76 (01.02.78) F26b-17/10

The finely disperse material, e.g., grain, thermal treatment unit can be used in the food and chemical inds. It contains a pneumatic pipe and double sectional heat exchanger with heat pipes. The pneumatic pipe is connected to a cold air source at the base and to a recirculation column and cooling shaft through a separator and heat-mass exchanger. The double sectional heat exchanger pipes evaporation zone is situated in the section connected to the furnace.

To intensify the treatment process and increase the reliability, the heat exchanger section which contains heat pipe condensation zones is situated in the line connecting the separator to the heat exchanger and loading bunker. This heat exchanger is provided with gas distribution grid, self contained unloading pipe. This heat exchanger section is connected to cooling shaft air circuit to the pneumatic pipe at a point lower than recirculation column connection point.
Shaiman, V.A., Lyuboshits, A.I., Nikolyachik, L.V. et al. Bul. 42/15.11.77. 8.6.76. as 369605 (3pp110)

GORL/ ★ D14 17554B/09 ★SU -602-15
Frozen fish block defrosting appts. - with steam from sidewal falling film passed through louvred droplet deflectors, to improve heating efficiency
GORLATOV A S 18.12.75-SU-302105
(D12) (27.03.78) A23b-04/06

Apparatus for defrosting blocks of frozen fish or other sea food, as in Parent Certificate No. 520965 comprises a chamber with a vertical hollow axial plate with through apertures and pipes connecting the plate interior with a vacuum pump. On each side of the chamber is a boiler unit with shelves, electrical heating elements and overflow tubes. The blocks are carried on a trolley with mesh trays.

For more uniform defrosting and to increase space utilisation, each unit has a longitudinal overflow trough to distribute water over the chamber wall, a droplet deflector and a water collecting channel. Each deflector is pref. louvred and adjustably spaced from the chamber wall.
Gorlatov, A.S., Apykhtin, A.N., Bayura, N.D. Bul. 14/15.4.78. 18.12.75. as 302105 Add to 520965 (6pp1358

TBIL= ★ D14 17556B/09 ★SU -602-158

Conifer cone opening appts. - with carriage funnel moving cone through receiving guide on to conical drill and then to discharge

TBILISSI FORESTRY 24.05.76-SU-365322

(12.05.78) A23n-05

Apparatus for removing seeds from conifer cones which are difficult to open comprises a conical drill and a funnel. To increase output and safety, a cone guide is located between drill and funnel and a cone feeder is located at an angle to the guide. On the guide end facing the drill a spring-loaded plate is fixed for locating the cones.

After charging a cone into the guide, the carriage moves the cone to the rotating drill. Contact with locating plate seats the cone firmly in the funnel and the cone is then drilled with the plate horizontal. Funnel and plate then return to the initial position and the pusher discharges the drilled cone to the hopper for further processing, while the next cone falls into the guide. The apparatus can increase throughput by 50%.

Saralidze, G.M., Salaridze, B.G., Beriashvili, I.G. Bul 14/15.4.78. 24.5.76. as 365322 (2pp1358)

FESH/ ★ D14 17557B/09 ★SU -602-159

Fruit and vegetables classifier - with drum of stepped plates having alternate plates movable radially, to prevent jamming

FESHCHENKO N S 18.02.75-SU-107432

(27.03.78) A23n-15

A classifier comprises loading and discharge troughs, and a drum mounted on a worm shaft and consisting of rings and stepped classifying plates secured between the rings. To prevent items jamming between the plates, additional plates of similar shape are located between the main plates and are secured to the rings while permitting radial movement. The movable plate ends pref. have detents fitting in slots in the rings.

Feshchenko, N.S. Bul. 14/15.4.78. 18.2.75. as 107432 (3pp1358)

MOMD ★ D14 17586B/09 ★SU -602-228

Centrifugal separator drum - has fine separation disks supporting sleeve with coarse separation passages

MOSCOW MEAT DAIRY INST 15.12.75-SU-300123

J01 P41 (28.03.78) B04b-01/08

Disc centrifuges are particularly useful for the sepn. of emulsions, such as the butter fat of milk, and normally comprise a stack of conically-shaped metal discs.

Now there is a set of passages at the base of the disc supporting sleeve. The feed enters through them the annular peripheral chamber of the bowl where most intensive separation takes place. The discs are thereby available for the finer final sepn. securing a purer clarified product.

The denser material accumulates on the periphery of the bowl and is removed periodically. Clarified liquid flows up the central annulus and out. An additional improvement is a firm attachment of the disc sleeve to the base plate, providing greater mechanical stability.

Nikolaev, A.S. Bul. 14/15.4.78. 15.12.75. as 300123 (2pp1403)

MOEC= ★ D14 17594B/09 ★SU -602-237

Fruit and vegetables classifier - with rotating, profiled roller having elastic mesh surface, for better grip and earth removal

MOSC ECONOMY INST 09.12.75-SU-197481

P43 (23.03.78) A23n-15 B07b-13/04

A classifier working member comprises a profiled rotating roller. To improve output and classifying accuracy, the roller is hollow and has a working surface of elastic mesh, pref. of corrosion-resistant material.

The mesh provides additional frictional grip on the fruit or vegetables, and also sieves out particles e.g. of earth. In the event of fruit jamming the mesh can deform so that fruit can be released without damage.

Bloshtein, I.I., Prilepskii, V.E., Balabanov, V.V. Bul. 14/15.4.78. 9.12.75. as 197481 (2pp1358)

STEW/ ★ D14 17722B/09 ★US 4140-049

Conversion of charcoal griller to food smoker - by suspending heat absorber from food supporting bars

STEWART W G 06.04.77-US-785189

(20.02.79) A23c-03/02

The cooker has a food supporting surface formed of spaced horizontal bars. A heat absorber reduces the atmospheric temp. in the space immediately surrounding food placed on the bars. The absorber also adds moisture to the space.

The absorber comprises a cavity which forms a heat barrier between a heat generator section and the space surrounding the food. The cavity is in the form of an open-top container holding vaporisable liq. The container is suspended from the bars closely beneath the food to be smoked, using hooks detachably secured to the bars and connected to the container. 6.4.77 as 785189. (7pp295)

BUCM D14 47279Y/27 =US 4140-051

Press for separating fluids from solids esp. fruit juices - comprises rotatable vessel with flexible internal dividing wall

BUCHERGUYER MASCH 22.12.75-CH-016635

*P71 (20.02.79) *DT2656-369 B30b-05/02*

Appts. for sepg. liq. and solid materials, partic. for extracting juice from fruit, comprises a rotatably mounted press container subdivided by a squeezing diaphragm into a pressure compartment and a squeezing compartment.

The press container has an inlet through which a pressurised fluid medium enters and the squeezing compartment has an outlet for the juice. The juice outlet possesses helically shaped drainage channels formed by spaced-apart trough-shaped elements provided with perforations at the inside of the wall of the container. 20.12.76 as 752668. (10pp1363)

WDAI- ★ D14 17762B/09 ★US 4140-270

Removing dense impurities e.g. metal fragments, from food slurry - in centrifugal separator with annular trough trap to collect impurities

WESTERN DAIRY PRODS 07.11.77-US-849071

J01 P41 (20.02.79) B04b-11/06

A centrifugal separator includes a vertical rotating cylinder into which a slurry is fed axially. An impeller mounted within the cylinder engages the slurry and throws it against the cylinder walls. An outlet is located on the cylinder base adjacent the sidewalls and conveys the slurry to a discharge chamber where a pumping vane directs the slurry to an exit port.

Pref. an annular trough in the base of the cylinder collects material from the walls of the cylinder when it is halted after use. A removable housing surrounds the cylinder and includes a non-contacting seal to retain slurry in the discharge chamber.

After use the sepd. impurities fall from the cylinder walls into the trough which thus prevents them from entering the sepd. prod. in the discharge chamber. 7.11.77 as 849071. (10pp295)

See Also

D14 J5 4010271

D15: WATER TREATMENT

LANG- ★ D15 16003B/09 ★BE -869-972
Proportional dosing of liq. additive, esp. disinfectant, into water - with safety circuit to stop flow if dosing fails
LANG APPARATEBAU 26.08.77-DT-738531
P34 (26.02.79) A61l B01f C02b

The proportion of additive to main liq. is held constant regardless of changes in the flow of main liq. The equipment uses an hydraulic motor in the pipeline of the main liq. and to drive a volumetric, proportioning pump for additive. The pipework for the main liq. is separate from the pipework for the additive. The hydraulic motor is stopped and started by operating a valve in the outlet pipe of the motor. The valve is actuated to stop the motor when a safety circuit is set to alert condition.

The additive reservoir is fitted with a low level sensor which sets the safety circuit to alert condition when the additive runs out. The alert condition is also set by a pressure switch which operates if the supply pressure of main liq. drops too low to operate the hydraulic motor satisfactorily. The pipe systems for main liq. and for additive are pref. separated just upstream from the point where additive is mixed into main liq. The valve controlling the hydraulic motor is pref. a solenoid valve operated by the safety circuit.

The system is esp. used for adding disinfectants to water for use in hospitals, swimming baths, abattoirs, etc There is no danger of the system operating when the additive runs out or when main liq. pressure is insufficient to ensure correct proportioning. 25.8.78 as 869972 (11pp448)

RICT ★ D15 16007B/09 ★BE -869-978
Sewage sludge used to mfr. nutritious animal feed - by forming culture medium from aerobically digested sludge then anaerobically fermenting sludge
RICHTER GEDEON VEGY 25.08.77-HU-RI0645
C03 (D13 D15) (26.02.79) C02c C12b

Anaerobically digested sewage sludge is heated to $\geqslant$80°C, pref. 100-150°C, opt. cooled to 80-40°C; and sepd. opt. in the presence of a coagulant, e.g. $Al_2(SO_4)_3$, into a sludge concentrate and a supernatant part. A culture medium is formed by adding a 1-3C alcohol, pref. methanol, to the supernatant part, together with an N-contg. mineral salt, e.g. an NH_4 salt such as NH_4HCO_3, precursor(s) of water-soluble vitamin(s) and growth factors.

The culture medium is inoculated with the sludge; and fermentation takes place anaerobically at 26-38°C. A biomass is sepd. from the fermentation liq. in the course of fermentation, and pref. dried to 10% moisture by atomisation. Vitamin precursors which may be used in the process are pimelic acid and nicotinic acid.

The product can be used for animal feeding, having (a) a crude protein conc. $>$ 50 wt.% and (b) a water-sol. vitamin conc. $>$ 1000γ/g. 25.8.78 as 869978 (40pp1331)

BRBL ★ D15 16030B/09 ★BE -871-371
Drying aq. sludge to mfr. fertiliser, solid fuel, pigments, etc. - by injecting hot waste gas while agitating sludge
BRAUNSCHWEIG MASCH 16.08.78-DT-835916 (22.10.77-DT-747506)
C04 H09 (15.02.79) B01c C02c

Individual particles in the sludge are subjected to intense agitation to obtain a powderful disintegrating action. Simultaneously with or immediately following the agitation a dry gas is blown through the sludge and exhausted with a very high moisture content drawn from the sludge. The dry gas is pref. a high temp., industrial exhaust gas or hot air was as a heat transfer medium for industrial waste heat.

Used for drying sludge pastes with an initial dry solids content of 15-18%, to produce raw materials for solid fuels pigments, fertilisers, etc. Simple inexpensive recovery of valuable residues using waste heat exhausted from industrial processes is obtd. The exhaust gases are purified before release to atmos. 19.10.78 as 871371 (36pp)

CNRM ★ D15 16043B/09 ★BE -871-436
Removing phenol, thiocyanate, and complex cyanide s) from waste water - in stripping column fed with oxidising agent in addn. to stripping fluid and base; used e.g. for treating coking plant
CENT RECH METAL 20.10.78-BE-871436
H09 (15.02.79) B01d C02c

A stripping column is fed in its upper part by waste water, such as from a coking plant, and in its lower part by a stripping fluid. At a certain level in the column a strong base is introduced to remove volatile pollutants, partic. free and fixed NH_3. In addn. oxidising agent, capable of degrading phenols, thiocyanates, complex cyanides, etc., are introduced. Such oxidizing agents can be those specifically effective in a basic medium, suitable cpds. being H_2SO_5, $(NH_4)_2S_2O_8$, K_2FeO_4 and O_3, or an acidic medium, e.g. H_2O_2, or in both e.g. ClO_2 and/or oxygen, or at pH 6.5-7.5 e.g. NaOCl.

The agents can be introduced at the same level as the strong base, or at a place where the NH_3 has already been removed. When H_2O_2 is used, acids are pref. introduced between the points where free and fixed NH_3 are removed NH_3 vapours from the latter being fed back to the former without contacting the region where the thenols are degraded. 20.10.78 as 871436 (22pp1331)

CNRM ★ D15 16044B/09 ★BE -871-437
Treating effluents from coke mfr. using stripping column - feeding also strong base plus phenol adsorbing agents
CENT RECH METAL 20.10.78-BE-871437
A97 H09 (15.02.79) B01d C02c

The waste water is fed in at the upper part and the stripping fluid at the lower part. To at least one level of the column a lateral introduction is effected of a strong base into a zone for decomposing ammonium salts. A further feature comprises introducing adsorbing agents for phenols and analogous cpds.

Process is partic. applied to effluent from coke mfr. contg. ammonium salts, phenols, thiocyanates and complex cyanides. The improvement of the addn. of adsorbing agents avoids the need for supplementary treatment before discharge, the possibility of pollution, and harmful effects to biological treatment basins. 20.10.78 as 871437 (6pp)

MULL/ ★ D15 16063B/09 ★CH -608-381
Drinking water filter bed surface layer regenerator - lowers enclosed injectors from floating structure and evacuates disturbed impurities
MULLER H 17.02.75-CH-001944
J01 (15.01.79) B01d-23/24 B01d-35/24

Sand and/or carbon filters as used in drinking water purifying plants have their surface layers regenerated by a floating swilling-out arrangement. This consists of a mantle supported by a buoyant structure which can be raised and lowered. Inside the mantle a number of swilling-out spindles connected to a compressed air and/or a pressurised water supply are fixed, and above the spindles means of evacuating the contaminated water from inside the mantle are provided. At the lower end of the spindles outlets of different inclination are provided, those for compressed air being at the higher level.

The mantle which is rectangular may be supported between two floats at their centre, or there may be a mantle at each end of the structure. The spindles for injecting the swilling-out water and the compressed air are fixed inside the mantle together with feed manifolds, and above them there is a suction chamber connected to a pump for evacuating the contaminated water. A gantry above the floats carries a block and tackle for lifting and lowering the mantle.

Used in slow filtration plants for purifying drinking water, in which the surface layers of the beds become choked after a time. Appts. restores the permeability for water of the surface layers at relatively little cost. 17.2.75 as 001944 (5pp1045)

URBA/ ★ D15 B/09 ★CS 7604-981
Highly pure water prodn. by distillation - using electric heating via electrodes immersed in water
URBANCIK L 29.07.76-CS-004981
J01 (30.11.78) B01d-03

NOVY/ ★ D15 B/09 ★CS 7700-318
Aq. effluent purification appts. - using stabilised, active sludge
NOVY J 18.01.77-CS-000318
Q42 Q46 (30.11.78) E02c-01/32 E04h-07/26

PECH/ ★ D15 B/09 ★CS 7702-095
Mechanical separator of solid particles and suspensions
PECHAN Z 30.03.77-CS-002095
J01 (30.11.78) C02c-01/18

SKLE/ ★ D15 B/09 ★CS 7706-074
Swimming pool water filtration
SKLENAR J 20.09.77-CS-006074
J01 (30.11.78) C02c-01/04

RIHA/ ★ D15 B/09 ★CS 7707-162
Disinfection of potable or waste water
RIHA J 03.11.77-CS-007162
(30.11.78) C02b-03/10

HVIZ/ ★ D15 B/09 ★CS 7708-373
Sediment scraper
HVIZDAL Z 14.12.77-CS-008373
(30.11.78) C02b-01

SKAL/ ★ D15 B/09 ★CS 7708-944
Oil products trapping system
SKALA J 28.12.77-CS-008944
(30.11.78) C02c-01/38

ANDE/ ★ D15 B/09 ★DK 7703-230
Distillation plant
ANDERSEN I 15.07.77-DK-003230
J01 (05.02.79) C02b

DUPO D15 12670R/08 =DS 1941-932
Perm selective membranes from linear aromatic - polycondensates contng nitrogen
DU PONT DE NEMOURS CO 08.08.69-US-848611 (04.09.68-US-757272)
*A24 J01 (22.02.79) *BE-737-710 +B01d-13 C02b-01 C08j-05/22 C08l-77*

Permeability selective synthetic membranes are produced from polycondensn. products $-(LR)_n-$. L is a divalent link $A_iB_jA_kB_lA_m$, where A is -C(=X)- and B is -N(Z)- or vice versa. X is O or S, Z is lower alkyl, phenyl and (pref. ⩾25%) H. All non-terminal gps. B occur in pairs; i and j are 1 or 2, k, l and m are 0, 1 or 2, with m=0 when l=0 and l =0 when k=0, and $i+j+k+l+m \leqslant 8$. R is a divalent organic residue with a terminal C.

A defined number of R, linked to A and B, are part of an aromatic nucleus, n is sufficiently large so that a filming mol.wt. is reached. The polycondensation product has a solubility of ⩾10 wt.% at 25°C in Me_2-acetate or -sulphoxide, N-Me-pyrrolidone, Me_6-phosphotriamide or mixt. of such solvents contg. 0-9 wt.% LiCl.

Membranes having a water permeability ⩾350 and a permeability for dissolved material of < 20% are obtd. which have high mechanical strength. 18.8.69 as 941932 (24pp260).

ECCH- D15 64283U/43 =DS 2317-158
Coagulating agents and viscosity modifiers - prepd by dispersing aldehyde/alcohol condensate, surfactant and solvent
EC CHEMICAL IND KK (ECC -) 08.04.72-JA-035390
*A21 G04 (22.02.79) *DT2317-158 B01j-01/24 C02c-05/02 C09k-03*

Fibre forming liq. compsns. are produced by uniformly dispersing a mixt. of (a) a condensation product, (b) a surfactant and (c) a polar organic solvent, e.g. N-alkylamide, alkyl sulphoxide, nitrile, alcohol, glycol ether or ketone, in water. The wt. ratio a:b:c is 5-50:15-50, with the amount of a + b being 0.1-10 wt.% in the compsn.. The condensate is produced from (a) (substd.) benzaldehyde, phenylalkanal, phenylalkenylaldehyde and (b) a pentitol, hexitol or pentaerythritol in a mol ratio 0.5-3. The compsns. pref. also contain boric acid.

Liq. compsns. are suitable as flocculating and coagulating agent for waste waters. Hydrophobic fibres are pptd. even at high dilutions. They can also be used as viscosity increasing agents for paints. 5.4.73 as 317158 (6pp260).

MINN D15 82372V/47 =DS 2450-103
Separation of esp. oil in water emulsions - by passage through coalescing and sorbing layers in intimate contact
MINNESOTA MINING CO 19.10.73-US-407965
*A88 J01 (22.02.79) *US3847-821 B01d-17/04*

A dispersed fluid phase is sepd. from a continuous fluid phase, e.g. oil in water, by a separator of compact design which works at low pressure, and reduces a highly contaminated fluid to < 5 ppm of the dispersed fluid phase.

Between inlet and outlet a chamber is filled by layers of coalescing medium as well as layers of absorbent medium for the dispersed phase. The coalescing medium has less resistance to flow than the absorbent medium.

The absorbent and coalescing layers are arranged alternately, and wound into a separating element; the fluid passing between the layers of the absorbent medium, through the coalescing medium. 18.10.74 as 450103 (8pp).

GOTT/ D15 83390X/45 =DS 2517-041
Alkaline industrial wastes neutralization - by mixing in tubular reactors with flue gases after sulphur dioxide removal
GOTTSCHE R 17.04.75-DT-517041
*F06 J01 (F09) (22.02.79) *DT2517-041 C02c-05/02 +B01d-53/34*

Alkaline effluents are neutralised in a simple manner by means of flue gases, to a desired pH value. Densified and pre-cooled flue gases and fed into the effluents to be neutralised and are moved together for a period, after which they are sepd..

To remove highly aggressive constituents, the fluid gases are first mixed with part of the effluents, and they are densified together. The part of the effluents contg. fall-out prods. is sepd. and drained away from the gases, which are then fed to a tube reactor and finely divided into the effluents flowing through. 17.4.75 as 517041 (5pp).

LEIS/ D15 20235Y/12 =DS 2540-284
Anaerobic and aerobic water treatment - by darkening flow path partly by covers and using water jets for motion
LEISTNER K 10.09.75-DT-540284
*(22.02.79) *DT2540-284 C02c-01/02*

Arrangement for the biological purificn. of sewage in a stretch of water such as a pool, provides partitions dividing the area of the water into long, flow-through zones. Suitably spaced-out injection nozzles are also provided which set up horizontal flow.

The layout provides for both anaerobic as well as aerobic break-down, by fitting covers either close to the surface, and at about half the depth, or both, which darken the zone beneath them whilst for agitation by the nozzles only water poor in oxygen, or sludge is used.

The submerged covers may be formed by short sections inclined downwards in the direction of flow and overlapping each other, whilst gauzes to which the micro-organisms can adhere are fitted to the partitions and covers. 10.9.75 as 540284 (4pp1045).

HUTT- D15 40157Y/23 =DS 2552-934
Boiler cleaning process - in which pptes. are removed dry and residual water recycled before being evaporated
HUTTER S & CO GMBH 26.11.75-DT-552934
*(22.02.79) *DT2552-934 C02c-05/02*

Treatment of effluents from the cleaning of the heating surfaces of steam generators, exchangers, etc., loaded with sludge, yields a very solidified sludge which can be dumped conveniently, whilst the water can be recycled as washing water.

A predetermined amt. of washing water is used and is passed through a sludge dewatering stage first of all whilst being neutralised to a pH value of 7. The sludge is dumped and the water resulting is adjusted accurately by a suspension of lime to a pH value of 9, and heavy metal sludge is removed. With cleaning additives, this water is recycled as washing water.

The heavy metal sludge is dewatered and dumped, the effluent of the last cycle being evaporated by means of waste heat, and the residues dumped. 26.11.75 as 552934 (5pp1045).

SHIK- D15 52557X/28 =DS 2557-443
Purification of waste solns. contg. polyvinyl alcohol - by coagulating with a boric acid salt and a metal salt
SHIKIBO O KK 20.12.74-JA-147125
*A14 (22.02.79) *DT2557-443 C08j-03/14 C08j-11/04 C08k-03/24 C08l-29/04*

Polyvinyl alcohol (PVA) is separated from its dil. aq. soln., esp. waste water, by addn. of 0.01-50 pts.wt. of a coagulant mixt. of a boric acid salt, and 0 01-50 pts. wt. per pts.wt. of the borate of a salting out agent (I). The resulting mixt. is stirred and the coagulated PVA separated off.

(I) is a salt of an inorganic acid of a metal of Gp. I or II, an inorganic ammonium salt or an inorganic aluminium salt. 19.12.75 as 557443 (11pp068).

KRAM/ ★ D15 16149B/09 ★DT 2736-271
Mixing gas into liquid - using air lift pump principle with venturi throat to induce movement and recycling in liquid esp. for flocculation or froth flotation
KRAMPITZ J 11.08.77-DT-736271
J02 (22.02.79) B01f-03/04 B01j-10

Gases can be mixed with liquids in a vessel by using a stand-pipe with a venturi throat into which the gas is injected at the base by a circular blowing ring with a row of holes. This operates as a mixing zone and leads into a venturi profile pipe.

The liquid is accelerated through the throat and mixes in the wide section which follows. The pipe can be mounted vertically or at an angle. Its base can be at any height above the vessel base but its upper end is below the liquid surface.

Used e.g. for flocculation or froth flotation processes and avoids the use of mechanical moving parts and the corrosion problems associated with these. 11.8.77. as 736271 (10pp1053)

SCHR/ ★ D15 16167B/09 ★DT 2736-565
Biological treatment of highly concentrated wastes - by intensive aeration developing heat for anaerobic digestion tank
SCHREIBER A 13.08.77-DT-736565
(22.02.79) C02c-01/17 C02c-05

In a multi-stage biological treatment of highly conc. waste, e.g. from sugar refineries, preserve factories or animal farms, the first stage uses an enclosed and heated digestion tank. The second stage includes an activated sludge tank, concentric to the first, in which intensive aeration raises the temp. of the mixt. Its surplus heat is used to heat the surrounding digestion tank contents.

The result is a low-cost process of high functional reliability which utilises the heat developed during finely dispersed aeration by friction and by biological reactions for raising the digestion tank temp. 13.8.77. as 736565 (7pp39)

WASS- ★ D15 16229B/09 ★DT 2819-848
Mechanical sepn. of emulsions - using settling vessel followed by pressure separator with capillary membrane followed by cooler, decanter and recycle
INST WASSERWIRTSCHA 20.05.77-DL-199020
J01 (22.02.79) B01d-17/04

Emulsions are sepd. by preseparation in a device such as a filter, a decantor, magnetic separator or centrifuge. They are then pumped in circuit to a capillary system where they undergo a forced rise in concn. of the more viscous medium with a change in the chemical equilibrium in the mixture. The less viscous phase is fed off and the conc. emulsion is then cooled and fed to a decantor-type device. The conc. emulsion is then recycled a number of times until it reaches the desired concn.

The process is used for sepg. emulsions, esp. oil/water mixts. in waste water. It avoids the use of chemicals or heat to recover oil from water effluent streams. 5.5.78. as 819848 (10pp1053)

DOWO D15 23834Y/14 =GB 1541-283
Liquids distillation by solar energy - using silicon membrane to separate liq. from airspace
DOW CORNING CORP 29.09.75-US-617564
*A88 J01 (28.02.79) *DT2604-978 B01d-03/02*

A solar energy powered distillation unit includes a cover sheet, a vapour permeable silicone membrane cooperating with the sheet to separate a liq. to be distilled from air spaces enclosed by the sheet, a solar energy absorbing device (pref. a pigment in the membrane) in contact with the liq. such that the liq. vaporises and passes through the membrane, and a device for draining condensed liq. from the sheet.

Pref. the sheet is of solar energy transmitting materia The membrane is pref. undulating and joins the sheet at spaced points. 26.1.76 as 002830 (5pp1376)

HAWK ★ D15 16368B/09 ★GB 1541-293
Scum removal from a liq. settling tank - via a hopper, pivotally connected to an arm whose position is governed by guides on a rotary beam
HAWKER SIDDELEY WAT 03.11.76-GB-045831
J01 (28.02.79) B01d-21/06

The arrangement, for removing scum from the surface of a circular settling tank, comprises a scum receiving hopper connected via pipes out through the tank wall, a means for moving the hopper from its out of use position above the liq. level to one below the surface, and a scum scraper.

This appts. is simpler and cheaper than previous arrangements and is just as effective. 17.10.77 (7pp959

IGUA- D15 87252X/47 =GB 1541-31
Sea water desalination plant - with cooling circuit of compressor condensors evaporator and vacuum system for evaporator and a cycling
IGUANA SRL (ARCA/) 30.04.75-IT-022881
*(28.02.79) *DT2618-561 B01d-03/10*

Brackish or sea water is purified by distillation under vacuum by evaporating the water by heat exchange with composed refrigerant fluid to cool the fluid in its circuit, further cooling the fluid, expanding the cooled fluid, condensing the evaporated water vapour by heat exchange with cold expanded refrigerant fluid in the circuit.

Pref. evaporation occurs in two thermal stages. The distillate is pref. collected in a vessel from which the water is recovered at ambient pressure between batches, 27.4.76 as 017057 (4pp1376)

ANVR D15 50153A/28 =GB 1541-34
Self-cleaning fish farming tank - with air injectors to oxygenate th water and remove debris by flotation (DK 29.5.78)
AGENCE NAT VALORISATION 15.10.76-FR-031474
*P14 (28.02.79) *FR2367-705 +A01k-63*

Water is purified in an aquaculture tank by withdrawing water from below the surface, recycling the water with an emulsion of small air bubbles, injecting the aerated water below the surface obliquely to the tank floor, and skimming off the surface film of tank water at a position downstream of the injectors.

An open channel just below the surface level pref. effects the skimming. Pref. the channel is alongside but above the injectors, water flowing from the injectors to the end of the tank and back. 12.10.77 as 042540 (5pp)

ROHM D15 00017A/01 =GB 1541-38
Crosslinked anion exchange resin contg. microbicide - have larg pore size and are used to purify water
ROHM & HAAS CO 22.06.76-US-698626
*A91 P34 (A97) (28.02.79) *BE-855-910 C02b-03/06 C08k-03/2 +C08f-08/42*

Microbiocidal prod. comprises a strong base macroreticular anion exchange resin having quat. ammonium functionality and average critical pore dimension of 8000-500000 Å, contg. > 1 partially water soluble salts of Ag, Cu, Hg, As, Zn and/or Pb as microbiocide, esp. AgCl.

Material is prepd. by heating the anion exchange resi pref. in the chloride form, with a water soluble microbicide pref. Ag sulphate, nitrate, acetate, carbonate, oxide and/or tartrate, followed by washing. 16.6.77 as 025154 (7pp931)

ALHA/ ★ D15 16396B/09 ★GB 2002-736

Pyrogen-free sterile water prodn. by reverse osmosis - after pre-filtration by reverse osmosis and ion exchange

ALHAUSER E 17.08.77-DT-737121

B07 (28.02.79) C02b-03/06

Pyrogen-free sterile water is produced from untreated water by pumping the untreated water through a pre-filter and an ion exchanger. After this treatment the water is fed to a reverse osmosis unit to produce sterile water as the permeate. Concentrate from the reverse osmosis unit is returned and mixed with the untreated water upstream of the pump.

Pref. the pre-filter comprise a second reverse osmosis unit whose concentrate is also returned to the untreated water inlet. Optionally a throttled drain removes a portion of the untreated water downstream of the pump to reduce the temp. rise as a result of the pumping operation.

Pyrogen-free water is used for injection, infusion solutions and eye medicaments. Returning the concentrate streams of the reverse osmosis units to the untreated water inlet flushes germs from the membranes thereby preventing their penetration by germ growth. 16.8.78 as 033519 (6pp295)

KORY- ★ D15 16462B/09 ★J5 4006-829

Corrosion prevention compsn. for circulating soft water systems - comprises sodium methylate aliphatic mono:carboxylic acid amide and polyoxyethylene alkylphenol ether

KORYU KOGYO KK 20.06.77-JA-073731

A97 E19 M14 (A25) (19.01.79) C23f-11/14

The compsn. used for a metal contacting circulating water contg. no hardness component e.g. Ca^{2+} or Mg^{2+}, includes sodium methylate, an aliphatic monocarboxylic acid amide and a polyoxyethylene-alkylphenolether.

For the aliphatic monocarboxylic acid amide, C 6-24 may be used, e.g. rauric, oleic, capric or palmitic acid and 5-40(15-25)wt.% together with sodium methylate 5-60-(30-50)wt.% and the ether 5-60(35-45)wt.%. 20.6.77 as 073731. (4pp53)

MITQ ★ D15 16474B/09 ★J5 4006-861

Dehydrating waste sludge contg. colloidal organic material - by treating with ultrasonic waves, freezing, remelting, then drying

MITSUBISHI ELECTRIC CORP 17.06.77-JA-072473

Q75 (19.01.79) B01d-43 B01j-01 C02c-03 C02c-104 F25d-31

The method comprises applying ultrasonic waves to a waste sludge contg. organic substances; freezing the resulting sludge; melting it, and dehydrating it. The organic substance is protein, hydrocarbon, fibre, oil or fat. And the organic substances are contained as hydrophilic colloids in the waste sludge, the sludge is difficult to dehydrate. 17.6.77 as 072473. (3pp51)

KOBM ★ D15 16483B/09 ★J5 4006-873

Cleaning tubular membrane separator - using cleaning ball transfer structure, the separator being used for concn. and desalination of solns. and suspensions

KOBE STEEL KK 20.06.77-JA-073737

J01 (19.01.79) B01d-13 B01d-31

The separator comprises tubular membrane modules arranged in several series of sepn. lines. Each module is cleaned by cleaning balls.

A cleaning ball transfer structure is disposed in the upstream of the series of modules and connected to a raw liq. feed one and conc. drain line formed in each module. The balls are fed to the series of modules from the upstream to the downstream then sepd. from the conc. drain, and fed back to the feed line. 20.6.77 as 073737. (7pp26)

FUJI- ★ D15 16682B/09 ★J5 4007-756

Water-insoluble cpd., e.g. synthetic resin, sepn. from waste water - by adding aluminium sulphate to coagulate resin, and adding sulphuric acid which recovers the aluminium sulphate

FUJI SANGYO PLANT K (NISH-) 18.06.77-JA-072510

A35 (20.01.79) C02c-05/02

A first chemical is added to coagulate and separate water-insoluble substances present in waste water; a second chemical, capable of restoring the reaction prod. from the previous process to the first chemical, is added to the coagulated sludge deprived of its moisture to a certain extent; and the first chemical and the water-insoluble substances are sepd. from each other to recover the first chemical.

This method can perform highly effective treatment of waste water at low running cost due to the recovery of the first chemical, aluminium sulphate, and the reduced amt. of sludge to be discharged, $^1/_{10}$th that of other methods, because the finally discharged sludge contains small amts. of oil and $CaSO_4$. The first chemical is $Al_2(SO_4)_3$ in addn. to the coagulants, e.g. $Ca(OH)_2$ or NaOH, and the second chemical is sulphuric acid. 18.6.77 as 072510. (3pp117)

KOBM ★ D15 16683B/09 ★J5 4007-757

Treating waste aq. suspensions - by passing under pressure through tank with zigzag baffles and intimately contacting with adsorber particles

KOBE STEEL KK 17.06.77-JA-072674

(20.01.79) B01d-15 C02c-05/02

Pollutants present in waste water are adsorbed in an adsorber set in a treatment tank while flowing waste water from one side to another. Waste water becomes a pressurised circulating flow while being forced to flow zigzagly up-and-down among partition walls and baffle plates in a treatment tank. The pressurised circulating flow water is further made to flow upwards in the form of a jet stream from the lower part of the tank, whereupon adsorber particles present in waste water are forced to flow together with waste water, while adsorber particles are concurrently circulated from the other end of the treatment tank to the foremost portion of the tank. During the time part of deteriorated adsorber particles are taken out from the outlet of the circulating path.

This method exhibits good efficiency in continuous operation. It is used to treat urban sewage, factory effluents, river water, sea water, etc. contg. either organic or inorganic material. The adsorber used includes zeolite, ion-exchange resins, activated carbon, active alumina, etc., or other liq. and semi-solid adsorbers. 17.6.77 as 072674. (4pp117)

EBAI ★ D15 16684B/09 ★J5 4007-758

Treating nitrate and/or nitrite-contg. waste water - using a hydrogen donor under anaerobic conditions with a denitrifying microorganism

EBARA INFILCO KK 20.06.77-JA-073153

(20.01.79) C02c-01/02

In the biological denitrification of nitrate and/or nitrite-contg. waste water, in which a hydrogen donor is added to waste water under anaerobic conditions, using denitrifying microorganism attached to granules in a stationary or fluidised bed, the concn. of nitrite in the effluent from the denitrification process is determined in order to control the amt. of the hydrogen donor to be added.

The process is used for the treatment of human waste or factory effluents at low operation cost without causing any environmental pollution. Pref., the hydrogen donor (organic carbon source) is methanol, acetic acid, saccharide, etc.; and the nitrite is determined by the α-naphthyamine-sulphanilic acid method or the N-ethylenediamine-sulphanilic acid method. 20.6.77 as 073153. (5pp117)

EBAI ★ D15 16685B/09 ★J5 4007-759

Controlling organic carbon added in biological denitrification - using monitor column packed with denitrifying bacteria-attached granular solids

EBARA INFILCO KK 20.06.77-JA-073154

(20.01.79) C02c-01/02

In the microorganisms-floating type denitrification of organic waste water contg. nitrate and nitrate nitrogen to which an organic carbon source is added, comprising a digestion process and a denitrification process, a part of the effluent from the digestion process is taken out to add an organic carbon source, e.g., methanol, and then the waste water thus treated with the organic carbon source is passed through a monitor column packed with denitrifying bacteria-attached granular solids to determine the concn. of nitrite nitrogen present in waste water, so that the addn. of an organic carbon source to the biological denitrification process can be controlled.

Specifically the method of determining the concn. of nitrite nitrogen in waste water used is the α-naphthylamine-sulphanilic acid method or the N-ethylenediamine-sulphanilic acid method.

Method is capable of rapidly detecting the concn. of nitrite nitrogen present in waste water and therefore of controlling the amt. of the organic carbon source to be added to the denitrification tank. Process is applicable to the treatment of urban sewage or industrial effluents. 20.6.77 as 073154. (3pp117)

HIEJ ★ D15 16686B/09 ★J5 4007-760

Purificn. of oily waste water e.g. coolant water - using mineral acid and opt. emulsion breaker, and reverse osmosis of aq. phase

HITACHI PLANT ENG CONST 20.06.77-JA-073648

A97 (20.01.79) C02c-05/02

A mineral acid opt. contg. an emulsion breaker are added to oily waste water to separate into aq. phase and oil phase, and then the aq. phase thus obtd. is subjected to reverse osmosis treatment. The mineral acid includes H_2SO_4, HCl, etc., and the emulsion breaker used also includes anionic surfactants of higher fatty acid alkali salts, cationic surfactants of halogenated higher amine salts, nonionic surfactants of polyethyleneglycolalkylether, aliphatic monoglycerides, etc., and amphoteric surfactants of amino acid, etc.

Treated waste water has a very low concn. of COD components, BOD components and SS components, which brings about no environmental pollution. Treatment is highly effective, economical and efficient. 20.6.77 as 073648. (3pp117)

HIEJ ★ D15 16687B/09 ★J5 4007-761

Fluorine-contg. waste water purificn. - by adding calcium salt and then slaked lime, and removing ppte. formed

HITACHI PLANT ENG CONST 20.06.77-JA-073649

(20.01.79) C02c-05/02

A Ca salt is added to the waste water the pH of which is 1-7(4-5), then slaked lime is further added to the waste water so as to regulate the pH range to 8-11, and the ppte. formed is removed. Ca salts used include $CaCl_2$, $CaBr_2$, CaI_2, $Ca(NO_3)_2$, etc., and the amt. of Ca salt added is nearly equiv. to the possible amt. of fluorine present in waste water. A coagulant, e.g. Al sulphate, etc. may be added to waste water after slaked lime has been added.

The method, which lowers the content of fluorine to $\leqslant$ 10 ppm. and the amt. of sludge discharged to $^1/_2$-$^1/_{10}$ that of the conventional methods, is effectively applicable to the treatment of the effluents from electronics parts mfg. factory, atomic power plants and related industry, foundry, etc. at lower operation cost due to redn. of the cost for concentrating, drying and dumping sludge. 20.6.77 as 073649. (3pp117)

HIEJ ★ D15 16688B/09 ★J5 4007-762

Purificn. of fluorine cpd.-contg. waste water - by passing through calcium salt packed column and regulating pH by addn. of slaked lime

HITACHI PLANT ENG CONST 20.06.77-JA-073650

(20.01.79) C02c-05/02

A waste water of pH 1-7(3-5) is passed through a Ca salt-packed column, then the pH of the waste water is further regulated to 8-11 by the addn. of slaked lime to ppte. CaF_2, and lastly the ppte. is removed to the outside.

The method reduces the concn. of fluorine in waste water to approx. $\leqslant$ 10 ppm. at low running cost. The waste water is e.g., those discharged from electronics parts mfg. industry, molten salt electrolytic industry, atomic power-related industry, foundry, etc.

The Ca salt used includes $CaCO_3$, lime, $CaCl_2$ chloride, $CaBr_2$, CaI_2, $Ca(NO_3)_2$, etc. 20.6.77 as 073650. (3pp117)

NIPS ★ D15 16755B/09 ★J5 4008-166

Removing heavy metals from exhaust smoke treating soln. - by pptn. as hydroxide(s) by pH adjustment, then chelating remainder

NIPPON SODA KK 22.06.77-JA-074051

(22.01.79) C02c-05/02

The heavy metals in treatment soln. are pptd. as hydroxides by adjusting pH value of soln. to 8-10 and the resulting pptes. are removed. Further heavy metals contained in the soln. are pptd. as chelate cpds. by adding chelating agent after adjusting pH of soln. to 1-11, and resulting ppte. is removed.

Used for treating soln. contg. large amt. of heavy metal, esp. Hg. Further, by-prod. salts obtd. by evaporating the treated soln. may be used for various industrial materials. 22.6.77 as 074051. (6pp96)

MISK ★ D15 16757B/09 ★J5 4008-168

Gas-solid contact device for treatment of waste water etc. - has overflow pipe for solid granular material, with truncated inverted cone shape

MITSUBISHI KAKOKI KAISHA 21.06.77-JA-072772

J01 (22.01.79) B01d-15/02 B01j-01/06 B01j-08/20

The device comprises a multistage fluidised bed of the solid grain. The overflow pipe installed on each stage, for flowing the solid grain down against the ascending flow of the liq. through the stages, has a shape of truncated inverted cone.

The cone angle of the overflow pipe is ~ 4° to the vertical line. Each pipe is supported by a horizontal support plate. Movement of the grains down each pipe is continuous and stable. 21.6.77 as 072772. (3pp26)

TOKE ★ D15 16767B/09 ★J5 4008-180

Desalting water - using reverse osmosis appts. and then electrodialysis appts.

TOKYO SHIBAURA ELEC LTD 21.06.77-JA-072797

(22.01.79) B01d-13 C02b-01/82

Brine and industrial waste water contg. salt in a relatively low concn. is desalted using the reverse osmosis appts. and its conc. soln. is continuously desalted using the electrodialysis appts. The desalted water is then returned to the reverse osmosis appts.

Recovery of water, desalting and concn. efficiency are high and continuous operation is possible. 21.6.77 as 072797. (3pp96)

SHIG/ ★ D15 16772B/09 ★J5 4008-185

Composite adsorbent for treating waste water or sea water - comprises inorganic fine powder contained in a porous substance e.g. organic polymeric gel

SHIGETOMI Y 12.06.77-JA-073746

A97 J01 (22.01.79) B01d-15

The adsorbent comprises inorganic fine powder in a porous substance. The porous substance is e.g. organic polymeric gel, into which metal oxide or metal oxide contg. water is dispersed at a ratio of $>$0.1 mol. per 1 litre of the gel. The composite adsorbent easily adsorbs inorganic components contained in waste water or sea water, while showing excellent adsorption for metals, durability and sepg. property from water.

In an example, 8.0 g. of acrylamide and 2 g. of N, N^1-methylene bisacrylamide were added to 30 ml. water, heated to dissolve and added with 20 ml. 1-M soln. of ferrous sulphate and with 1.0 ml. of polymerisation initiator of 3-dimethyl aminopropionitrile and 100 mg. of ammonium persulphate. The resulting polymer gel was crushed and immersed in 1-M NaOH soln. or 1-M ammonia water to produce adsorbent. The adsprbent showed adsorption amt. of 0.23 m.equiv./ml. of Cr^{3+}. 12.6.77 as 073746 (2pp43)

DORY- ★ D15 16794B/09 ★J5 4008-30

Solidifying radioactive waste organic solvent - using hydroxide basic carbonate and/or carbonate of alkaline earth metal c solidifying agent

DORYOKURO KAKUNENRY (MITV) 21.06.77-JA-073574

K07 L02 (22.01.79) C02c-05/02 G21f-09/16

The solidifying agent is added to a radioactive waste organic solvent consisting mainly of organic phosphate. The mixed soln. is stirred to convert the waste organic solvent into a stable solid material.

Pref. the alkaline earth metal is aclcium. The waste organic solvent is tributyl phosphate, dibutyl phosphate, monobutyl phosphate, di-2-ethylhexyl phosphate or monethylhexyl phosphate. Cement and sodium silicate may b added with the solidifying agent to the waste organic solvent. 21.6.77 as 073574. (3pp86)

RASA ★ D15 16834B/09 ★J5 4008-624

Concrete prodn. using industrial waste - which is dehydrated cake of sewage sludge, or ash obtd. from this, and water quenched blast furnace slag

RASA SHOJI KK 22.06.77-JA-073346

L02 (23.01.79) B01j-01 C04b-13 C04b-15

Method comprises blending the dehydrated cake of sewerage sludge (or its incinerated ash) and water-quenched blast furnace slag with a mixt. of cement, sand, gravel, water etc.

Heavy metals included in the waste materials are fixed in concrete, and environmental pollution due to their elution is prevented. Incinerated ash obtd. from sewerage sludge contains an appreciable amt. of CaO (e.g., CaO 33.1%; SiO_2 11.5%; CO_2 19.2%) which economises the quantity of cement used. 22.6.77 as 073346. (2pp170)

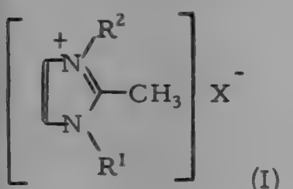
MITN ★ D15 16898B/09 ★J5 4008-723

Compsn. for controlling propagation of microorganisms - contains quat. imidazolium halide and hydrazine cpd., esp. for use in water

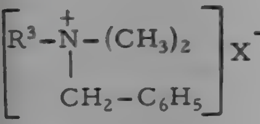
MITSUBISHI GAS CHEM IND 17.06.77-JA-071907

C02 E13 (D22) (23.01.79) A01n-09/02 C02b-03/10 C02b-05/06

Agent contains as active component a mixt. of quat. imidazolium halide of formula (I):


(I)

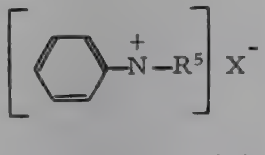
(where R^1aand R^2 are alkyl or benzyl; X is halogen) and hydrazine cpd. Pref. the agent contains as active component a mixt. of hydrazine cpd., and $\geqslant 1$ cpd. selected from quat. ammonium halide of formulae (A), (B) or (C):


$\left[R^3-\overset{+}{N}(-CH_2-C_6H_5)-(CH_3)_2\right]X^-$

(A)

$[R^4-\overset{+}{N}-(CH_3)_3]X^-$

(B)


(C)

(where R^3, R^4 and R^5 are alkyl; X is halogen).

Addn. of (I) to the hydrazine cpd. or the addn. of (I) and (A), (B) or (C) to the hydrazine cpd. shows the synergistic effect. Hydrazine cpds. include, e.g., anhydrous hydrazine, hydrazine hydrate, hydrazine aq. soln., hydrazine salt (e.g., hydrazinium salt of hydrochloric, sulphuric, nitric, carbonic, formic and acetic acid) and hydrazine deriv. (e.g., methylolhydrazine, methylhydrazine). The concn. of the hydrazine cpd. is 1-700 ppm., pref. 5-70 ppm. as anhydrous hydrazine. The concn. of (I) is 1-50 ppm., pref. 3-20 ppm. 17.6.77 as 071907. (6pp108)

TOJV ★ D15 16969B/09 ★J5 4009-161

Copper removal from aq. solns. - by adding hydrazine to decompose peroxide followed by electrolysis or further hydrazine addn.

TOKAI DENKA KOGYO K 24.06.77-JA-074399

E31 L03 M14 (23.01.79) C02c-05/12 C09k-13/04 C22b-15 C23g-01/10 C25c-01/12

In the removal of Cu from waste peroxydisulphate aq. soln., waste peroxymonosulphuric acid (salt) aq. soln. or waste sulphuric acid-acid hydrogen peroxide aq. soln., hydrazin is added to decompose the peroxides present and then copper ions present are removed by electrolysis or as water-insoluble copper salts by the further addn. of hydrazin.

Process almost completely removes copper, present in an amt. of 1-50 g./l., from e.g. waste liquors from the mfr. of printed circuits or from the pretreatment of copper-covered plastic or fibrous thin plates for secondary copper plating. 24.6.77 as 074399. (4pp117)

UBEI ★ D15 16971B/09 ★J5 4009-163

Moisture-rich sludge treatment - using granular moisture adsorbent which is dehydrated and reused

UBE INDUSTRIES KK 24.06.77-JA-074482

C04 Q76 (23.01.79) B01d-15 B01d-43 B01j-01 C02c-03 F26b-05/16

Method comprises (1) adhering the sludge to a granular adsorbent by mixing in, e.g., a ball mill, tube mill, V-shaped mixer, etc.; (2) dehydrating the adhered sludge by mixing with a granular dehydrator having a grain size differing from that of the granular adsorbent by 1 to several mm.; (3) sepg. the sludge-adhered adsorbent and the moisture-absorbed dehydrator, where powdered substance is sepd. as needed; (4) recycling the sludge-adhered adsorbent thus sepd. to step (1), and (5) recycling the moisture-absorbed dehydrator, after dehydrating at 200-300°C for 1-5 hrs., to step (2). The adsorbent and dehydrator used include zeolite, silica gel, or active alumina of a grain size 1-10 mm.

The powdered sludge and sludge-adhered adsorbent sepd. can be used as a fertiliser or soil stabiliser because no denaturation of protein and organics present takes place, and also can be burned out without any supplemental fuel. No heating is needed. Malodours are not generated. 24.6.77 as 074482. (4pp117)

DAIL ★ D15 16975B/09 ★J5 4009-168

Sleeve insert for micro-filtration, ultrafiltration or reverse osmosis - prepd. by laminating filter membrane with backing cloth, then sealing ultrasonically

DAICEL KK 23.06.77-JA-074877

A88 J01 (23.01.79) B01d-13 B01d-31

In the mfr. of a sleeve to be inserted into the outer tube of a membrane-exchange type internal pressure tubular element which is used in a microfiltration, ultrafiltration or reverse osmosis process, a ribbon-like filter membrane is laminated with a backing cloth by ultrasonic sealing after first positioning and prefixing the two members by partial sealing or using a water-soluble adhesive.

The method is a kind of improved lapping method which is more economic than the liq. coating method, and gives a prod. free of defects, e.g., incomplete sealed portion.

The materials for the filter membrane and the backing cloth are a thermal setting type high polymer, e.g., polyester, polypropylene, polycarbonate, nylon, etc. The ultrasonic sealing process uses a transfer type horn and lap or lap butt seal mould, with amplitude 5-15 μ/mm², contact time 3-150 cm./sec., and a horn contact pressure of 5-30 kg./cm²; 23.6.77 as 074877. (4pp117)

DNIN ★ D15 16987B/09 ★J5 4009-182

Adsorption of heavy metal contg. anions e.g. from waste water - using distn. residue obtd. from mfr. of ethylene di:amine from ethylene di:chloride and ammonia

DAINIPPON INK CHEM KK (DNII) 23.06.77-JA-073834

E16 (23.01.79) B01d-15 C02c-05/02

Heavy metal anions present in waste water, e.g., chromic acid ion, dichromic acid ion, ferrocyanic acid ion, ferricyanic acid ion, etc. are removed by passing the water through a column packed with the distn. residues, or simply stirring and filtering heavy metal-contg. water contg. the distn. residues.

The adsorption capacity of the distn. residues is approx. 1.7 g. chromic acid per 1 g., indicating that it is much greater than that of the general grade anion-exchange resins, and also in the case of the adsorption of chromic acid ions, its adsorption ability is selective even in the presence of sulphuric acid ions. The heavy metals adsorbed in the distn. residues can easily and completely be removed by acid-treatment at pH 1-2, and residues reused. 23.6.77 as 073834. (3pp117)

DAID- ★ D15 16996B/09 ★J5 4009-193

Extracting molybdenum and tungsten from aq. soln. - by contacting with organic solvent and recovering from solvent using oxidant-contg. aq. soln.

DAIDO SANSO KK 23.06.77-JA-075255

E11 M25 (23.01.79) C01g-41 C22b-34/36

To separate and recover each Mo and W from aq. soln. contg. molybdenum and tungsten metals, an organic solvent is brought into contact with the soln. to jointly extract the molybdenum and tungsten, and then the organic solvent contg. the molybdenum and tungsten is contacted with an oxidant-contg. aq. soln. whose pH is regulated to acid side, or pH 0.5-1.5, by using sulphuric acid, hydrochloric acid, nitric acid, or hydrogen fluoride to immigrate only molybdenum into the aq. phase.

The method is capable of easily and highly effectively recovering much higher purity molybdenum at a high recovery rate of 95-100% from the molybdenum-rich aq. soln., and thus is applicable to the treatment of mineral ores, waste materials, and waste water which contain molybdenum and tungsten.

The organic solvent used includes D_2EHPA(di-2-ethylhexylphosphoric acid), etc., and the oxidant used includes hydrogen peroxide, permanganates, etc. which is used in a mole proportion of 2.5-3.0. 23.6.77 as 075255. (3pp117)

HOOL ★ D15 17055B/09 ★J5 4009-450
Sepg. oils from defatted liquor - by salting out and flotation
NIHON PARKERIZING 22.06.77-JA-073373
J01 (24.01.79) C02c-05/02

Oil components are simply sepd. by salting-out and flotation from oil-contg. defatted waste liquor (esp. contg. oils in emulsified state), e.g. resulting from removing oil and fat, e.g. anti-rusting agent, lubricating oil etc. from metal surface(s) on surface treatment etc., having the oil concn. of 3-200 ml./l., by adding a builder in amt. of 5-50 g./l. and maintaining the liquor at 40-90°C to salt-out the oil components. 22.6.77 as 073373. (3pp34)

AGEN ★ D15 17056B/09 ★J5 4009-451
Treating heavy metals-contg. effluent - by contact with yellow ochre
AGENCY OF IND SCI TECH 22.06.77-JA-073993
J01 M25 (24.01.79) C02c-05/02

Heavy metal components, e.g. V, Ni, Hg, Pb, Cr etc., are effectively and economically removed by adsorption from effluent by contacting the effluent with Yellow ochre (natural occurring low cost yellow pigment composed of noncrystalline Al silicate contg. iron oxide hydrate, comprising 6-12% binding water, 30-60% SiO_2; 5-15% Al_2O_3 and 20-60% Fe_2O_3), the amt. of which is 20-2,000X (by wt.) that of the heavy metal components.

The yellow ochre may be first calcined at >110 (esp. 500-550)°C, and it is pref. used in form of powder or granules having the granular size of 50-1,000 (100-500) μ.

In an example, 1 g. of yellow ochre was added to 50 ml. of aq. soln. contg. 100 ppm. of heavy metals (Pb, Cr, Hg, V), followed by agitation for 60 mins. and filtration. The metal removability are as follows: Pb 74%; Cr 61%; Hg 93%; V 83%. 22.6.77 as 073993. (2pp34)

EBAI ★ D15 17057B/09 ★J5 4009-452
Removing BOD and organic nitrogen components from waste water - using excess recycled activated sludge, hydrolysed with alkali, as hydrogen donor
EBARA INFILCO KK 22.06.77-JA-074268
(24.01.79) C02c-01/02

Purificn. of waste water is effective by utilisation of surplus amt. of activated sludge resulting in the system as hydrogen donor without any use of hydrocarbon, e.g. MeOH etc.

Process comprises transferring the waste water in succession to, initial denitrification vessel, nitrification vessel and to secondary denitrification vessel; sepg. the water thus treated into treated water and conc. activated sludge; recycling a portion of the sepd. conc. activated sludge to the initial denitrification vessel; introducing the remainder of the activated sludge (as the surplus amt. of the sludge) into a hydrolysing vessel where it is treated with a monovalent alkali metal cpd., e.g. NaOH, KOH, Na_2CO_3 or K_2CO_3 etc. under elevated temp. to solubilise by hydrolysis organic matters contained in the sludge; sepg. the alkali hydrolysed liquor into solids (filter cake) and sepd. liquor which is then recycled as hydrogen donor to the secondary denitrification vessel. 22.6.77 as 074268. (3pp34)

MINA- ★ D15 17058B/09 ★J5 4009-453
Night soil treatment using less treating agent - by removing impurities, crushing solids, neutralising, sepg. night soil, aerating, treating with earth and adding lime
MINAMOTO KK 23.06.77-JA-075081
(24.01.79) C02c-01/40

Process comprises removing solid impurities difficult to be crushed, e.g. stone, metal, etc.; crushing coarse solids, e.g. plastics sheet and paper etc.; neutralising it with acid; sepg. the night soil thus pretreated into distilled component and conc. residue by reduced distn.; and aerating under agitation the distilled component for about 24 hrs. in the presence of H_2O_2 soln. and catalyst, e.g. Fe, Ni and their cpds.

Process further comprises treating with diatomaceous earth or clay, filtration and further aeration for 20-30 hrs to give odourless water (pH = about 7) which is as industrial waters, e.g. cooling water etc.; adding CaO to the conc. residue together with diatomaceous earth or clay etc., followed by agitation to evaporate-off an unreacted remaining portion of water by hydration heat and to convert the muddy residue into powder form. 23.6.77 as 075081. (3pp34)

KURK ★ D15 17159B/09 ★J5 4010-27
Sludge treatment in protein recovery, juice sepn. etc. - using horizontal rotary filter elements
KURITA WATER IND KK 25.06.77-JA-074936
(D14) (25.01.79) B01d-25 B01j-01 C02c-03

Rotary filter elements are horizontally carried in a treating chamber. Each element has a rotary shaft having a filtrate liq. inlet and outlet ports at both ends. A filtrate liq. chamber is disposed near the treating chamber and communicates with the outlet ports of the elements throug the wall of the treating chamber.

The device used for treating sludge and is applicable to water treatment, recovery of proteins from waste liqs. drained from food factories, and sepn. of juices from raw liqs. in juice prodn. plants. Filtrate liq. take-up ability is improved and changes of sludge dewatering rate are avoided. 25.6.77 as 074936. (6pp26)

MITQ ★ D15 17160B/09 ★J5 4010-27
Sludge treating appts. - in which the sludge is frozen and remelte in pipes, heat medium being sprayed from variously sized holes
MITSUBISHI ELECTRIC CORP 24.06.77-JA-075827
(25.01.79) B01d-43 B01j-01 C02c-03

Appts. is claimed for treating sludge where e.g. a difficultly filtered sludge is frozen, remelted, and dewatered. Object is to uniformly heat the sludge after freezing it, thus avoiding unbalance between freezing and heating.

First and second chambers are disposed at a sludge inlet and outlet sides around pipes, each to be charged with the sludge under pressure. A cooling and heating media are fed into the first and second chambers to freeze and remelt the sludge in the pipes. Holes are bored in a heating medium inlet or outlet with spaces, and the size of th hole is made different depending on the medium flow. 24.6.77 as 075827. (4pp26)

MITQ ★ D15 17161B/09 ★J5 4010-27
Sludge treating appts. - where sludge is frozen, remelted an dewatered, the frozen sludge being uniformly heated and melte using heating medium
MITSUBISHI ELECTRIC CORP 24.06.77-JA-075828
(25.01.79) B01d-43 B01j-01 C02c-03

Device is claimed for treating sludge where the sludge is first frozen, remelted and dewatered to separate a solid component from sludge. Object is to uniformly heat the sludge after freezing, by smoothly flowing a heating medium. Device comprises a casing, pipes, each charged with the sludge and disposed in the casing, a first and second chamber formed around the pipes to cool the sludge i the pipes until it is frozen, and to heat it until remelted, during flowing a coolant and heating medium in them, respectively.

Novelty is that passages for feeding and draining the heating medium are closely formed at the outer wall of the chamber and holes are bored through the wall to communicate with the chamber. 24.6.77 as 075828. (4pp26

MITR ★ D15 17168B/09 ★J5 4010-28
Hollow fibre filter membrane made from acrylonitrile polymer - h outer, middle and inner layers with pores of progressive increasing size
MITSUBISHI RAYON KK 24.06.77-JA-075018
A88 J01 (A14) (25.01.79) B01d-13

The hollow fibre membrane has a thin outer layer substantially free of pores >500Å, a central layer contg. pores of 500Å - 2μ size, and an inner net structure type layer contg. pores of 1,000Å - 5u pore size. Sepd. large pores of 5-100μ dia. and small pore of 1-30μ dia. are contained in the net structure type layer; one end of the large pores opens in the inner layer, and the direction of the large pore is radially directed to the outer layer of th membrane. The hollow fibre membrane is made from a acrylonitrile polymer.

In an example, a copolymer of acrylonitrile and methylacrylate was dissolved in dimethylacetamide to obtain a spinning soln. The spinning soln. was introduced from a ring type nozzle into a soln. of 50% dimethylacetamide to obtain a hollow tube of 420μ outer dia. and 200μ inner dia. The hollow tube was washed with water, and treated with hot water to obtain a hollow fibre membrane. 24.6.77 as 075018. (8pp51)

HOND/ ★ D15 17169B/09 ★J5 4010-283
Filter assembly for reverse osmosis - in which filter membrane is attached to liq. feed pipe through which holes are bored
HONDA H 24.06.77-JA-075691
J01 (25.01.79) B01d-13

A device is claimed for filtering a liq. such as sea water, industrial waste water and solns. and is used for treating water, concn. of the solns. and refining of the liqs.

A filter membrane for sepg. a solute contained in the liq. is held on the inner wall of a liq. feed pipe having through-holes bored through the wall. The pipe is made of a rigid material such as metal. A feeder feeds the liq. to be treated into the pipe at room temp. and high pressure A unit is provided for applying ultrasonic vibration to the pipe.

Clogging of the membrane is avoided. 24.6.77 as 075691. (4pp26)

HITF ★ D15 17170B/09 ★J5 4010-284
Desalting a soln. in electrodialytic appts. - and concentrating and sepg. nonionic cpds. in osmotic appts.
HITACHI SHIPBLD ENGG KK 24.06.77-JA-075869
J01 (J03) (25.01.79) B01d-13

In process for desalting a soln. in an electrodialytic appts. introducing the desalted soln. into a pressure type osmotic appts., and concentrating and sepg. non-ionic cpds. to obtain a desalted soln. contg. no non-ionic cpds., the improvement comprises supplying and recycling a soln. to be desalted and a soln. to be conc. into the electrodialytic appts. by a high pressure driving energy of the desalted soln. under pressure exhausted from the pressure type osmotic appts. 24.6.77 as 075869. (4pp51)

KOBM ★ D15 17173B/09 ★J5 4010-288
Adsorbent for oxyacid ions, e.g. sulphate or phosphate ions - comprises sintered prod., contg. over 15 wt. per cent alumina
KOBE STEEL KK 24.06.77-JA-075687
J01 (25.01.79) B01d-15 B01j-01/04

The adsorbing agent consists of a sintered material contg. $>$15wt.% of alumina having crystal structure given below. The sintered material has $>$0.6ml./g. minute pore volume and water adsorbing capacity $>$0.5g.per g. The crystal structure has X-ray diffraction lines of 2.085dÅ: I/Io = 100, 2.552dÅ: I/Io = 90, 1.601dÅ: I/Io = 80, or 3.479dÅ: I/Io = 75 given in ASTM card 10-173.

The alumina used as the adsorbing agent is β-Al_2O_3, γ-Al_2O_3, δ-Al_2O_3, θ-Al_2O_3, K-Al_2O_3, α-$Al(OH)_3$, β-$Al(OH)_3$, α-$AlO(OH)$, or β-$AlO(OH)$.

Specifically a material mainly contg. alumina and silica was sintered to obtain a prod. having γ-alumina structure. An aq. soln. of phosphoric acid of pH 7 (sic) was treated with the prod. for 4 hrs. to adsorb phosphate ions therefrom. 24.6.77 as 075687. (4pp51)

TAMA/ D15 64137X/34 =J7 9002-004
Soil consolidating matl. - is sewage treated soln. ppt calcified ash
TAMAI M 29.00.75-JA-002705
*Q42 (01.02.79) *J51078-514 E02d-03/14*

To sludge, the ppte. of sewage treated soln., filter aid e.g. organic polymer coagulant, lime, iron salt, alum cake, etc. is mixed and filtered to give cake, and dried under sun then calcified at 700-800°C. Since the resulting prod. has absorptivity $\geqslant$80%, water permeability equal to that of sand, hydraulicity and expansibility due to moisture absorption, it is possible to be used as reinforcing agent for compacting soft soil.

Soil can be reinforced using ash only but the addn. of $>$1 hydraulic material e.g. lime, cement alum at $\geqslant$5% w.r.t. ash is beneficial. 29.00.75 as 002705 E02d-3/14 (1.2.79) TAMAI, M. (4pp) (J5 1078514)

JAAT ★ D15 17263B/09 ★J7 9002-020
Decomposing sodium thiosulphate in effluent - by oxidising with air or oxygen while irradiating with ionising radiation
JAPAN ATOMIC ENERGY RES 23.05.72-JA-050352
E34 (01.02.79) C02c-05/04

In treating an effluent contg. a very small amt. of $Na_2S_2O_3$ by oxidising it with air or oxygen, the improvement comprises irradiating with ionising radiation of 10^4-10^{11} Rad/hr while admitting, at ordinary temp., 0.1-2 vols. of air or oxygen per one vol. of effluent, so that the oxidn. decomposition of $Na_2S_2O_3$ is accelerated to a large extent. 23.5.72 as 050352 C02c-5/04 (1.2.79) JAPAN ATOMIC ENERGY RES. (3pp34) (J4 9015250)

TOXS D15 62678X/33 =J7 9002-021
Treatment of waste water contg chlorinated organic cpds - by hydrolytic treatment with calcium hydroxide or sodium hydroxide, followed by biological treatment to lower BOD
TOYO ENGINEERING CORP 27.12.74-JA-148812
*E19 (01.02.79) *J51076-849 C02c-05/02*

To the waste water contg. chlorinated org. cpd. is added an equiv. amt. of $Ca(OH)_2$ or NaOH, maintaining the pH at 7 to 11 and hydrolysing at 40-95°C, followed by subjecting to biological treatment to lower BOD.

The biological treatment is easily carried out without any lowering in activity of bacteria and without extinction of the bacteria due to variation in concn. of the chlorinated org. cpd; it becomes unnecessary to increase amt. of water used for diluting the waste water because the method removes the toxicity of the chlorinated org. cpd. against the bacteria. Thus water is saved and size of the installations can be reduced. 27.12.74 as 148812 C02c-5/02 (1.2.79) TOYO ENGINEERING CORP. (4pp) (J5 1076849)

ENVI- D15 75460V/43 =J7 9002-022
Improving quality of leachate from sanitary landfills - by treating with alkali metal silicate and a setting agent
ENVIRONMENTAL SCIEN 02.01.74-US-429972
*+P35 Q35 (01.02.79) *US3841-102 +C02c-03*

Title process comprises treating waste material by mixing it with an aq. soln. of an alkali metal silicate and a silicate setting agent contg. polyvalent metal ions to convert the mixt. into a consolidated chemically and physically stable earth-like material substantially insoluble in water and with its pollulants entrapped in the solidified silicate, and disposing the landfill material and treated waste material in contact with each other so that the leachate will trickle down through the treated waste material.

The setting agent is pref. Portland cement. 27.12.74 as 149083 (clg. 2.1.74-US-429972) C02c-3/00 (1.2.79) ENVIRONMENTAL SCIENCES (5pp) (J5 0098132)

AKIY/ ★ D15 17264B/09 ★J7 9002-023
Oily sludge solidification - adding emulsifying agent, mixing with lime cement and sand and pouring onto land filling site to harden and solidify
AKIYAMA S 05.03.75-JA-026093
L02 (01.02.79) C02c-03 C04b-13/24

Solidification of an oily sludge comprises (a) adding an emulsifying agent, the amt. of which is almost equal to hat of oil component contained in the oily sludge, followed by agitation, to emulsify the oil component; (b) mixing the emulsified liquor throughly with lime, a cement and sand; (c) transferring the mixt. of a land-filling site; (d) and pouring the mixt. into the land to harden and solidify it. 5.3.75 as 026093 C02c-3/00; C04b-13/24 (1.2.79) SAKAE AKIYAMA (2pp34) (J5 1102345)

CALG D15 39736X/21 =J7 9002-330
Scale prevention in steam generators - using ethylenediaminetetracetic acid and nitrilo triacetic acid
CALGON CORP 23.09.74-US-508125
*E16 J05 (06.02.79) *US3956-164 C02b-05/06 C23f-14/02*

A method of preventing and removing deposits from the metal surfaces of the aq. circuit of steam generators comprises adding to the circulating water or feed water a blend of ca. 1:1 molar ratio of nitrilotriacetic acid (I) and ethylenediamine-tetraacetic acid (II).

The blend is synergistic in that use of (I) and (II) results in superior boiler water treatment due to augmentation

of the more economical and thermally stable (I) by the higher stability value of (II). 22.9.75 as 113809 (clg. 23.9.74-US-508125) C02b-5/06 C23f-14/02 (6.2.79)
CALGON CORP. (7pp) (J5 1057302)

MITK ★ D15 17304B/09 ★J7 9002-409
Solids sepn. from liq. fermentation suspension - using a screw-type centrifugal precipitator having a bowl with specifically angled sides
MITSUI TOATSU CHEM INC 17.09.73-JA-103759
J01 P41 (D16) (07.02.79) B04b-01/20

In the sepn. of solid components from liquid suspension, such as active sludge, contg. solids which have a small difference of specific gravity w.r.t. the liquid the liquid suspension is fed to a screw-type centrifugal precipitator which is fitted with a bowl having an initial angle of 15-80° and a terminal slanting angle of 2-15°, so that the solids are sepd. and discharged with a high rotational velocity. 17.9.73 as 103759 B04b-1/20 (7.2.79)
MITSUI TOATSU CHEM. INC. (4pp15) (J5 0054961)

NAVA= ★ D15 17339B/09 ★SU -217-282
Anti-scaling additive for boilers used in evaporation of sea water - comprising sodium hexa:metaphosphate and oak tannin extract
NAVAL FEET RES INST 21.05.66-SU-077131
E34 (11.04.78) C02b-05/04

Scale formation in evapn. of sea water can be prevented by using sodium hexametaphosphate. The effect of the latter can be increased by addn. of an oak tannin extract. The additives are taken in a ratio of 1:1 to 1:3, and produce an antiscale effect of up to 95%, compared to sodium hexametaphosphate alone, which gave an effect of 70-80%.

Kamenskaya, I.N., Puchkin, A.V., and Goldenfon, A.K.
Bul. 35/19.11.70. 21.5.66. as 077131 (1pp815)

WATE= ★ D15 17396B/09 ★SU -462-375
Waste water purification filter - comprises two concentric cylinders separated by rotor with radial scrapers
WATER STORAGE RES 11.09.72-SU-827060
A88 J01 (A25) (04.07.78) B01d-33/16 C02c-01/36

Filter for removing insoluble liquids, e.g. oil, from waste waters comprises two concentric cylinders with filtering material, pref. foamed polyurethane particles, in the annular space. To improve efficiency, a rotor between the cylinders carries radial perforated scrapers, and a device for recovering the filter material is located above the level of oil collected in the lower part of the inner cylinder.

Pichakhchi, I.D., Khailovich, Yu.A., Zatyl nikov, V.I.
et al. Bul. 30/15.8.78. 11.9.72. as 827060 (4pp1358)

SAKI= ★ D15 17423B/09 ★SU -492-483
Dehydration of sea- or lake-salt soln. - by hot gases in a fluidised bed of inert material to give salt with reduced magnesium content
SAKI CHEM WKS 03.07.73-SU-946235
E34 (15.05.78) C01d-03/06 C02c-03

Sea salt with a given compsn. can be obtained and its quality improved, if the dehydration of the brine is carried out in an inert fluidised bed in presence of 2-3% of calcium chloride and 13-17% of sulphate ions. Suitable materials for the fluidised bed are gravel with particle dia. 5-8 mm., steel or porcelain balls with dia. 2-12 mm., or any corrosion-resistant material with sp. gravity >2 g./cm.^{3}. The hot air used enters at 400-700°C, and it exits at 120-250°C The method reduces the amt. of difficulty sol. Mg salts from the brine passing into the product.

Lyandres, S.E., Vologodskii, L.B., Nikolaenko, V.P.
et al. Bul. 43/25.11.75. 3.7.73. as 946235 (2pp815)

AUCO= ★ D15 17435B/09 ★SU -494-353
Removal of surfactants from waste water - by bubbling air through, separating the foam then adding an adsorbent
AS UKR COLLOID CHEM 04.01.74-SU-982985
(15.05.78) C02c-05

Surfactants are removed from the waste water of light ind., paper ind., and synthetic rubber factories by bubbling air through it, separating the foam and extracting the surfactants with a solvent. The process is simplified and its rate increased by introducing the adsorbent into the foam.

Koganovskii, A.M., Kozhanov, V.A., Klimenko, N.A.
et al. Bul. 45/5.12.75. as 4.1.74. as 982985 (2pp1349)

BIOS= ★ D15 17520B/09 ★SU -597-648
Protein prepn. from surplus active sediment of aq. waste - by flotation, and two/stage acid hydrolysis and alkaline extraction
BIOSYNTH PROTEINS 10.10.74-SU-066872
C03 (D13) (12.05.78) C02c-03

Surplus active silt is reprocessed into protein, fodder additives and biologically active materials by flotation at pH 1.5-3.0 until dry content reaches 5-10%; two-stage acid hydrolysis at pH 0.5-1.0 and 50-80°C for 0.25-1.0 hr. and at pH 0.01-0.5 and 80-100°C for 0.5-1hr. and alkali extraction at pH 9-11 for 0.25-0.5 hr. at 80-90°C.

Belyaev, V.D., Mezentsev, A.N., Chepigo, S.V. et al. Bul
10/15.3.78. 10.10.74. as 066872 (3pp1349)

SOYU= ★ D15 17530B/09 ★SU -600-091
Cleaner removing petroleum products from waste water - has extractor frame with scrapers mounted on beams and horizontal troughs mounted on oil collecting pipe
SOYUZVODOKANALPROEK 27.07.73-SU-955576
H05 (17.04.78) C02c-01/34

The cleaner, removing petroleum products and mechanical impurities, comprises a settling tank, a water distributor and a foam and sediment collector and extractor, made as a frame whose top and bottom beams have scrapers. There is also an oil-removal pipe and a central support.

To simplify design and improve performance, the support is made as a tube connected at the bottom to the said pipe and having horizontal troughs and hinged to the frame, which incorporates rods at the periphery, interconnecting the top and bottom beams.

Avdeev, E.V., Turukin, V.V., Vainshtein, L.I. et al.
Bul. 12/30.3.78. 27.7.73. as 955576 (3pp132)

VETE= ★ D15 17561B/09 ★SU -602-184
Waste water steriliser - has water heat treatment system connected in series with heat exchangers
VETERINARY VIROLOGY 12.03.76-SU-326395
P34 (21.03.78) A61l-03

The steriliser comprises a set of tanks communicating with pumps and heat exchangers. To increase reliability and economy, jet appts. with pumps and piping for heat treatment of the water is provided, and is connected in series with the heat exchangers.

Kokurin, V.A., Bakulov, I.A. Kotlyarov, Bul.
14/15.4.78. 12.3.76. as 326395 (2pp132)

VORO= ★ D15 17583B/09 ★SU -602-224
Electromagnetic separator effluent clarification - contains ferromagnetic semi-cylinder acting as limiter mounted in feeding trough between profiled magnetic poles
VOROSHILOVGRAD MECH 11.02.76-SU-324259
P41 (15.05.78) B03c-01/08

Improved efficiency in clarifying domestic sewage and effluent water, using electromagnetic separator described in Parent Certificate No. 426611, is ensured by application of the following modification. In the feeding trough, between profiled magnetic poles is mounted a limiter in the form of a semi-cylinder made from ferromagnetic material

Kartashyan, V.O., Fadeev, V.I. Bul. 14/15.4.78.
11.2.76. as 324259 Add to 426611 (2pp135)

URAL= ★ D15 17690B/09 ★SU -602-477
Water electro-coagulation treatment appts. - with magnet poles in iron swarf electrodes and separated by dielectric strip
URALS HEAT TECH RES 03.09.76-SU-398099
J03 (17.03.78) C02b-01/82 C02b-09

The appts. comprises a housing with conductive plates and soluble particulate electrodes. To reduce unproductive loss of metal and to extend the range of usable metallic wastes, the electrodes are equipped with magnets with their poles sepd. by diamagnetic dielectric strips, the same poles of the magnets located on one side of the strip. The poles and plates are pref. immersed in the particulate electrode above the level of the liquid.

The arrangement provides a more uniform magnetic field over the iron swarf electrodes and a constant electrode gap. Water is supplied to the housing and d.c. imposed on plates, leading to dissolution of swarf and formation of hydroxide, which reduces the negative charges

on colloidal particles and facilitates their coagulation.
Velkov, S.I., Malyshev, G.N., Zhulkov, N.I. et al. Bul.
14/15.4.78. 3.9.76. as 398099 (2pp1358)

KRAM/ ★ D15 17691B/09 ★SU -602-478
Cleaner for waste water - ensures continuous, deposition-free operation, since mixer is linked to gas separator and exchange tube area, before outlet separator
KRAMARENKO S S 28.11.75-SU-193571
(17.03.78) C02c-01

The cleaner, for removal of organic cpds. comprises a tubular heat exchanger, an outlet vapour gas mixt. separator, a reactor, a compressor and a pump all linked by piping and fitted with a cut-off and control system.

To improve performance by ensuring continuous operation, a mixer is provided, together with a gas separator having gas and liquid pipes linked to the tube area of the exchanger and the bottom of the mixer respectively, which latter is also linked to said tube area.

Kramarenko, S.S., Rubchaki, I.Yu., Sirota, M.N. Bul.
14/15.4.78. 28.11.75. as 193571 (3pp132)

MAKE= ★ D15 17692B/09 ★SU -602-479
Purificn. of aromatic nitro-cpds. from waste water - includes mixing with domestic sewage residues and anaerobic treatment
MAKEEVKA CIVIL ENG 19.01.76-SU-314688
E14 (17.03.78) C02c-05/10

Waste water contg. aromatic nitro cpds. is purified by preliminary mixing with residues, anaerobic treatment and final aerobic purifcn. The process is simplified, and cost is reduced, by using raw residues of household sewage in proportion 10 pts. residue to 1pt. nitrocpds., and anaerobic treatment is applied to the residue remaining after separation of water.

Kulikov, N.I., Kulikova, E.N., Boyko, A.A., et al. Bul.
14/15.4.78. 19.1.76. as 314688 (2pp1349)

BIOL- ★ D15 B/09 ★SW 7708-243
Rectangular biological effluent treatment vessel - fitted with rotating screens in the bottom and through which oxygen flows upwards from the bottom
BIOLOGISK AVFALLSHA 15.07.77-SW-008243
(12.02.79) C08f-09/02

The effluent passes down through various zones in a vessel during continuous treatment and is discharged, fully treated from the bottom of the vessel. Oxygen is passed into the vessel at the bottom and flows upwards through the vessel.

The rectangular vessel has rotating screws which move backwards and forwards across the vessel's bottom between two of its sides. 15.7.77 as 008243 (-pp1183)

FRUC/ D15 55990Y/32 =US 4140-079
Pisciculture water treatment circuit - using cascade of tanks with rising water levels and aerator in each riser
FRUCHTNICHT E A 26.01.76-CH-000882
*P14 (20.02.79) *DT2605-787 +A01k-61*

A water conditioning and circulating system for fish growing tanks includes an aeration system having receptacles in staggered cascade form having compressed gas inlets in each receptacle to provide progressively rising water levels in each receptacle.

The last of the progressively rising water levels is higher than the nominal water level. The fish receptacle of the cascade is connected to the outlet of a clarifier positioned beside the growing tank. 21.1.77 as 761430.
(-pp1363)

CSIR ★ D15 17794B/09 ★US 4140-487
Appts. for analysis of water - used to detect substances which are oxidised by ozone with emission of visible light (SW 4.7.77)
COMMONWEALTH SCIENT ORG 10.12.75-AU-004243
J04 R16 (20.02.79) G01n-31 G01n-33/18

Appts. includes a reactor contg. a body of water and being made of ozone resistant material. It has a fixed lid of optical-quality glass. The reactor also has gas and water inlet tubes and an overflow tube as a water outlet. Distilled water is supplied to the water inlet and ozonised air to the gas inlet. A measured volume of the water to be tested is dispensed into the reactor and emitted light is detected and measured using a water cooled photomultiplier.

Appts. is used with e.g., sewage effluents, river and sea waters, industrial waters, drinking water, distilled water and water for injection. Substances which can be identified include cpds. contg. SH gps., phenolic OH gps. or olefinic double bonds; inorganic sulphides and ammonia. 6.12.76 as 747994. (10pp295)

ATOM . D15 22170W/13 #US 4140-584
Vacuum condenser for salt removal with plastic tubes - in a longitudinal bundle and a common shell for the steaming and heating chambers
ATOMENERGI AB 06.08.73-SW-010783 (07.02.75-US-548098)
*J01 (20.02.79) *SW7310-783 B01d-03/10*

A distn. plant of the multi-stage flash distn. type comprises a reinforced concrete shell which is divided into a large number of vaporising chambers and a heat supply chamber by means of a number of partitions.

A bundle of flexible heat resistant plastics condensn. tubes extends through all the vaporising chambers. Distillant flows through the tubes and a basin in each vaporising chamber. A condensate trough is provided in each vaporising chamber under the tubes to collect distillate.
3.11.76 as 738286, C.i.p.4004984. (5pp1363)

BUCM D15 10641A/06 =US 4140-737
Aeration of foaming liquors - using immersed pump with separate liquid and air intakes (NL 31.1.78)
BUCHERGUYER MASCH 27.07.76-CH-009568
*(20.02.79) *DT2730-190 B01f-03/04*

Appts. for aerating liqs. having a foam forming tendency, e.g. effluent contg. organic substances, comprises an aeration pump placed in the liq.

The pump has a liq. inlet situated at the surface of the liq. and an air inlet located in the vicinity of the desired foam thickness level.

The liq. inlet and the air inlet are funnel-shaped and taper inwardly from the inflow edges towards the pump and is flexibly arranged and adjustable one w.r.t. the other. 26.7.77 as 819133. (-pp1363)

SIMC ★ D15 17978B/09 ★ZA 7704-648
Liquid purificn. appts. - comprising suction pipe(s) having load bearing portion to span between spaced support
SIMON-CARVES AFRICA 01.08.77-ZA-004648
J01 (16.10.78) C02c-01

See Also

D22 J5 4006867
D22 J5 4008725
D22 US 4140798
D22 US 4140848

D16: FERMENTATION INDUSTRY

NOVO ★ D16 15971B/09 ★BE -869-869
Glucose isomerase activated by water-soluble iron salt - is converted into dried particles before use
NOVO INDUSTRI A/S 23.08.77-US-827030 (23.08.77-GB-035368)
(D17) (21.02.79) C12d C13k

A cellular mass of glucose isomerase (which can conform to BP 1516704 or USP 3980521) is activated by the incorporation of at least 0.05 wt.% (on the dry base) of Fe in the form of a water-sol., non-toxic, pref. solid. Fe salt After incorporation of the Fe, the glucose isomerase is converted into particle form and dried.

At least 0.5 wt.% MgO, w.r.t. the dry wt. of the cellular mass, and 2 wt.% of solid glucose are pref. mixed with the Fe before addn. to the cellular mass. The mass is then extruded into granules.

The prod. is used to isomerise glucose. The method avoids the use of (toxic Co), at the same time allowing the Fe to be introduced with the enzyme, and causing it to remain firmly bound throughout the use of the enzyme. 21.8.78 as 869869 (34pp1331)

ZEME/ ★ D16 B/09 ★CS 7701-021
Alpha-amylase enzyme prepn. - using Streptomyces spp.
ZEMEK J 16.02.77-CS-001021
(30.11.78) C12d-13/10

KUNI/ ★ D16 B/09 ★CS 7702-325
Chromogenic polysaccharide gel prepn. - for quantitative evaluation of glycan-glycano hydrolase activity
KUNIAK L 07.04.77-CS-002325
A11 (30.11.78) C08l-01/08 C08l-03/04 C08l-05 C12k-01/10

KUNI/ ★ D16 B/09 ★CS 7702-536
Chromogenic starch prepn. - for serial quantitative determination of alpha amylase in biological material
KUNIAK L 18.04.77-CS-002536
A11 R16 (30.11.78) C08l-03/04 C12k-01/10 G01n-21/02

MAZA/ ★ D16 B/09 ★CS 7702-683
Dry bacteriophage prepn.
MAZACEK M 00.00.77-CS-002683
(30.11.78) C12k-03

EROC/ ★ D16 B/09 ★CS 7704-290
Inosine prepn.
EROCHINA L I 29.06.76-SU-378374
B02 (30.11.78) C12d-13/06

BOHU/ ★ D16 B/09 ★CS 7707-635
Yeast evaluation by fermentation power measurement
BOHUNICKY K 21.11.77-CS-007635
(D11) (30.11.78) A21d-02/40

PEND/ ★ D16 B/09 ★CS 7800-063
Normal sodium citrate prepn.
PENDL J 03.01.78-CS-000063
E12 (30.11.78) C07c-59/16 C12d-01/04

INRG D16 34077S/20 =DS 2051-189
Apparatus for measuring bacterial culture - optical density
INST NAT RECH AGRON 06.11.69-FR-038124
*J04 R16 (22.02.79) *NL7016-218 +C12k-01/10*

An aggregate for measuring the optical density of a microbial culture by the taking of samples, ensures complete asepsis, accuracy of measurement, an increased number of measurements per unit of time, without the continuous presence of highly skilled personnel.

It comprises a measuring chamber formed by a cylinder in the mechanical sense, which is cleaned by means of a piston. Cylinder and piston form a pump operated pneumatically for the taking of samples and the seal between piston and cylinder consists of a ring packing which, at the same time serves to clean the inner wall of the measuring cylinder. 19.10.70 as 051189 (7pp1045).

SEEG- D16 49195T/31 =DS 2101-848
Malting plant - with rotating germinating and/or kiln floor
SEEGER C MASCHFAB (SEE -) 15.01.71-DT-101848
*(22.02.79) *DT2101-848 C12c-01/08*

A plant for the production of malt consisting of a closed, circular, germinating or kiln box, has a simpler means of loading and unloading and is much more easily cleaned. The box has a movable rotary floor with fixed loading and treating equipment. The side walls have feeding and unloading openings for the goods, of which, at least the unloading openings are level with the floor.

In the zone of the feeding and unloading openings a conveyor worm, which can be adjusted vertically, extends across the full width of the floor. This worm is carried by the radially extending arm of the turning machine, the spirals of which cover the box floor above which they are arranged vertically. 15.1.71 as 101868 (5pp1045).

BEHW D16 44652W/27 =DS 2364-317
Choleragen-prodn. from culture filtrate solns. - by adsorption of silica pref. prepd. from silicon tetrachloride and elution
BEHRINGWERKE AG 22.12.73-DT-364317
*B04 (22.02.79) *DT2364-317 C12k-05*

Isolation of choleragen from its aq. solns. comprises stirring with silica aerogel (amorphous sphericules obtd. by hydrolysis of $SiCl_4$ in an oxyhydrogen flame; av. diam. 5 -50 mμ). The gel is sepd. and eluted with aq. salt or buffer soln. and the eluate is purified using ion exchange resin and/or molecular sieves. The starting material comprises a culture medium in which Vibrio cholerae has been propagated, followed by removal of bacterial cells. The filtrate is then treated with phenol (0.2-0.9%) or 2-ethoxy-6, 9-diaminoacridine lactate (0.05-0.3%) to kill cholera vibriones.

The prods. are used for immunisation against cholera. 22.12.73 as 364317 (5pp047).

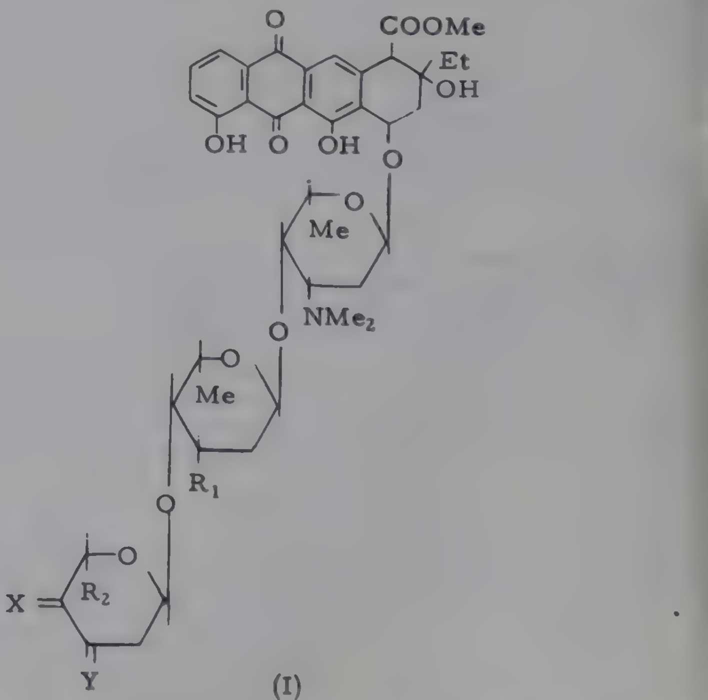
NEST D16 77091W/47 =DS 2522-478
Microbial protein prodn - using mineral oils as substrate culture medium being force-circulated via fermentation vessel and external cooler
SOC PROD NESTLE SA 28.05.74-CH-007249
*(22.02.79) *BE-828-763 C12b-01/08*

A technique for the aerobic cultivation of a micro-organism in a fluid nutrient containing $\geqslant$1 source of carbon which can be assimilated by the micro-organism, ensures a high rate of production by achieving a high take-up speed of oxygen together with a corresponding giving-up of carbon dioxide.

The broth consisting of the fluid nutrient and a mass of cells of the micro-organism is moved between a lower and a higher level under the action of rising bubbles of (a gas contg.) oxygen, in a circuit, and is cooled outside the fermentation zone. The action of the gas bubbles is reinforced in the vertical and horizontal directions by mechanical means in the form of conveyors and agitators, whilst, at the top end of the fermentation zone, beneath the higher level, a counter-pressure is applied. 21.5.75 as 522478 (6pp1045).

ZAID D16 85012W/52 =DS 2532-568
Antitumour antibiotic aclacinomycin-A and -B - prepd by submerged aerobic culture of Streptomyces galilaeus ATCC 31133
ZH BISEIBUTSU KAGAKU KEN 27.07.74-JA-086390
*B03 (22.02.79) *BE-831-726 C07h-15/24 C12d-09/16*

Aclacinomycin A and B of formula (I) are new anthracyclin



(I)

glycoside antibiotics. In I, R_1 is OH, R_2 is Me, X is O and Y is H,H; or R_1 is H, R_2 is H, X is H, Me and Y is O.

Prepn. of cpds. I comprises sepn. of the antibiotics from culture media in which Streptomyces galilaeus, ATCC31133, (or its mutants) has been propagated under aerobic submersed conditions in the presence of the usual nutrients, at pH 5-8 and temps. 20-35°; opt. followed by formation of nontoxic salts.

The prods. are anti-tumour agents with little cardiac toxicity. 21.7.75 as 432568 (19pp047).

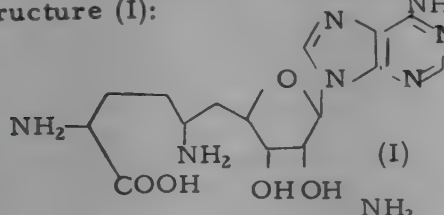
SORG/ ★ D16 16143B/09 ★DT 2736-180
Protein-rich nutrient material prepn. from cellulose material - by hydrolysis and lactic acid fermentation of hydrolysate
SORG E 11.08.77-DT-736180
C03 (D13) (22.02.79) C12d-13/06

Protein-rich prods. are prepd. by (i) hydrolysing finely-divided high cellulose-contg. materials and then (ii) subjecting the hydrolysate to a lactic acid fermentation, pref. using mainly L(+)-lactic acid-generating bacteria cultures.

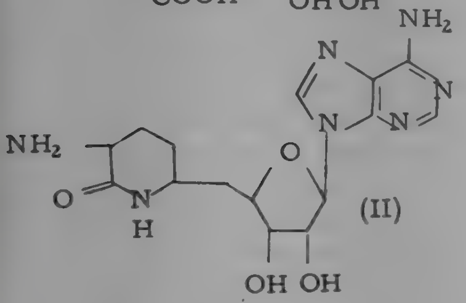
The prods. have a pleasant taste and can be used directly for human or animal nutrition, or as good- or feed additives. The protein prepn. process may also be applied to the conversion of damaged raw materials, e.g. infected by pathologic bacteria, which are destroyed by combination of cellulose hydrolysis and lactic acid fermentation. 11.8.77. as 736180 (12pp200)

RHON ★ D16 16148B/09 ★DT 2736-238
Antifungal di:amino-carboxy-alkyl purine deriv. - and its lactam, prepd. from Streptomyces incarnatus DS 26068 (NRRL 8089) or its mutants by aerobic cultivation
RHONE-POULENC INDUSTRIES 11.08.77-DT-736238
B02 C02 (22.02.79) C07d-405/14 C07d-475

A new diaminoacid, designated 32232RP, has probable structure (I):


(I)

It can exist in the form of an inner salt. Also new are the metal salts and acid-addn. salts of (I) and its lactam (35391 RP) of formula (II):


(II)

(I) is an amorphous white powder readily soluble in water, sparingly soluble in methanol or DMF and almost insoluble in acetone. It has m.pt. 281°C, analysis C 48.0%; H 5.8%; O 21.0% and N 25.2% and has characteristic UV, IR, 1H-NMR and ^{13}C-NMR spectra (reproduced). On silica gel t.l.c. plates developed with 60:30:10 v/v/v methanol-1,2-dichloroethane- 11N NH_3 it has Rf - 0.20.

(II) is a white microcrystalline powder soluble in water at 10 mg/cc and analyses C 49.6%; H 5.8%; O 17.6%, N 27.0% with empirical formula (mass spectroscopy) $C_{15}H_{21}N_7O_4$. Its spectra are also reproduced and in the t.l.c. system specified it has Rf = 0.70.

(I) and (II) are active in vivo and in vitro against fungi and yeasts. Their oral LD_{50} in mice is $\geqslant$1g/kg and they are esp. useful in human medicine for treating Candidosis (of the mouth mucosa, intestines or genitalia) or internal mycoses. The usual oral adult dose is 1-10 g/day. 11.8.77. as 736238 (50pp1251)

BIER- ★ D16 16150B/09 ★DT 2736-281
Pressurised beer tank fitting - combines charging, discharging and vent valve in one unit (NL 13.2.79)
BIERDRIVE AG 11.08.77-DT-736281
Q34 Q39 (22.02.79) B65d-87/44 B67d-01/04 C12l-11

A fitting for charging and discharging a pressurised tank contg. a carbonated beverage, e.g. beer, in a foil bag includes a charging valve, a discharging valve designed as a spring-loaded non-return valve, and an antechamber leading to a vent valve. Both the discharging valve and the charging valve are designed as integral parts of the fitting.

This simplifies the design and saves time because its operation requires no interchange of any loose parts. 11.8.77. as 736281 (15pp39)

BIER- ★ D16 16151B/09 ★DT 2736-282
Beer tank charging system - with storage tank and pump for gas other than air on road tanker (NL 13.2.79)
BIERDRIVE AG 11.08.77-DT-736282
A92 Q34 Q39 (22.02.79) B65d-87/44 B67d-05 C12l-11

A system of charging tanks from road tankers with a pressurised carbonated beverage such as beer uses instead of compressed air a supply of carbon dioxide and a gas pump on the tanker to charge a foil bag before the tank is filled with beer. Gas displaced by the filling operation is received back. This prevents any possible deterioration of the beer quality by diffusion of air through the foil bag into the beer.

Suitably each of the tanks in the cellar of an inn has a pressurised gas space which is sepd. from the space taken up by the foil bag with beer, by a foil partition. This foil is large enough to enable the enclosed gas space to be varied from zero to the entire internal volume of the tank. This foil can also be designed as a separate gas foil bag. A pref. material for it is a thermoplastic material such as polyethylene. N_2 or a rare gas could also be used instead of CO_2. 11.8.77. as 736282 (18pp39)

BIER- ★ D16 16152B/09 ★DT 2736-283
Spherical storage tank mount - with tubular ring below equator restrained by abutments and suspended from pivoted hooks
BIERDRIVE AG 11.08.77-DT-736283
+Q39 (22.02.79) B67c-09 B67d-01 C02d-01 C12l-11

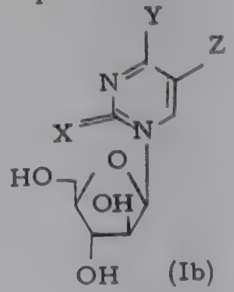
A turn-over mount for a spherical tank for the storage of a carbonated beverage, e.g. beer, consists of a tubular ring of a smaller inner dia. than the equatorial dia. of the spherical tank. The ring is suspended on hooks with pivots in the equatorial plane from a stand. Abutments on the tank which leave a little clearance prevent it from dropping out in the 180° inverted position.

This permits the tank to expand depending on the degree of filling of its foil bag and on the pressure of the gas in the rest of the tank. 11.8.77. as 736283 (8pp39)

AJIN ★ D16 16275B/09 ★DT 2835-151
Purine arabinoside(s) enzymatic prodn. - by reacting arabinose donor with purine source in presence of bacterial enzyme, useful as agrochemicals and therapeutic agents (NL 13.2.79)
AJINOMOTO KK 11.01.78-JA-001802 (10.08.77-JA-095766)
B02 C02 (22.02.79) C07h-19/16 C12d-13/10

In the prodn. of purine arabinosides, an arabinose donor and a purine source are reacted in an aq. medium at 40-70°C in the presence of an effective amt. of a bacterially-produced enzyme capable of transferring arabinose from the arabinose donor to the unsubstd. or 2,6 and/or 8-substd. purine of the purine source until the β-D-arabinofuranosyl residue is bound to the 9-position of the unsubstd. or 2-, 6- and /or 8-substd. purine, and the resulting unsubstd. or 2-, 6-and/or 8-substd. 9-(β-D-arabinofuranosyl)-purine is recovered.

The arabinose donor is D-arabinofuranose 1-phosphate (Ia) or a cpd. of formula (Ib) or its phosphate.


(Ib)

(where X is O, S or NH; Y is OH, NH_2, SH or SR (R=lower alkyl); and Z is H halogen, NO_2, CH_3 or CH_2OH). The purine source is an unsubstd. or 2,6- and/or 8-substd. purine or its ribofuranoside, ribofuranotide, deoxyribofuranoside or deoxyribifuranotide. 9-(β-D-Arabinofuranosyl)-2-chlorohypoxanthine and 9-(β-D-arabinofuranosyl-2-methylhypoxanthine are new and claimed.

Purine arabinosides are useful as agricultural chemicals and therapeutic agents. Adenine arabinoside has been used in the treatment of various herpes infections. 10.8.78. as 835151 (+28.12.77-JA-158738) (39pp280)

STRK ★ D16 16328B/09 ★FR 2392-114
Treating wine making residues to recover alcohol and calcium tartrate - avoiding polluting effluent and with better yields
STORK FRIESLAND BV 15.10.76-IT-028372
(26.01.79) A23k-01/06 C05f-05 C07c-59/14 C12f-03

The wire dregs are treated by putting them into pellet form eliminating alcohol and recovering the alcohol from the liquor extracted, roasting the residue and grinding it, continuously forming a suspension of the residue in hot water or aq. mineral acid solns. and then recovering calcium tartrate from the suspension.

The putting pellet form enables direct removal of the alcohol without dilution. The roasting step results in a coagulation of the yeasts, colloidal substances and colourants making them insoluble thereby avoiding pollution by having a reject liquor with a high B.O.D. Also the yield of calcium tartrate is higher than previous processes (96% as against 70-75%). 14. 10. 77 as 031071 (9pp597)

EGRE/ ★ D16 16329B/09 ★FR 2392-115
Winemaking maceration process of the carbonic type - separates pendicles from whole grapes by hydrodynamic shock wave from positive rotary pump
EGRETIER M 26.05.77-FR-017294
(26.01.79) C12g-01

The system is a carbonic maceration system in which uncrushed grapes are deposited in vessels precharged with carbon dioxide. The pendicles are detached and sepd. from the berries from which a fraction of the must is obtained while they are suspended in and surrounded by a mass of incompressible liq. which projects the berries.

Pendicle detachment is effected by periodic, hydrodynamic shock waves to which the grapes are subjected by a pump delivering them to a fermenting vessel. The must is pref. satd. with CO_2 gas by injection into the pump discharge pipe immediately downstream of the pump. The installation pref. combines in series a reception hopper for harvested grapes, a screw feeder of which the screw pitch increases in direction of dischage, ensuring that grapes are conveyed without crushing, and a positive, rotary pump delivering to an outlet well above the level of the pump.

Used for carbonic maceration of grapes for partial release of must without crushing the grapes. Danger of uncontrolled, irregular fermentation, which can follow crushing of grapes at the bottom of a heavy layer, leading to lactic contamination, is now eliminated. Colour intensity is greatly increased and prod. taste improved. 26. 5. 77 as 017294 (9pp448)

DSIL/ ★ D16 16330B/09 ★FR 2392-117
Continuous crystalliser to extract crystals from wine by cooling - has pipe connections creating flow conditions for rapid crystal settlement
RIBEIRO DA SILVA A 28.06.76-FR-019635
(26.01.79) B01d-09/02 C12h-01/06

The crystalliser takes the form of a temp. controlled vessel with inlet and outlet pipes for wine which are disposed so that the liq. passes through the vessel with a rising, turbulent, circulatory motion. Entrained microcrystals start to rise through already-formed, descending crystals. The crystals agglomerate with the microcrystals which they meet and the enlarging crystals settle towards the bottom of the vessel to be removed via a purge valve.

The vessel is pref. a vertical, cylindrical shell with acutely coned base section and a less acutely coned upper section. The wine inlet pipe pref. delivers tangentially at the lower end of the cylindrical section of the vessel. The outlet pipe pref. extracts from the top of the coned upper section.

The crystalliser is designed for continuous, flowline operation. The flow arrangement produces very rapid deposition of crystals and ensures sepn. of microcrystals. 28. 6. 76 as 019635 (5pp448)

KURE D16 06341A/04 =GB 1538-399
Prodn. of polysaccharide with antitumour activity - by extracting a culture of Coriolus fungus
KUREHA KAGAKU KOGYO 22.07.76-JA-087503
*B04 (17.01.79) *BE-856-805 C12d-13/04*

A polysaccharide is prepd. by submerged culture of a Basidiomycetes fungus of the Coriolus genus in aq. liq. media. The obtd. culture is dried at 60-150°C and extd. with aq. solvent (i.e. water or aq. soln. contg. alkali, salt, polar organic solvent or the like) and the extract soln. is refined by removing substances of mol. wt. < 5000.

Pref. the extn. is carried out in multiple stages and the refining of the extract soln. is by ultrafiltration or reverse osmosis. An N-contg. polysaccharide showing antitumour activity and also useful for improving the liver function, promoting the appetite, remedying intestinal disorders, promoting urination and treating leprosy is obtd. 14.7.77 as 029714 (5pp945)

SEAR D16 61881X/33 =GB 1541-435
Cytotoxic immunoglobulin preparations - in which specific immunoglobulin is covalently bound to polymeric carrier also carrying cytotoxic agent
SEARLE G D & CO 04.02.75-GB-004696
*A96 B04 (28.02.79) *DT2603-120 C07g-07 C08g-69/48*

Cytotoxic agent comprises an immunoglobulin specific for antigens on the surface of cells to be killed having 1-10 polymer carrier molecules covalently bound thereto, the polymer carrier having 5-500 molecules of a cytotoxic drug covalently bound thereto and the polymer carrier having a mol. wt. of 5000-500000 and free carboxyl, amino or cyclaimidocarbonate gps. for covalent bonding, the cytotoxic drug also having amino or carboxyl gps. available for covalent bonding.

Pref. cytotoxic drugs used include p- [N, N-bis(Z-chloroethyl)]phenylene diamine and p-[bis(2-chloroethyl)amino] -L-phenylalamine. The agent is pref. administered intravenously and has low toxicity. 2.2.76 (27pp984)

SEAR D16 61881X/33 =GB 1541-436
Cytotoxic immunoglobulin preparations - in which specific immunoglobulin is covalently bound to polymeric carrier also carrying cytotoxic agent
SEARLE G D & CO 04.02.75-GB-004696 (00.00.76-GB-050070)
*A96 B04 (28.02.79) *DT2603-120 C07c-103/50 C07c-125/06 C07g-07 C08g-69/48*

Cpd. useful as cytotoxic agent or intermediate in the prepd. of the parent patent cytotoxic agent, comprises a polymer carrier, suitable for binding to ammunoglobulin, having a mol. wt. of 5000-500000 add 5-500 molecules of cytotoxic drug covalently bound thereto.

The cpd. has formula $A\{B\text{-}CD)_m$ where A is polymer carrier e.g. dextran activated with cyanogen bromide to form cycloimidocarbonate and functionalised with $-NH(CH_2)_xCO_2H$, $-NH-(CH_2)_x-NH_2$ where x is 3-8; aminoethylated dextran; polyglutamic acid or fibrinogen; CD is covalently bound cytotoxic drug e.g. N- {p- { [2, 4-diamino-6-pteridinyl methyl] methylamino} - benzyl} -L- glutamic acid, p- [N, N-bis(2-chloroethyl)] phenylenediamine or cytosine arabinoside. B is a peptide linkage between a free carboxyl gp. of the polymer carrier and the free amino gp. of CD, or between a free amino gp of the polymer carrier and the free carboxyl gp. of CD or the covalent linkage between a cycloimidocarbonate gp. of the polymer carrier, when the polymer is activated dextran, and the free amino gp. of the CD; and m is 5-500. 2.2.76 Div. ex 1541435 (14pp984)

CHEM- ★ D16 16413B/09 ★GB 2002-814
Cultivating animal cells as monocellular layer - on cage of tubes rotating in drum of nutrient medium, the tubes pref. contg. additional polycarbonate or glass supports
CHEMAP AG 16.08.77-CH-010058
A96 (28.02.79) C12k-09

Cells of animal tissues are cultivated as a monocellular layer in a tubular element. The tubular element is rotated about a shaft together with an array of similar tubes which extend horizontally. While the tubes are rotated they pass through a nutrient medium enclosed within a drum which surrounds these tubes.

Pref. the ends of the tubes are engaged by apertured discs which may carry O-rings to allow the tubes to be easily removed. Opt. star-like supports made of polycarbonate may be located within the tubes to increase the cultivating area.

The appts. has a large area of concave surfaces and uses a minimum quantity of nutrient medium in the drum. 9.8.78 as 032767 (7pp295)

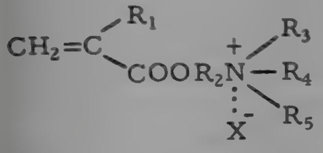
NITO ★ D16 16916B/09 ★J5 4008-788

Fixing enzymes or microbial body - with amphoteric electrolyte-type polymer

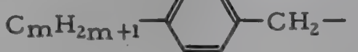
NITTO BOSEKI KK 15.06.77-JA-070718

B04 (23.01.79) C07g-07/02 C12k-01

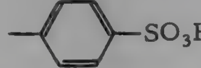
Method comprises radical copolymerising cationic monomer (I) and anionic monomer $CH_2=C(Y)(R_6)$ (II) in the presence of a crosslinking monomer having two ethylenic unsatd. bonds intramolecularly in an aq. medium contg. enzymes or microbial body.



$CH_2=C(R_1)COOR_2\overset{+}{N}(R_3)(R_4)(R_5)\ X^-$ (I)



(III)



(IV)

R_1-R_6 are H atom or methyl; R_2 is ethylene or $-CH_2CH(OH)CH_2-$; R_3, R_4 are (m)ethyl; R_5 is $-C_nH_{2n+1}$ or gp. (III); X is Cl, Br, OH, $-CH_3SO_4$, $-CH_2SO_3$ or $\frac{1}{2}SO_4$; Y is carboxyl, sulpho or gp. (IV), their alkali metal salt or their ammonium salt.

As it has the properties of an amphoteric electrolyte, the polymer has affinity for enzymes and hydrophilic properties and with crosslinking agent it can be made water-insoluble. Further by selecting the proportion of the monomers (I) and (II) the electric charge of obtd. polymer can be freely controlled to match the properties of any enzyme to be fixed. 15.6.77 as 070718. (8pp5)

AMAN ★ D16 16917B/09 ★J5 4008-790

Bacterial prepn. of beta-amylase - by culturing Bacillus polymyxa in a medium of high carbon source concn.

AMANO PHARM KK 17.06.77-JA-070989

B04 (23.01.79) C12d-13/10 C12k-03

Method comprises culturing Bacillus polymyxa in the culture medium having high carbon source concn. The culture is effected at 36-40°C from the start to the maximum multiplication of bacterial body and at 30-34°C afterwards.

Accumulation of viscous substance can be suppressed and accumulation of β-amylase can be increased. Bacillus polymyxa No. 55 FERM-P 3952, B. polymyxa ATCC 8523, etc. are used. The culture is pref. at pH 6.0-7.0 with aeration. The carbon source concn. in the culutre medium is made >6% (10-20%). 17.6.77 as 070989. (4pp5)

SHIO ★ D16 16918B/09 ★J5 4008-792

Ribostamycin prepn. - by culturing strain of Bacillus, specifically B15M-306

SHIONOGI KK 16.06.77-JA-071444

B04 (23.01.79) C12d-09/20 C12d-13

Ribostamycin is produced by culturing a ribostamycin reproducible strain of Bacillus on a culture medium and recovering ribostamycin from the culture broth.

Ribostamycin is known to be produced by Streptomyces ribosidificus, but not known to be produced by Bacillus which is a variant of butirosin producible strain.

The strain of Bacillus is a B 15M-306 strain derived from the B 15M strain on treatment with nitrosoguanidine, named Bacillus circulans B 15M-306, FERM-P 4025. 16.6.77 as 071444. (4pp52)

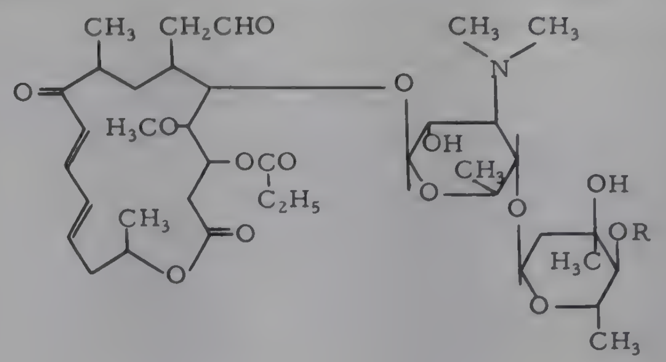
MEIJ ★ D16 16919B/09 ★J5 4008-793

Biochemical prepn. of macrolide antibiotics SF 837A-1 and SF-837A-2 - in which SF-837A-3 or SF-837A-4 is contacted with actinomycetes to reduce carbonyl to hydroxy gp.

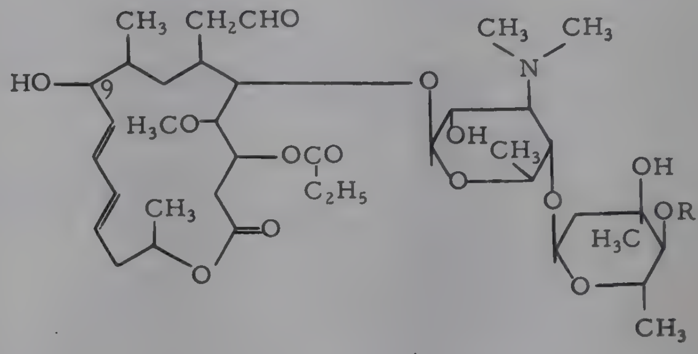
MEIJI KK 16.06.77-JA-070466

B03 (23.01.79) C12d-09/14 C12d-13

Biochemical prodn.of an antibiotic SF-837A_1 or SF-837A_2 of formula (II) (where R = COEt or COPr) comprises contacting a substance SF-837A_3 or SF-837A_4 (I) with the organism of Actinomycetes or its ground one or an enzyme isolated from it to reduce the carbonyl at the 9-posn. to hydroxy,



(I)



(II)

The actinomycetes include Streptomyces mycarofaciens SF-837 (FERM-P 262), Streptomyces lavendulae SE-330 (FERM-P 93), Streptomyces mycarofaciens SF-837 mutant MDM-6 (FERM-P 4065). The reaction is conducted at pH 4.0-7.0. The enzyme contacts with (I) in the presence of a reduced type pyridine nucleotide. 16.6.77 as 070466. (10pp52)

YAMS ★ D16 16920B/09 ★J5 4008-794

5-Adenosyl-L-methionine prepn. - by contacting methionine and ATP with a dry microorganism such as Candida or Saccharomyces

YAMASA SHOYU KK 17.06.77-JA-071128

B02 (23.01.79) C12d-13

Prodn. of S-adenosyl-L-methionine comprises contacting methionine and adenosine triphosphate (ATP) with a dry organism of microorganism which produces S-adenosyl-L-methionine from L-methionine and ATP in an aq. soln. Such microorganisms include Candida, Mycotorula, Saccharomyces, Torula,. Pichia, Debaryomyces, Rhodotorula, Torulopsis, Hansenula, Kloechera.

The organism is dried by acetone dehydration, lyophilisation or air drying. The content of methionine in the reaction medium is kept at >0.1(4-8)mM. The ATP content is kept at >0.1(5-10)mM.

S.Adenosyl-L-methionine is useful as chemotherapeutic agent effective to metabolic disturbance such as hypercholesterolaemia, arteriosclerosis, depression, neuropathic pain of degenerative arthopathia, agrypnia, etc. 17.6.77 as 071128. (9pp52)

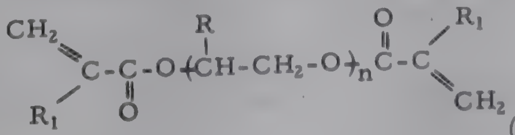
ASAH ★ D16 16988B/09 ★J5 4009-184

Adsorbent for removing organics in protein - obtd. by copolymerisation of a bridging polymerisable monomer and a cyano-contg. monomer

ASAHI CHEMICAL IND KK 24.06.77-JA-074517

A97 (A12 A14 A25 D13) (23.01.79) A23j-01 B01d-15 C07g-07 C07g-11

An adsorbent for removing organics adsorbed in protein comprises a porous copolymer having an average borehole dia. of 40-9000 Å which is obtd. from the copolymerisation of a mixt. of 2-99wt.% of a bridging polymerisable monomer, e.g., divinylbenzene, having the formula (I)



$CH_2=C(R_1)-\overset{O}{\overset{\|}{C}}-O(CH(R)-CH_2-O)_n\overset{O}{\overset{\|}{C}}-C(R_1)=CH_2$ (I)

(where R_1 and R_2 are H or Me gp., and n is 1-30), and 1-98wt.% of a cyano-contg. monomer, e.g., acrylonitrile of formula $CH_2=C(CN)(R)$ (where R is H, alkyl, etc.), and the organics adsorbed in protein can be removed by simply mixing the adsorbent with an aq. soln. contg. the organics-adsorbed protein.

Method is applicable to the purificn. of all culture liqs.

in the fermentation industry and also to other animal blood refining. 24.6.77 as 074517. (9pp117)

KITA ★ D16 17004B/09 ★J5 4009-201
Enzyme inhibitor KM-2753, for inhibiting human blood elastase - prepd. by aerobic culture of streptomyces noboritoensis KM-2753 in medium contg. aliphatic carboxylic acid
KITASATO RES INST 21.06.77-JA-073665
B04 (24.01.79) C07g-07/02 C07g-17 C12d-13

An enzyme inhibitor, KM-2753 which inhibits human blood elastase has the following characteristics: (1) consists of C, H and O; (2) is oily at ambient temp.; (3) shows a specific rotation: $[\alpha]^{18}_{D}$ = -0.9° (c = 1, ethanol); and gives specific UV and IR spectra.

The enzyme inhibitor is prepd. by culturing Streptomyces noboritoensis KM-2753 in a nutrient medium contg. 5-20 µg/ml. of a higher satd. aliphatic carboxylic acid at 25-30°C for 50-120 hrs. under aerobic conditions. 21.6.77 as 073665. (11pp16)

MURA/ ★ D16 17114B/09 ★J5 4010-156
Basidiomycetes fruit mass prepn. - by addn. of acidic protease inhibiting agent to culture medium or young fruit mass
MURAO S 18.06.77-JA-072693
P13 (25.01.79) A01g-01/04 C07g-07/02 C12d-13 C12k-01

Basidiomycetes includes, e.g., Cortinellus, Pleurotus, Collybia, Armillaria, mushroom, Auricularia. Cultivation is in a conventional manner and the culture medium contains a carbon source, nitrogen source, inorganic salts and minor nutritive elements necessary for the growth of fungi. After inoculation, cultivation is carried out at 20-25°C in order to propagate the fruit mass, and then the temp. is adjusted to 10-15°C which is suitable for the generation of the fruit body rudiment.

The acidic protease inhibiting agent pref. has the formula R-Val-Val-AHMHA-Ala-AHMHA-COOH (where AHMHA is 4-amino-3-hydroxy-6-methyl-heptanoic acid; R is carbonyl). The agent is prepd. by cultivation of a microorganism belonging to the Streptomyces class. The agent can be used in the form of salt or ester, and it used in an amt. of 2-20 µg per g. of the medium.

The acidic protease-inhibiting agent greatly promotes the growth of Basidiomycetes fruit mass, and as a result the cultivation period is shortened. 18.6.77 as 072693. (4pp108)

HOKK- ★ D16 17117B/09 ★J5 4010-171
Prepn. of compost for use as soil conditioner or fertiliser - by adding concentrate of waste water from sugar beet mfr. to bark of needle-leafed tree and adding bark-decomposing microorganism
HOKKAIDO TOGYO KK 27.06.77-JA-075575
C04 (25.01.79) C05f-05 C05f-09/04 C05f-11

Prepn. of compost comprises (1) adding a conc. of waste water exhausted from sugar beet mfr. to the bark of needle-leaved tree; and (2) adding a bark-decomposing microorganism.

Addn. of the concentrate promotes fermentation. The bark is readily humidified and a matured compost obtd.

In an example, 500 kg. of waste water conc., 2000 kg. of raw excrements of hen and 5 kg. of the decomposing microorganism ZS 42 are added to 10,000 kg. of pulverised bark, and water is added to a water content of ~50%. The mixt. is piled. After 3 days, the temp. becomes 65°C. After one week, the mixt. is stirred and water is supplied. After stirring, the temp. becomes > 70°C. After two weeks, the mixt. is stirred and 100 kg. of the waste water concentrate is added after dilution. After two weeks the mixt. is stirred and water is supplied. The mixt. is then matured for 2 months at 57-60°C. 27.6.77 as 075575. (7pp108)

TORA D16 43068U/31 =J7 9002-024
Sewage treatment plant - by photochemical /photobiochemical processes
TORAY INDS INC 07.01.72-JA-004329
*(01.02.79) *DT2300-273 B01j-01/10 C02c-05/04*

Esp. for tertiary treatment of part purified sewage following e.g. activated sludge treatment, the liquid is fed into the first of a series of reaction chambers each of which has a vertical u.v. light source extending from top to base, the whole radiation section being below water level. The chambers are connected in series, the outlet from the last passinginto the main purified effluent collection tank. Each chamber has dispensers for oxidising agents and a gas feec at the base of the UV source which moves or stirs the liqui over the surface of the source. 7.1.72 as 004329 C02c-5/04; B01j-1/10 (1.2.79) TORAY INDS. INC. (3pp) (J4 8073375)

SEAL- D16 61340W/37 =J7 9002-248
Concentrated vitamin compsn. contg. yeast - for treatment of alcoholic intoxication
SEALEYS PROD CO INS 11.12.73-JA-137426
*B05 (05.02.79) *J50089-526 +A61k-09/20 A61k-31/51 A61k-35/72*

Process for producing a highly concn. vitamin compsns. contg. stable yeast, in which an edible yeast is mixed with vitamin, thiamine, nicotinic acid(niacin) and riboflavin to obtain a yeast cream contg. the above additives in an amt. of ≥10 wt. % and the yeast cream is dehydrated to a moisture content of ≤8 wt. %. The vitamin compsn. is used for treating intoxication caused by alcoholic drinks. 11.12.73 as 137426 A61k-9/20; 35/72; 31/51 (5.2.79) SEALEYS PROD. CO. INC. (7pp) (J5 0089526)

YAMS D16 67711X/36 =J7 9002-265
Odour removal from and utilisation of waste sludge - by addn. of soya residues and bacterial treatment to give fertiliser and feed
YAMASA SHOYU KK 00.00.75-JA-067472 (25.07.73-JA-083059)
*C03 (C04 D13) (05.02.79) *J51083-071 C05f-05 C05f-07 C12k-01 +A23k-01 C12b-01*

Waste industrial sludge is utilised by mixng 20-80% (parti 40-60%) of an active sludge with soy residue, cultivating linear type bacteria on the resulting mixt., thus removing noxious odours from the mixt. Polymer components (protein, nucleic acid, etc) contained in the residue and the sludge are decomposed by the bacteria to produce a fertiliser and a feed.

The waste can possibly be used in further ways after sepn. of such substances as the process removes troublesome smells etc. 25.7.73 as 67472/75 Div ex 83059/73 C12b-1/00; A23k-1/00; C05f-5/00; 7/00; C12k-1/00 (5.2.79) YAMASA SHOYU KK (3pp) (J5 1083071)

KANF D16 24211W/15 =J7 9002-266
Increasing growth rate of yeast culture - by addn. of carnitine, its precursors or derivs to medium
KANEGAFUCHI CHEM KK (KANE) 14.11.73-JA-128724
*(05.02.79) *BE-822-067 +C12c-11/08*

Micro-organism belonging to one of the genera Saccharomyces, Pichia, Saccharamycopsis, Rhodotorula, Candida Torulopsis or Trichlosporon is cultivated under aerobic conditions in a nutrient medium which can be assimilated by the micro-organism and contains carnitine, one of its precursors or derivs.

Suitable micro-organisms are Saccharomyces cerevisiae or rouxii, Pichia farinosa or membranaefaciens; Sacc haromycopsis lipolytica; Rhodotorula rubra; Candida nove lus, tripicalis, lipolytica, arborea, guillemondii or rugos etc. The nutrient medium pref. contains a C source e.g. sugars, oils, fats, alcohols, org. acids or hydrocarbons. Suitable precursors of carnitine are crotono- and butyrobetaine and suitable derivs. are acetyl- propionyl-, butyryl-, palmitoyl- and stearoyl- carnitine.

The speed of cell growth is increased, thus shortening the process time, increasing the yield and avoiding the danger of contamination. 14.11.73 as 128724 C12c-11/08 (5.2.78) KANEGAFUCHI CHEM. IND. LTD. (4pp)(J5 00762

AJIN D16 58408Y/33 =J7 9002-26
Preparing raw material for fermentation of lysine or glutamic acid by hydrolysing sucrose in molasses to glucose and fructose anc sepg. fructose by addn. of lime
AJINOMOTO KK 23.12.75-JA-154337
*B05 E16 (05.02.79) *J52079-077 C12b-03/04 C12d-13/06*

Fructose, which has greater sweetness and gives lower fermentation yield, is removed for other use and glucose which has lower sweetness and gives a higher fermentatio yield, is used for the fermentation of lysine or glutamic acid.

Quick lime or slaked lime can be used for sepn. of fru

-tose. 30-95% e.g. (50-79%) of fructose in the hydrolysed molasses should be sepd., because refining of separated fructose becomes more difficult as the ratio of fructose to be separated is increased. After the separation of fructose, Ca in molasses should be removed. This Ca removal can be carried out economically by saturation of carbonate ion. 23.12.75 as 154337 C12b-3/04;C12d-13/06 (5.2.79) AJINOMOTO KK (5pp42) (J5 2079077)

AGEN D16 62653X/33 =J7 9002-268
Selective inactivation and removal of protease - by gamma-ray irradiation of the medium
AGENCY OF IND SCI TECH 25.00.75-JA-000764
*B04 (05.02.79) *J51076-481 C07g-07/02*

Protease contained in enzyme prods. is inactivated by irradiation with γ-rays without affecting other enzymes present. Examples of enzymes are sugar-decomposing enzymes e.g. α-amylase, β-amylase, glucamylase, lactase, etc., oxidn. - redn. enzymes e.g. catalase, glucoseoxidase, etc., lipid-decompsn. enzymes e.g. lipase, phospholipase, etc., isomerisation enzyme e.g. racemase, isomerase, etc. various arrangement enzymes, curd enzyme, etc.

The method is suitable for treating enzyme prods. which dislike contamination by protease. Further because the method can be applied to crude enzymes and fungus bodies as they stand the method is convenient. 25.00.75 as 000764 C07g-7/02 (5.2.79) AGENCY OF IND. SCI TECH. (4pp) (J5 1076481)

JAPM D16 46195Y/26 =J7 9002-269
Pyrophosphatase-phosphodiesterase prepn. - by culturing extract of plant tissue, e.g. tobacco leaf, seeds or roots
JAPAN MONOPOLY CORP 13.11.75-JA-135692
*B04 (05.02.79) *J52061-286 C07g-07/02*

Tissue pieces e.g. leaf seed or root of higher plants (e.g. tobacco, rose or carrot) are immersed in deionised water 95% ethanol, for several seconds and aq. 10% sodium hypochlorite soln. in order and then well washed with sterilised water. Then they are immersed in with sterilised water. Then they are immersed in Rinzmeyer's medium and cultured. After 10-20 days' culture the medium is divided and then cultured successively.

Enzyme is a single enzyme and has optimum pH at 4-7. The enzyme can be refined conventionally to simple protein, with high yield. Novel enzyme decomposes both pyrophosphoric acid bond and phosphodiester bond. It may be used in pharmaceutical or food inds. 13.11.75 as 135692 C07g-7/02 (5.2.79) JAPAN MONOPOLY CORP. (4pp5) (J5 2061286)

MITN D16 65576X/35 =J7 9002-271
L-malic acid prodn by fermentation - using Aureobasidium microorganism in medium contg. glucide, nitrogen source and organic and inorganic nutrients
MITSUBISHI GAS CHEM IND 09.01.75-JA-005116
*E17 (05.02.79) *J51079-783 C12d-01/02*

An L-malic acid producing microorganism belonging to genus Aureobasidium is cultured in a liq. culture medium contg. 1-10 wt.% pref. 5-7 wt.% of glucide, 0.1-0.5wt.% pref. 0.2-0.3 wt.%, of a nitrogen source, and inorganic and organic nutrients at 15-40°C, pref. 25-30°C for 4-5 days and the formed L-malic acid is collected from the culture medium. Aureobasidium pullulans 4156 is a suitable microorganism.

L-malic acid is directly produced from glucide by fermentation. The yield is good even when the period of culture is short. L-Malic acid can be produced economically on an industrial scale. 9.1.75 as 005116 C12d-1/02 (5.2.79) MITSUBISHI GAS CHEM. IND. (3pp)(J5 1079783)

AJIN D16 38495X/21 =J7 9002-272
L-Cysteine and/or L-cystine enzymatic prodn. - by incubating 2-aminothiazoline-4-carboxylic acid with microbial enzyme
AJINOMOTO KK 03.12.74-JA-137697
*B05 E16 (05.02.79) *DT2549-924 C12d-13/06*

In a process for the enzymatic prodn. of L-cysteine and/or L-cystine, (a) 2-amino-thiazoline-4-carboxylic acid (I) is maintained in an aq. solution at pH 5-11 with an effective microbial enzyme which is capable of converting (I) into L-cysteine and/or L-cystine and which has been formed by a microorganism capable of growth in a medium contg. (I) as nitrogen source, and (b) recovering the resulting L-cysteine and/or L-cystine from the aq. solution.

Pref. microbial sources for the enzyme include Sarcina Lutea ATCC272, Enterobacter aerogenes FERM-P 2764, and Serratia marcescens FERM-P-2765. Cysteine and/or cystine are/is produced in high yields and at low cost from readily available (I). Previously, L-cystine has been obtained from hydrolysates of proteinaceous materials such as hair, and L-cysteine has been obtained by reduction of L-cystine. 3.12.74 as 137697 C12d-13/06; (5.2.79) AJINOMOTO KK (10pp) (J5 1067790)

ASAH D16 43223A/24 =J7 9002-273
Antibiotic colistin active against Gram-negative bacteria - produced by culturing strain of Bacillus genus under aerobic conditions
ASAHI CHEMICAL IND KK 20.10.76-JA-125025
*B04 (05.02.79) *J53050-395 C12d-09/20 C12d-13/06*

Colistin (I) may be produced by culturing (I)-producing fungi strain having ethionine resistance derived from (I)-producing strain of Bacillus genus in culture medium contg. sugar source, nitrogen source, inorganic salts and biotin under aerobic condtions to yield and accumulate (I).

Bacillus polymyxa var. P-1 is strain suitable for producing (I). Example of ethionine-resistant variant of Bacillus polymxa var. E-812 (FERM-P No. 3714) was derived by treating parent strain P-1 with N-methyl-N'-nitro-nitrososo-guanidine and sepg. out as strain that grows in min. culture medium contg. 1000 μg/ml. of DL-ethionine.

(I) has growth-inhibiting effect on wide range of Gram-negative bacteria and it is polypeptide series antibiotics; is used as additives for animal feed. 20.10.76 as 125025 C12d-13/06; 9/20 (5.2.79) ASAHI CHEMICAL IND. KK (4pp) (J5 3050395)

AJIN D16 21095Y/12 =J7 9002-274
L:phenylalanine enzymic prepn. from (5)-benzyl hydantoin - using hydrolase obtd. from Flavobacterium aminogenes
AJINOMOTO KK 06.08.75-JA-095674
*B05 E14 (05.02.79) *J52018-887 C12d-13/06*

L-phenylalanine is prepd. from 5-benzylhydantoin using 5-benzylhydantoin-hydrolase produced by Flavobacterium aminogenes.

For the culture medium, carbon source is glucose, xylose, starch, molasses, organic acids (such as acetic acid, lactic acid, etc), alcohols (such as ethanol, glycerin etc.) nitrogen source is ammonium salts, nitrates, urea, gaseous ammonia, amino acids; inorganic ion is phosphate ion, magnesium ion, iron ion, etc; organic nutrients are vitamins, amino acids, yeast extract, peptone, etc. The addn. of a small amt. of 5-indolylmethylhydantoin is very effective.

Culture conditions are 20-40°C at pH 6-9 for 1-5 days; aerobic. 6.8.75 as 095674 C12d-13/06 (5.2.79) AJINOMOTO KK (4pp5) (J5 2018887)

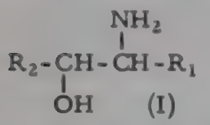
ZAID D16 47702U/34 =J7 9002-277
Streptomyces metabolite ka 10-e2 isolation
MICROBIOCHEM RES FO 24.05.71-JA-034812
*B02 (05.02.79) *J48001-186 +A61k-31/40 C07h-17/02 C12d-09/14 C12d-13*

S. tanashiensis KA 10-M1, freshly isolated from soil, produced a new metabolite (I), N-(α-L-rhamnopyranosyl-oxyhydroxyphosphinyl)-L-leucyl-L-trytophan[phosphoramidon], pos. to Ehrich reagent. Thus, the culture filtrate contg. 100mg/ml. (I) was treated with C and the C extd. with MeOH, Cryst. (I) dicyclohexylamine salt was isolated. 24.5.71 as 034812 C12d-13/00; 9/14; C07k-17/02; A61k-31/40 (5.2.79) MICROBIOCHEMICAL RESEARCH FOUNDATION (7pp) (J4 8001156)

AJIN D16 54889U/38 =J7 9002-278
Serine and serinol derivs prodn - microbiologically from aldehydes and glycine with enzymes
AJINOMOTO KK 13.04.72-JA-037296 (00.00.75-JA-102669)
*B05 E16 (05.02.79) *DT2310-471 C12d-13*

Cpds. of formula (I): (where R_1=COOH or CH_2OH and R_2=

org. residue contg. >2C), used as inters. for epinephrine and norepinephrine (aromatic derivs.) or for surfactants (higher aliphatic derivs.) are produced from aldehydes and glycine or ethanolamine in presence of a source for threoninealdolase derived from the cultivation of microorganisms e.g., E. coli et al., at pH 5-10, at 5-60°C.



$$R_2\text{-}\underset{\displaystyle OH}{\underset{|}{CH}}\text{-}\overset{\displaystyle NH_2}{\overset{|}{CH}}\text{-}R_1 \qquad (I)$$

If not carried out during the microbial fermentations itself the reaction is accelerated by the addn. of pyridoxine and surfactants (pref. non-ionic). The aldehydes can be satd. or unsatd. aliphatic, aromatic, heterocyclic or ketonic. 13.4.72 as 102669/75 Div ex 37296/72 C12d-13/00 (5.2.79) AJINOMOTO CO.INC. (5pp) (J5 1067788)

POTA= ★ D16 17402B/09 ★SU -478-058
Potato virus serodiagnosis chamber - has movable sections, matching inlet and outlet holes
POTATO IND RES 08.06.73-SU-930119
C03 (22.03.78) C12k-01/04

The chamber for field tests in the potato viruses serodiagnosis maintains constant humidity and ensures process continuity. The chamber is fitted with movable sections whose vertical walls feature a contour matching the inlet and outlet holes of the chamber.

The movable sections close the inlet and outlet of the chamber thus preventing its ventilation and loss of humidity. The slides with the drops of the reagent are placed on the movable sections inserted into the chamber and the humidity is set by a damp filter paper at the bottom of the chamber. The holding time is 20-30 min. corresponding to the incubation period, and the chamber allows 120-180 analyses per hour to be carried out.

Shmyglya, V.A. Bul. 27/25.7.75. 8.6.73. as 930119 (2pp89)

PROT= ★ D16 17413B/09 ★SU -492-118
Microorganisms pressure disintegrator - has pressure setting valve and two chambers separated by diaphragm
PROTEIN BIOSYNTH 12.01.73-SU-872033
P41 (17.04.78) B02c-19 C12k-01

The disintegrator of microorganisms for the separation of cell protein, ferments or nucleic acids features an automatic valve for maintaining a set pressure in the vessel. The metering pump feeds the microorganism suspension and compressed gas, while the disintegrator comprises two chambers separated by the diaphragm.

The working chamber has a valve closing needle carried by the diaphragm, and its housing is connected to a flange and the seat for the needle. The vessel holding the suspension under pressure features a heat exchanger ensuring continuous and intensive disintegration of microorganisms.

Rakitin, V.Yu., Fedorov, I.K., Grigoryan, A.N. et al. Bul. 14/15.4.78. 12.1.73. as 872033 (3pp89)

ROAN= ★ D16 17428B/09 ★SU -492-544
Nutrient medium for growing pathogenic microorganisms - contains yeast, agar-agar, sodium chloride, sodium phosphate, sodium sulphate and sodium carbonate
ROST ANTI-PLAGUE 27.03.74-SU-009414
(25.03.78) C12k-01/06

Medium for fast-culturing pathogenic microorganisms comprises (by g./l): 20.0-25.0 hydrocarbon yeast, 10.0-12.0g agar-agar, 3.0-5.0 g. NaCl, 1.5-2.0 Na_2HPO_4, 0.4-0.6 Na_2SO_4 and 0.2-0.6g. anhydrous Na_2CO_3. The pH is pref. 7.1-7.2.

Milyatin, V.N., Kasatkin, N.F. Bul. 43/25.11.75. 27.3.74. as 009414 (2pp314)

LEMI ★ D16 17459B/09 ★SU -527-912
Frozen microbiological specimen sampler - includes shell with movable bottom and cleaver above funnel holding heaters
LENINGRAD PLEKHANOV MINE 27.05.75-SU-137714
R16 (22.05.78) C12k-01/10 G01n-01/10

Pure sampling from frozen microbiological specimens is ensured by using a container shell with a movable bottom, and ice cleaving unit set between the latter and the shell. Beneath the bottom is a heater with a guide cylinder and a top funnel carrying heating elements, while the throat holds a tube for draining the liquid.

The frozen specimen is placed on the bottom inside the shell, and the cleaver separates the lower end of the specimen. Then the bottom with the separated part is moved to the side, and the sterilised funnel is brought to the cleavage surface of the specimen. The drain tube is connected to the sterile receiving vessel in the burner flame, the heating elements are switched on, and the inner part of the specimen is thawed out.

Kudryashov, B.B., Bobin, N.E., Abyzov, S.S. Bul. 22/25.6.78. 27.5.75. as 137714 (3pp89)

ROME= ★ D16 17560B/09 ★SU -602-183
Influenza virus diagnostic compsn. prepn. - includes incubating virus in culture of yeasts, Saccharomyces, cerevisiae and then in meat-peptone agar medium
ROST MEDICAL INST 16.07.74-SU-044803
B04 (20.03.78) A61k-39/18

The diagnostic compsn. is prepd. by incubating the influenza virus in the presence of a sensitive system; subsequently the virus-contg. liquid is sepd. This process is simplified by incubating the virus on a culture of yeasts Saccharomyces cerevisiae for 3-5 days; transplanting onto a meat-peptone agar and cultivating for 2-3 days. Virus A_{21} having a 1/80 - 1/160 haemagglutinating titre, is used.

The agar culture is washed with a physiological soln. the resulting extract contains 10^{10} microbes is 1 ml.

Avrorova, R.I., Moskalenko, E.P. Bul. 14/15.4.78. 16.7.74. as 044803 (2pp70)

LEES/ ★ D16 17796B/09 ★US 4140-489
Test tube with annular region for growth of microbial colonies - has inner region providing dark background for easy counting of the colonies
LEE S Y 07.02.77-US-766220
Q32 R16 (20.02.79) B65d-01/04 C12b-01/02 G01n-01/10

Microbial colonies are enumerated and cultivated using a test-tube-like device consisting of inner and outer concentric tube walls forming an annular space between them. The growth medium for the colonies is contained in this annular space. A dark background may be inserted in the inner tube.

A cap is used to close the annular space at one end and the inner tube is open at the opposite end. Pref. the distance between the inner and outer tube walls is narrower than the dia. of the inner tube.

The tube is used in microbiological testing. The oxygen content is decreased to provide an environment suitable for the growth of anaerobic and facultatively anaerobic microorganisms. 7.2.77 as 766220. (4pp295)

KURE D16 06341A/04 =US 4140-578
Prodn. of polysaccharide with antitumour activity - by extracting a culture of Coriolus fungus
KUREHA KAGAKU KOGYO 22.07.76-JA-087503
*B04 (20.02.79) *BE-856-805 C12d-13/04 +C08b-37*

N-Contg. polysaccharide is produced by cultivating a fungus of Coriolus genus in an aq. culture medium by submerged cultivation, drying the cultivated mycelia, extracting dried substance with water or aq. alkaline soln., and treating extract to ultrafiltration or reverse osmosis to remove cpds. of mol.wt. < 5,000.

Mycelia cultivated are dried together with the culture medium without sepn. from each other at 60-150°C to reduce the moisture content < 20wt.%. Extn. process uses dilute alkaline soln. carried out in multiple stages.

Medicaments are prepd. from such process used as anticancer medicine having other pharmacodynamic activity in high yield. 20.7.77 as 817226. (3pp931)

MONC/ ★ D16 17838B/09 ★US 4140-579
Detection of phospholipase-A and phospholipase-C - inside a stable, solid dispersion of lecithin or other phospholipid
MONCLA B J 04.04.77-US-784059
B04 J04 R16 (20.02.79) G01n-31/14

The presence of or activity of phospholipase C ((I)-C) or phospholipase A ((I)-A) is tested as follows: (a) a soln. of a purified phospholipid (II) in MeOH, EtOH, n-PrOH, or i-PrOH is added to an aq. salt-contg. basal medium; (b) a hardening agent (III) is added to the resulting dispersion which is then allowed to harden; (c) a well is cut in the hardened dispersion; (d) the sample to be tested is placed in the well and incubated; and (e) the existence and extent of substrate hydrolysis surrounding the well is observed. (II) is phosphatidyl ethanolamine, phosphatidyl serine, phosphatidyl inositol, sphingomyelin, or pref. purified lecithin.

Method gives a stable, uniform, readily stabilised dispersion of (II). The method for detecting the presence or absence of (I)-C and (I)-A is esp. useful in indicating pathogenic strains of Clostridia, Staphylococcus, or Pseudomonas ((I)-C present) or Bacillus ((I)-C absent). (I)-D gives no reaction. 4.4.77 as 784059. (6pp478)

MCDD ★ D16 17839B/09 ★US 4140-580

Broth medium for detection of yeasts and fungi - contains chloramphenicol and potassium tellurite to inhibit interfering organisms

MCDONNELL DOUGLAS CORP 10.12.76-US-749249 (03.05.76-US-682660)

B04 J04 (20.02.79) C12k-01/06

Broth medium for detection of Candida yeasts, Saccharomyces cerevisiae, Torulopsis glabrata and Aspergillus niger comprises a N source, a C source, chloramphenicol and K tellurite to inhibit growth of Gram-positive and -negative bacteria (that would normally give positive results for yeasts and fungi), and a biological pH indicator to change colour when the medium becomes more acidic from metabolic activity of the organism.

Medium is effective in testing for the yeasts and fungi in urine etc. samples, to act as indicator of the presence of infection in the urinary tract, throat, etc. 10.12.76 as 749249. (3pp1248)

CORG ★ D16 17840B/09 ★US 4140-581

Immunoassay of Neisseria bacteria - with ammonium sulphate pptn. to give enzyme concn. and greater specificity

CORNING GLASS WORKS 28.09.77-US-837363

B04 J04 (20.02.79) C12k-01/04

Neisseria spp. bacteria in a fluid sample are determined by lysing the bacteria and dividing the lysate into 2 parts. With one part an antiserum specific to the released 1,2-propanediol dehydrogenase is formed and it is contacted with the other part. Then $(NH_4)_2SO_4$ is added to ppte. the 1,2-propanediol dehydrogenase antibody complex (I), the supernatant is removed and the mixt. is assayed for 1,2-propanediol dehydrogenase (II) activity.

The pptn. step concentrates the enzyme and can remove possibly interfering substances; speed and precision of the assay are improved. Esp. useful for the specific assay of N. gonorrhoeae by a simple, quick and accurate method. 28.9.77 as 837363. (4pp1248)

SAXH/ D16 82152R/44 =US 4140-582

Support body for diffusion method for - bacteriologic analysis

SAXHOLM R (SAX /) 03.05.69-NO-001832

*(20.02.79) *NL7006-564 C12k-01/10*

A carrying body having stabilising legs used in microbiological, serological, immunological, clinical-chemical laboratory work includes a wall which is shaped to confine a substantially closed area on one side when the wall is forced to the bottom of a substrate contg. an agent to carry out biological and chemical diffusion tests.

An active substance is diffused from the body along its depth of penetration into the confined area of the substrate to produce an equilibrium concn. of the active substance in the confined area, the reactivity of the active substance and the agent being the subject to the investigation.

The body has a shaped portion of ferromagnetic material on the wall so that the application of a magnetic force urges the wall into the substrate. 8.10.76 as 731103, Div. ex 3791930, C.i.p. 3985608 (+1.5.70; 7.8.75-US-033594; 602745) (12pp1363)

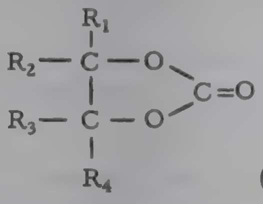
AGRO- D16 50380Y/29 =US 4140-741

Isolating poly-(beta)-hydroxy butyric acid from fermentation - by extracting with cyclic carbonate solvent

AGROFERM AG 14.01.76-CH-000403

*A23 E13 F01 (20.02.79) *BE-850-332 C08g-63/06*

Poly-(β-hydroxybutyric acid) is extracted from a moist or dry cell mass of a microorganism forming it by suspending cell mass in a liq. cyclic carbonic acid ester of formula (I), where R_1, R_2, R_3 and R_4 are the same or different H or 1-6C alkyl as solvent for prod.; heating suspension to > 100°C with stirring; sepg. cell mass from hot solvent extract; cooling extract to ppte. prod. and wet spinning.



(I)

Pref. prod. is dextro optical isomer. Prod. is wet spun through a nozzle into an aq. bath mixt. contg. ≥1 solvent of formula (I).

Prepn. is used without problems of drying prod. before extraction using solvents hazardous to health or risk of explosion. 12.1.78 as 868795, Div. ex 4101533 (+12.1.77-US-758647) (5pp931)

SANO D16 50924W/31 =US 4140-762

Extn. of immunogens hemagglutine and neuraminase - by treating influenza virus with cationic surfactants also vaccines contg. the immunogens

SANDOZ LTD 14.01.74-CH-000447

*B04 (20.02.79) *BE-824-372 A61k-39/18 C12k-07*

Influenza vaccine comprises effective amt. of mixt. of haemagglutinin and neuraminidase components of influenza virus without other components of virus, associated with inert liq. diluent.

Pref. vaccine is prepd. by treating virus in aq. medium with cationic detergent to selectively solubilise components and sepg. the solubilised components from residual subviral particles. Vaccine contains 600-3000 international units of haemagglutinin-neuraminidase per 0.5 ml. vaccine. Diluent is phosphate buffered physiological saline.

Vaccine is prepd. by less elaborate and laborious method and in better yield than other methods. Can be administered subcutaneously or intramuscularly. 23.9.77 as 836015 (+8.1.75; 18.5.76-US-539349; 687453) (3pp931)

USDA ★ D16 17914B/09 ★US 4140-763

Foot/and/mouth disease synthetic vaccine - so that accidental infection risk is avoided when vaccine administered

US SEC OF AGRICULTURE 21.04.78-US-898559 (08.09.76-US-721644)

B04 C03 (20.02.79) A61k-39/26

Immunological compsn. comprises a purified capsid protein, VP_3, of foot-and-mouth-disease virus emulsified with a suitable adjuvant.

Used for forming a foot-and-mouth synthetic vaccine that is free from intact nucleic acid, so that accidental infection due to insufficiently inactivated or modified nucleic acid is avoided. Also risk of sensitisation with revaccinations etc. is reduced.

Specifically the vaccine comprises purified capsid protein of virus type A_{12} strain 119; the protein is cleaved into 2 peptides by trypsin and it migrates as VP_3 when isolated by disc polyacrylamide gel electrophoresis in 8M-urea. A suitable adjuvant is Freund's complete adjuvant. 21.4.78 as 898559. (5pp1248)

SLIT ★ D16 17930B/09 ★US 4140-799

Fermenting brewer's wort - by water dilution after normal foam collapse during fermentation

SCHLITZ J BREWING CO 03.03.77-US-774028 (11.11.75-US-630803)

(20.02.79) C12c-11

An alcoholic drink is prepd. as follows: (a) an aq. mixt. of fermentable carbohydrates (I) (solids content 19-36° Plato) is placed in a fermentation vessel with the liq. occupying 50-85% of the original vessel vol.; (b) yeast is added, and the mixt. is fermented so that initially the head of foam generated occupies the headspace of the vessel; (c) a subsequent decrease in (I) consumption causes the foam head to collapse; (d) H_2O is added (to dilute the substrate to equiv. initial solids content < 18° Plato) after the rate of fermentation begins to decrease and when the (I) content is 30-70% by wt. of its original value; (e) the diluted wort (occupying a much greater vol. than the original vol.) is then fermented further in the same vessel under the same conditions to the desired end gravity.

By use of the H_2O dilution step (d) it is possible to use the head space of the fermentation vessel which is normally only used for the initial foam generation. Hence, productivity is increased without the use of extra equipment. In addn., the dilution reduces the osmotic pressure across yeast cells, allowing EtOH to be released from the cells and the complete conversion of (I) within the normal fermentation period. The dilution method is applicable to all foam-producing fermentations, including those for beer, malt beverages, wine, distd. spirits, or antibiotics etc. 3.3.77 as 774028. (6pp478)

See Also

D11 US 4140800
D13 J5 4010174
D12 SU 602156
D13 J5 4010175
D13 J5 4008785
D15 J7 9002409

D17: SUGAR; STARCH

SUDC D17 92715X/50 =GB 1541-407
Xylose soln. prodn. from oat husks - by treatment with alkali metal hydroxide to remove most of acetic acid before ion exchange treatment
SUD-CHEMIE AG 22.05.75-DT-522761
*E13 (28.02.79) *DT2522-761 C13k-13*

Prepn. of a xylose soln. comprises (1) treating oat husks (I) with an alkali metal hydroxide (II) such that the mole ratio (II) to acetic acid in (I) is $>$ 1:1 (esp. 1.1-1.2:1) and (2) treating the solid prod. with mineral acid.

Pref. (II) is NaOH or KOH. Pref. (1) is at atmospheric pressure and 60-100°C, and concn. of (II) is 0.6-4 (0.6-0.8) wt.%, w.r.t. solvent plus (II). Alternatively, (1) is at superatmospheric pressure (pref. $\ngtr$ 3 atmos. gauge) and at $\ngtr$ 125°C, and concn. of (II) is 0.3-1.5 (0.66) wt.%.

Solns. obtd. contain small amts. of acetic acid. The solns. can be used to produce xylitol (by redn.) or xylose. 12.3.76 as 009969 (3pp992)

NISS- ★ D17 16904B/09 ★J5 4008-736
Sugar-vitamin/C mixt. - partic. for addn. to black tea to improve taste, flavour and colour
NISSHIN SEITO KK 21.06.77-JA-073674
(D13) (23.01.79) C13f-03

Sugar is prepd. by combining vitamin C 0.01-0.13 $^{w}/w\%$ in sugar. Addn. of vitamin C in an amt. less than the nutritionally effective amt., together with sugar, to black tea, improves the taste and flavour and changes the colour a red-yellow colour. Bitterness and astringency of black tea are removed without using lemon or milk. 21.6.77 as 073674. (3pp5)

INGW D17 14351A/08 #US 4140-269
Centrifuge scraper interlock - with spring-loaded pins guided by flats and keyways for secure rest and vertical motion, esp. for centrifuge used in sugar refineries
INGENIOR N WEIBULL 12.08.76-SW-009014 (02.08.77-US-821138)
*J01 P41 +Q61 (20.02.79) *DT2730-482 B04b-11/08*

A locking device for an automatic scraper in a sugar centrifuge, comprises a shaft, carrying a scraper, which is rotatable in a bearing. The shaft has $\geqslant$2 diametrically opposed peripheral recesses forming radial shoulders and $\geqslant$2 diametrically opposed axial grooves forming axial shoulders.

At least two pins are spring-biassed towards the shaft periphery and are mounted in the bearing. When the shaft is in a first position of rotation - a rest position - each pin projects into a recess to prevent axial movement of the shaft. With the shaft in a second position of rotation - an operative position - each pin projects into a groove to prevent rotational movement of the shaft. 2.8.77 as 821138. (5pp1363)

POPP/ ★ D17 17819B/09 ★US 4140-541
Ion exchange treatment of crude sugar juice - to remove potassium, on mixed resin bed constrained by layer of beads
POPPER K 25.03.77-US-781286
(20.02.79) C13d-03/14

Treatment of crude sugar juice slurry to remove K ions and large particles (I) comprises first filtering to remove (I) then passing through an ion-exchange bed contg. cationic and anionic resins loaded with Ca^{2+} (for K exchange) and OH^- ions. Ca pptes. are thus formed in the slurry.

Method is improved by constraining the resins to remain in the ion-exchange zone while allowing the Ca pptes. to pass through without plugging. This is achieved with a bed of beads, less dense than water and of appropriate size, maintained on top of the resin bed. Esp. the resins are regenerated with Ca sulphite, $Mg(OH)_2$ or $CaCO_3$.

Used esp. for sugar beet or cone juice treatment. Classification of the resin bed is prevented. 25.3.77 as 781286. (7pp1251)

BATZ ★ D17 17984B/09 ★ZA 7705-144
Treating effluent from regeneration of sugar refining ion exchangers - by ultrafiltration at low pressure
BATEMAN E L LTD 25.08.77-ZA-005144
(09.10.78) C13d-01 C13d-03

BATZ ★ D17 17985B/09 ★ZA 7705-145
Treating rinsing liquor from sugar refining ion exchange columns - using ozone to oxidise sugar colourants into a gaseous phase
BATEMAN E L LTD 25.08.77-ZA-005145
(09.10.78) C13d-01 C13d-03

See Also

D16 BE 869869

D18: SKINS; HIDES; LEATHER; TOBACCO

MICU/ ★ D18 B/09 ★CS 7800-938
Semi-wet processing of leather
MICULKA Z 14.02.78-CS-000938
(30.11.78) C14b-01/58

BOHT D18 04373A/03 =DS 2629-537
Treating fur and leather in organic solvents - contg. anionic, cationic or nonionic emulsifiers, to improve softness and strength
BOHME DR T KG 01.07.76-DT-629537 (00.00.75-DT-532392)
*(22.02.79) *DT2629-537 C14c-09*

Hides or leather contg. 40-80% water are treated in machines such as are used for chemical purificn. and defatting of hides in a water insoluble solvent medium contg. 5-100 g/litre solvent of anionic, cationic or nonionic surfactants. The medium opt. contains 10-100 g/litre water insoluble greasing agents.

The di-and poly-alcohols or their derivs. present in the medium used in the parent patent are omitted. This omission improves the softness, flexibility and tear resistance of the finished hides or leather. 1.7.76 as 629537 Add to 2532392 (3pp068).

TSUK/ D18 78214X/42 =GB 1541-235
Improving activity of active charcoal used in cigarette filters - by adding powdered magnet material to provide magnetic and electrostatic force
TSUKAMOTO S 26.02.75-JA-024215
*P15 (28.02.79) *J51098-399 +C01b-31/08*

Magnetised active compsn., which has adsorbing, catalytic and electron-collecting properties, comprises active carbon and a magnetised ferromagnetic material. Pref. active carbon is mixed with a magnetised or non-magnetised material and opt. subjected to magnetisation. A chip filter may contain magnetised active layers of the filter, and are esp. used in cigars, cigarettes and their holders.

Compsn. can adsorb a variety of gaseous components having relatively high or low mol. wts., and are scarcely influenced by humidity. It may be added to soil to catalyse conversion of NO_x contained therein to nitrate.
24.2.76 as 007235 (11pp931)

TSUK/ D18 78214X/42 =GB 1541-236
Improving activity of active charcoal used in cigarette filters - by adding powdered magnet material to provide magnetic and electrostatic force
TSUKAMOTO S 26.02.75-JA-024215
*P15 (28.02.79) *J51098-399 +A24f-13*

Ring type smokers set is produced for removing carbon monoxide and nicotine from tobacco smoke, capable of being attached to a cigarette or cigar, comprises a member capable of applying an electrostatic field, and opt. a magnetic field to smoke.

Pref. member includes a magnet and is a means having a positive and negative terminal-connecting conductive wire circuit, and mechanism for applying electrostatic potential of an electret.

Role of active carbon is enhanced for removing smoke constitutents by such catalytic and electron-collecting capacities. 24.2.76 as 29138/78 Div.ex 1541235 (6pp931)

MIST ★ D18 16680B/09 ★J5 4007-679
Porous cellulose acetate fibre filter - for treating gas or smoke e.g. in cigarettes
MITSUBISHI ACETATE 20.06.77-JA-073084
A88 J01 P15 (A11) (20.01.79) A24b-15/02 B01d-39/16 B01d-53/02

Acetate filter is composed of porous cellulose acetate fibres. The fibres are prepd. e.g. by swelling dry spun acetate threads with a mixt. of a solvent capable of solubilising acetate and one not capable, and then treating with steam to form voids (micropores) in the fibres. The filters show a removal rate for tar and nicotine at least equal to conventional acetate fibres and a gas adsorption capacity at least equal to activated carbon or molecular sieve. Filters are useful for selectively filtering undesirable components of gas or smoke.

In an example, acetate flakes with acetylation degree 54.5% were dissolved in solvent of acetone and water (97:3) to a 25% soln., and dry spun to produce fibres of 4 d., while the atmos. 14 cm. under the nozzle was maintained at 3% of steam/air in vol. ratio. The fibres showed a void content of 22%, with void size of 0.07μ, and removal rates of 21% for HCn, 18% for NO, 25% for isoprene and 42% for nicotine. 20.6.77 as 073084. (5pp43)

LIOY ★ D18 16891B/09 ★J5 4008-701
Softening and oiling agent for leather - contg. liq. polymer obtd. by polymerising 6-18 C alpha-olefin
LION FAT & OIL KK 16.06.77-JA-071383
A17 (A97) (23.01.79) C14c-09/02

Softening agent for leather contains a liq. polymer of mol. wt. ca. 300-2000 obtd. by polymerising 6-18C α-olefin as the major ingredient.

Liq. polymer is not only more stable than natural oil and fat, but also shows less change with temp. than mineral oil. As the softening and oiling agent it is equal to conventional softening and oiling agent in giving good touch, tensile strength, tearing strength, weathering resistance, etc. to leather. Further it is free of unpleasant odours and hardly changes colour. 16.6.77 as 071383.

DAIL ★ D18 16922B/09 ★J5 4008-800
Tobacco smoke filter - prepd. by moulding mixt. of acetone-soluble cellulose di:acetate binder and refined copper fibre
DAICEL KK 17.06.77-JA-071624
A88 P15 (A11) (23.01.79) A24b-15/02 A24d-01/06

The filter is prepd. by adding a binder of acetone-soluble cellulose-diacetate to refined cotton fibre which contains $<2^{w}/_{w}\%$ of components soluble in aq. alkali soln. having alkali concn. 7.14% and has copper value <0.1, and moulding the mixt.

The filter can remove nicotine and tar without deteriorating the taste and flavour of tobacco smoke and can be prepd. at low cost.

The refined cotton fibre can be obtd. by steam-boiling linter with alkali to remove impurities and bleaching it with chlorine, hydrogen peroxide, etc. By the treatment the copper value and the content of alkali soluble components can be decreased to the stated values. 17.6.77 as 071624. (5pp5)

ANON ★ D18 17319B/09 ★RD -178-020
Appts. for continuous cigarette filter tip mfr. - uses tow of raw material which is loosened up, softened, shaped, sheathed, and feedback-control monitored for density
ANONYMOUS 20.01.79-RD-178020
*F04 (10.02.79) B01d-00/**

A continuous tow of raw material is led through two spaced air nozzles to loosen up the material and then passes through to spray device where a softening agent is introduced. Movement of the material is maintained via a series of spaced pairs of idler and driven rollers. The strip-like tow of material passes through a shaping funnel and a glued continous length of sheathing material wrapped around it by means of an accompanying endless shaping band.

The assembly then passes through a seam smoothing and drying off device before cutting into individual filter tips. A beta-ray monitor in front of the knife controls the density of the prod. to predetermined limits, via signals fed back to the loosening up, softening, and shaping sections (926)

KDFO= ★ D18 17523B/09 ★SU -599-794
Fermenting low grade tobacco - at constant elevated temp. and cooling after reaching maximum carbon di:oxide concentration in fermentation gases
KRASD FOOD IND RES 16.11.76-SU-420982
P15 (03.05.78) A24b-03/12

Low-grade tobacco is fermented by heating to 65-70°C at 3-5°/h, holding at constant temp. with an air temperature of 70-80°C, and cooling after determining the concn. of carbon dioxide in the liberated fermentation gases. This method provides a more rapid process and improves tobacco quality.
Arakelova, S.I., Kolesnikov, Yu.P. Trubnikov, V.F. Bul 12/30.3.78. 16.11.76. as 420982 (2pp1358)

BADI D18 94487X/51 =SU -602-122
Leather ironing and embossing machine - using thin hollow cylinder heated by radiation with inner backup roll against pressure roll NL021176)
BADISCHE MASCHINENF 30.05.75-DT-524018
*(14.03.78) *DT2524-018 C14b-01/54*

An ironing and embossing machine for leather etc. has a thin-walled hollow cylinder which isheated by radiation from the outside and/or the inside. The ironing or embossing pressure is exerted by a back-up roll inside the hollow cylinder which presses through it against the leather, carried by a conveyor belt around a pressure roll.

This provides a very rapid way of adjusting the temp. to the desired value because of the small inertia of the thin hollow cylinder which need not exert the ironing or embossing pressure. The machine has a simple design and the hollow cylinder can be quickly exchanged for another with plane or embossed surfaces.
Dokupil, I., Tsepfel, H., Habelmann, E. etal. Bul. 13/5.4.78. 28.5.76. as 363556 (4pp)

KAGR= ★ D18 17686B/09 ★SU -602-458

Hides salting container - has shelves with side troughs connected to brine discharge tube of collector

KAZA AGRIC ELEC MEC 26.03.76-SU-340284

Q37 (09.03.78) B65j-01/02 C14b-01

Improved working conditions when salting hides are due to the discharge of brine from shelves, ensured by a trough on the side of each cantilevered shelf. The trough is fastened between the vertical brackets of the frame with a connection to vertical tube draining the brine and which is fitted between the decks of shelves.

The container comprises fixing inserts between the ends of cantilevered shelves, and each brine discharge is inclined towards the discharge tube. The container is rolled below the salt feeder with the shelves set at an angle to the horizontal. Skins are placed on the shelves of the first deck and salt is fed for spreading on the upward flesh, and then another skin is placed in a similar position for salting.

In the next step, the shelves of the second deck are fitted in with separating inserts between the shelves followed by skin. placement and salting. The filled container is rolled out for curing with brine drained into a collector. Sentbekov, L., Nepsha, G.E., Kipshakbaev, I. et al. Bul 14/15.4.78. 26.3.76. as 340284 (3pp89)

GULW ★ D18 17736B/09 ★US 4140-135

Hydrophobic coating film for reconstituted tobacco - is of cellulose propionate and prevents tobacco from sticking to smoker's lips

GULF & WESTERN CORP 29.12.75-US-644765

A97 P15 (A11) (20.02.79) A24b-03/14

Coated reconstituted tobacco prod. is coated on $\geqslant 1$ surface with a cellulose propionate (I) hydrophobic film. (I) has acetyl content < 6wt.%; OH content $\nless 1$wt.%; and >3C acyl content < 10wt.%.

Inexpensive coating provides an appearance, taste, aroma, and feel equal to that of a natural tobacco leaf before and during burning. The treated tobacco prods. do not stick to smokers' lips, and puckering due to humidity changes is avoided. 29.12.75 as 644765. (7pp478)

BRWI D18 55997Y/32 =US 4140-136

Denicotinising tobacco biochemically - with microorganisms decomposing nicotine with formation of succinoyl-pyridine and pref. hydroxy succinol -pyridine

BROWN & WILLIAMSON CORP (BRTA) 17.11.75-US-632804 (13.04.77-US-787241)

*P15 (D16) (20.02.79) *DT2634-188 A24b-15/02*

Tobacco is treated by (a) contacting with an aq. medium contg. $\geqslant 10^7$ cells per g., based on dry wt., of a microorganism which degrates nicotine in process in which 3-succinoyl pyridine is formed, and (b) maintaining the tobacco in contact with the microorganism for 1-50(1-10) hrs. at a moisture level of $\geqslant 50(\geqslant 65)$wt.% (based on tobacco plus water total) at temp. of 20-45(27-32)°C and initial pH of 5-8(6).

Pref. the microorganism is Cellulomonas SP or Pseudomonas putida. The treated tobacco produces a mild smoke without loss of taste and flavour. 13.4.77 as 787241, Div. ex 4038993. (11pp964)

See Also

D13 DS 7800039 D13 US 4140134

D2: DISINFECTANTS; DETERGENTS

D21 : DENTAL; TOILET PREPARATIONS

SPIT/ ★ D21 16055B/09 ★CA 1048-453
Compressed gas propellant aerosol spray - for cosmetics, pharmaceuticals, detergents, etc., has controlling orifices to give the desired proportion of gas and liq.
SPITZER J G 06.01.77-US-757414 (19.07.76-US-706857)
A97 B07 G04 Q34 (13.02.79) B65d-83/14

An aerosol can comprises a body contg. an aerosol liq. and a space above the liq. contg. a propellant gas given off by a propellant liquid mixed with the aerosol liquid. A valve housing contg. a poppet biased by a spring against a sealing gasket is carried in the upper part of the body.

The poppet carries a hollow extrusion secured to a press button having a dispersing orifice and having an aperture normally located within the confines of an aperture in the sealing gasket. A capillary tube dips from the valve housing into the aerosol liq. and a gas aperture is provided in the housing.

The spring normally biases the poppet upwardly to a position in which the aperture in the extrusion lies within the sealing gasket and thus dispersing is prevented when the button is depressed the poppet is pushed downwardly against the spring and the aperture in the extension moves into the valve housing to allow dispersing of the foamed mixture within the housing. The foamed mixture is formed by the gas entering the housing through the gas aperture mixing with liq. from the capillary tube.

By specific sizing of the various apertures the amt. of gas used to form the foam, and thus the amt. of liquid to form the gas, is reduced over the prior art. 30.6.77 as 281798 (42pp525)

WACK ★ D21 16163B/09 ★DT 2736-421
Dental casts and casting spoons prepn. - using crosslinkable compsn. contg. organo polysiloxane having high mono:organosiloxane unit content
WACKER CHEMIE GMBH 12.08.77-DT-736421
A96 P32 (A26) (22.02.79) A61c-09 C08l-83/04

Casts are made by (1) crosslinking a compsn., consisting of (a) an organopolysiloxane, (I), contg.$\geqslant$2 alkenyl gps./mol., (b) an organopolysiloxane contg.$\geqslant$3 Si-bonded H atoms/mol., (c) a catalyst promoting the addn. of Si-bonded H to alkenyl gps. and (d) 30-90 wt.%, w.r.t. total wt. of compsn., of filler, in contact with surface to be copied, and (2) removing the cast obtd. from the copied surface. Novelty comprises using (I) contg.$\geqslant$ 20 mol.% monoorganosiloxane units.

The compsns. are used for (i) producing human or animal dental casts and pref. also(ii) for producing casting spoons. Precision imprints can be obtd. Hardening is quick, e.g. $<$10 min., in mouth of patient, to reach a Shore-A hardness such as to enable the cast to be removed without changes in moulded surface. 12.8.77. as 736421 (18pp200)

JANA- ★ D21 16236B/09 ★DT 2832-005
Fluorided dental floss - is impregnated with fluoride in non-toxic water soluble polyethylene glycol carrier having waxy consistency
JANAR CO INC 01.08.77-US-820759
A96 B06 P32 (A25) (22.02.79) A61c-15 D06m-11/04 D06m-15/10

Dental floss is impregnated with a fluoride in a non-toxic water-soluble carrier, pref. a polyethylene glycol having an actual mol.wt. which is sufficiently high, pref. 1450-3000, for its mixt. with fluoride to have waxy properties, comparable with those of pure polyethylene glycol having actual mol.wt. 1200-3400.

In use, the carrier dissolves and allows fluoride contact with the user's teeth in areas not reached by toothbrush. 20.7.78. as 832005 (12pp200)

LIOC D21 49133Y/28 =GB 1541-463
Complex emulsion of the type water-oil-water - esp. for cosmetic products prepd. using two emulsifiers
LION DENTIFRICE KK 06.09.76-JA-106487 (11.10.75-JA-122717)
*A96 E13 (28.02.79) *FR2326-914 A61k-07 +B01f-03/08*

Prepn. of a multiple emulsion having a dispersing form of water-phase)oil phase/water-phase comprises forming a water-in-oil emulsion having an oil phase consisting of an oil phase forming material and an oil soluble emulsifier having a predetermined hydrophile-lipophile balance, and adding the water-in-oil emulsion to an aq. soln. prepd. by dissolving into water, a water soluble emulsifier having such a hydrophile-lipophile balance that the oil phase will form the dispersed phase of an oil-in-water emulsion in an amt. such that the water soluble emulsifier will not solubilise the oil-soluble emulsifier, to emulsify the water-on-oil emulsion as the dispersed phase into the aq. soln. to form the multiple emulsion.

Prod is used as the fundamental form for various prods. requiring emulsified dispersion system such as cosmetics, drugs, foods and drinks. Emulsion has high prepn. rate is easily reproducible. 6.10.76 as 041457 (32pp982)

JONK/ ★ D21 16378B/09 ★GB 2002-637
Fluorine compsn. teeth treatment device - of thin flexible plastic U/shaped troughs fitting over teeth and joined at ends
JONKERS M K P 16.08.77-NL-009035
B07 (28.02.79)

Treatment device comprises two curved U-shaped trough members to receive upper and lower teeth respectively which are flexibly interconnected at their ends. The members are of soft flexible transparent plastic and the connec-tions are non-resilient and thin. The trough bottoms have recesses for teeth and one or both has projecting bottom external cams.

The member ends pref. have interengaging toothed projections and protruding lips at the trough apex which are superimposed when the device is in position. The device fits well and comfortably without causing retching. 15.8.78 as 033371 (5pp1358)

JASK/ ★ D21 16424B/09 ★GB 2002-833
Hair shaping compsn. for all types of hair - contg. straight chain di:aldehyde and opt. catalyst and thickening agent
JASKOWSKI M C 17.08.77-US-825226
A96 E17 P24 (28.02.79) A45d-07/06 A61k-07/11

Hair shaping compsn. contains a 2-6C straight chain dialdehyde (I), and pref. also a catalyst (II) (2 pts/100 pts (I)), a thickening agent (III), and H_2O. Pref. (I) is glyoxal, in an amt. of 0.5-10 wt.%; (II) is pref. $Al_2(SO_4)_3$ and (III) is pref. hydroxypropyl methylcellulose.

Hair to be treated is pref. cleaned, treated with a relaxer (pref. 1-15 wt.% Na_3PO_4), pref. then heated (esp. after having been covered with an elastomeric cap), rinsed, treated with the hair shaping compsn., heated, then rinsed.

Compsn. is effective in straightening or curling hair, but unlike known compsns. contg. NaOH, is safe to normal skin, and can be used in tinted, dyed or bleached hair all the way down to the roots. The compsn. is safe for use by all age gps., and may be applied by unskilled persons. 17.8.78 as 033675 (4pp478)

MSCY- ★ D21 16437B/09 ★J5 3015-467
Cyclodextrin-contg., orally refreshing material - avoids halitosis and tooth decay, and does not have a slimy feel in the mouth
MSC YG 22.07.76-JA-087548
A96 (A11) (13.02.78) A23g-03/30 A61k-07/16

The material contains a small amt. of cyclodextrin. The slimy feel in the mough caused by polysaccharide, and halitosis can be avoided, and a refreshing feel can be given to mouth. Decaying of teeth, caused by the acid which is formed by fermentation of polysaccharide, can also be avoided.

Cyclodextrin is prepd. by reacting a specific enzyme with starch or dextrin. It is safe and suppresses the formation of polysaccharide from glucose. Pref. 0.01-10, esp. 0.1-3 $^{w}/w$% cyclodextrin is combined with a basic material, such as chewing gums, dentifrice, mouth wash, etc. Other sweeteners, such as saccharin, cyclamate, etc., can be added for easy dosage. 22.7.76 as 087548. (3pp5)

KANE ★ D21 16823B/09 ★J5 4008-607

Liq. shampoo compsn. - contg. quat. ammonium salt, dried albumen, (thio urea, alkali salt of higher fatty acid and water

KANEBO KK 21.06.77-JA-074228

E19 (23.01.79) A61k-07/06 C11d-10

A liq. shampoo compsn. contains a quat. ammonium salt of formula $(A\text{-}NH\text{-}CH_2CH_2CH_2\text{-}NR^1_2\text{-}C_2H_5)^+(SO_4C_2H_5)^-$ (where A is H or RCO; R is 6-21C alkyl or alkenyl or 14-18C hydroxyalkylene; R^1 is (m)ethyl, or propyl), dried albumen, urea or thiourea, alkali salt of higher fatty acid and water.

Pref. the amt. of the ammonium salt is 0.1-2.0wt.%, amt. of dried albumen is 0.1-4.0wt.%, amt. of urea or thiourea is 0.1-4.0wt.%. Pref. alkali salt of higher fatty acid is sodium, potassium, diethanolamine, triethanolamine, etc. of (un)satd. 10-18C fatty acid, e.g. capric, lauric, myristic, palmitic, stearic, oleic, tallow-fatty, palm oil-fatty, etc., present in an amt. of 10-40wt.%. The amt. of water is 49-89wt.%.

The shampoo is not stimulating, sterilising, softens the hair, glosses the hair, makes combing easy, prevents dandruff, has favourable foaming power and high preservability. 21.6.77 as 074228. (7pp170)

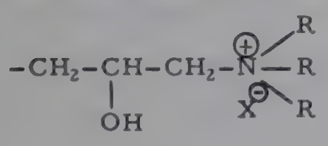
LIOY ★ D21 16882B/09 ★J5 4008-688

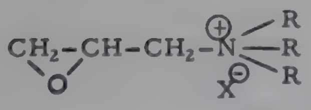
Cation-denatured polypeptide used in cosmetics - prepd. from collagen hydrolysate and glycidyl tri:alkyl-ammonium salt

LION FAT & OIL KK 21.06.77-JA-073484

A96 (23.01.79) C08h-01

In a new cation-denatured polypeptide, active hydrogen in collagen hydrolysate having mol. wt. 500-1500 is substd. for quat. nitrogen-contg. gp. of formula (I). In (I), R is (m)ethyl and X is halogen. The cation-denatured polypeptide is prepd. by reacting the collagen hydrolysate and glycidyltrialkylammonium salt of formula (II) in the presence of alkali catalyst.


(I)


(II)

The polypeptide is white powder soluble in water, insol. in anhydrous ethanol and high in adhesion to hair and skin. Touch and completion are improved when used in toilet goods and perfume compsns. 21.6.77 as 073484. (5pp78)

YOSH/ ★ D21 16896B/09 ★J5 4008-713

Dentifrice contg. carcinostatic, anti:neoplastic drugs etc. - usable as toothpaste but also drinkable when opt. diluted with water

YOSHIDA K 18.06.77-JA-072528

B04 (23.01.79) A61k-09/06

Prophylaxis of carcinogenesis on oral cavity, pharynx or larynx comprises adding carcinostatic drug including immunological antineoplastic agent, to dentifrice including tooth-paste. Prophylaxis of gullet, stomach and digestive cancer is achieved by drinking the dentifrice opt. diluted with water and opt. contg. minerals including digestive Ca and vitamins. As the carcinostatic/antineoplastic agent, any orally effective known medicine can be used.

The dentifrice acts not only as dentifrice preventing dental caries caused by germs such as S. mutans but as medicine or tonic by swallowing - not spitting out or washing out as in the conventional tooth-polishing procedure. 18.6.77 as 072528. (2pp38)

LIOY ★ D21 16900B/09 ★J5 4008-728

Cosmetic base of cation-modified protein - obtd. by reacting hydrolysed protein with glycidyl- or halo:hydroxy-propyl-tri:alky ammonium salt

LION FAT & OIL KK 21.06.77-JA-073485

(23.01.79) A61k-07

Cosmetic base comprises a cation-modified protein contg. 2.5wt.% quat. nitrogen, which is obtd. by reacting hydrolysed protein with glycidyltrialkyl-ammonium salt or with 3-halo-2-hydroxypropyltrialkyl-ammonium salt. The reaction takes place in the presence of alkali catalyst in aq. medium, and after the reaction the reaction mixt. is neutralised. Hydrophilic solvent e.g. acetone is added to the reaction mixt., and the cation-modified protein is pptd. as a white solid.

The cosmetic base is adsorbed strongly onto hair and skin and is not washed out with water. It has good water-holding properties and has an emollient effect on hair. It is easily dissolved in water or aq. ethanol soln. and gives a more transparent soln. c.f. hydrolysed protein. The cosmetic base is used in shampoos, rinses, creams, lotions, pomades, etc. 21.6.77 as 073485. (6pp5)

LIOC ★ D21 16901B/09 ★J5 4008-729

Antiperspirant, cosmetic stick prepn. - comprises a sweat-suppressant and aliphatic alcohol-ethylene oxide adduct in an oily base

LION DENTIFRICE KK 23.06.77-JA-074789

E19 (23.01.79) A61k-07/32

The antiperspirant is prepd. by combining a sweat-suppressing agent together with a satd. aliphatic alcohol-ethylene oxide adduct in a base composed of oily caking agent liq. oil and powdery material. The cosmetic has excellent form-holding property, stability, antiperspirant effect extending property and feel. It is not sticky and can be easily washed out.

Pref. oily caking agent is beeswax, whale wax, carnauba wax, candelilla wax, stearyl alcohol, cacao fat, ceresin, Japan tallow, etc., in an amt. of 10-30 $^{w}/w$% of the cosmetic; the liq. oil is paraffin, isopropylmyristate, diisopropyladipate, etc. in an amt. of 25-50 $^{w}/w$% of the cosmetic; the powdery material is starch, talc, kaolin, etc., in an amt. of 15-35 $^{w}/w$% of the cosmetic; the antiperspirant is fine powdery Al salt, such as aluminium chlorohydrol, aluminium chlorohydrol-propyleneglycol complex, etc in an amt. of 10-30 $^{w}/w$% of the cosmetic; and the satd. aliphatic alcohol-ethylene oxide adduct has a $>$14C satd. fatty acid and HLB $>$10, in an amt. of 1-5 $^{w}/w$% of the cosmetic. 23.6.77 as 074789. (6pp5)

SUNS- ★ D21 16902B/09 ★J5 4008-731

Non-stimulating hair dye - contg. di:hydroxyphenyl-pyruvic acid, acetic acid, -ethanol, -ethylene glycol and/or di:hydroxy mandelic acid, ferrous salt

SUN STAR HAMIGAKI 18.06.77-JA-072490

E14 (E31) (23.01.79) A61k-07/13

The hair dye consists of (i) $\geqslant$1 cpd. selected from (a) 3,4 dihydroxyphenylpyruvic acid, (b) 3,4-dihydroxyphenylacetic acid, (c) 3,4-dihydroxyphenylethanol, (d) 3,4-dihydroxymandelic acid and (e) 3,4-dihydroxyphenyl-ethyleneglycol and (ii) ferrous salt. Ferrous salt such as $FeSO_4$, $FeCl_2$, ferrous perchlorate, ferrous oxalate, etc. is applied in an amt. of 0.1-10 pt. wt. on 1 pt. wt. of the cpd.

The hair dye is safe and nonstimulative to skin and hai and with it white hair can be dyed black. The hair dye itself is hardly coloured on application and the dyeing can be practiced rapidly without staining. 18.6.77 as 072490 (6pp5)

SHOH- ★ D21 16947B/09 ★J5 4009-11

Nickel-chromium alloy for dental use - contg. molybdenum manganese, aluminium, silicon, copper, boron, with niobium and/or tantalum

SHOHU TOSHI SEIZO 23.06.77-JA-075109

M26 P32 (23.01.79) A61c-05 C22c-19/05

Ni-Cr series alloy partic. suitable for dental casting bed, consists of Cr 13-29%, Mo 4-12%, Mn 0.5-7%, Al 0.5-6% Si 0.1-4%, Cu 0.5-7%, B 0.01-1.3%, Nb and/or Ta 0.1-8 in total, and the balance Ni and incidental impurities.

The Ni-Cr series alloy includes no Be harmful to human body, has multiple combination of elements B, Mn, Al

Si, etc., contributing to lower melting point of the alloy so that embedding material of gypsum series substances can be used sufficiently to retain mechanical strength. 23.6.77 as 075109. (4pp53)

OHAR- ★ D21 17122B/09 ★J5 4010-210

Dental alloy ingot produced by powder metallurgy technique - having uniform quality and compsn., and pref. comprising titanium, cobalt, and chromium

OHARA KK 27.06.77-JA-076704

M22 P32 P53 (M26) (25.01.79) A61c-05/08 B22f-05 C22c-19/08

A uniform dental alloy ingot is prepd. by mixing measured amts. of each metal powder, packing the mixed metal powder in a small die (20mm. 0 x 10mm h); compressing the packed metal powders; and sintering the compressed compact at >1300°C in an inert gas stream.

A sintered dental alloy ingot exhibit has uniform compsn. at any point of the cross section and an even quality as it is free of segregation and like defects. The alloy may be composed of Ti 6-10%; Cr 25%; Cp 60% and other metal elements 9-15%. The dental alloy ingot (20-30 g.) is melted and cast in a mould of an Ar arc casting machine. 27.6.77 as 076704. (2pp135)

SNKM ★ D21 17132B/09 ★J5 4010-223

Castable nickel alloy used in dentistry - contg. chromium, copper, manganese, niobium and silicon

SANKIN KOGYO KK 24.06.77-JA-076014

M26 P32 (25.01.79) A61c-05 C22c-19/05

The alloy comprises Cr 9-25%; Cu 7-20%; Mn 15-28%; Nb 2-7%; Si 0.5-3% and the remainder Ni and incidental impurities.

For example, an alloy of Ni 41.5%; Cr 15%; Cu 15%; Mn 20%; Nb 5%; Si 1% and impurity 2.5% was fused and centrifugally cast.

The tensile strength, Vicker's hardness and elongation of the cast alloy were 44.5 kg./mm^2, 200 and 2.5%, resp. The alloy had favourable castability, small shrinkage during the solidification and less mould sticking property, and was not discoloured in oral conditions. 24.6.77 as 076014. (2pp8)

THOM/ D21 49204Y/28 =US 4140-648

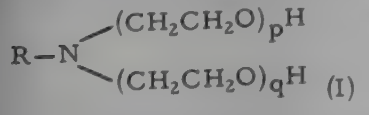
Aerosol foams esp. for shaving - stabilised with nitrogen-contg. surfactant and fatty alcohol

THOMPSON J (WILK) 27.02.75-GB-008249

*A97 E16 (A25 E13) (20.02.79) *GB1479-706 C11d-17*

Aerosol shaving foam dispenser contains an aq. soap-free surfactant conc. contg. an emulsified/readily emulsifiable gaseous aerosol propellant in liq. phase.

The conc. comprises mainly water and 1-15wt.% N-contg. surfactant and 0.5-6wt.% conc. of water-insol. 12-18C fatty alcohol, to yield HLB value of 8-18 in ratio surfactant to fatty alcohol 0.5-12:1. N-Contg. surfactants include cpds. of formula (I), where R is 12-18C straight chain alkyl and p and q are 1-30 totalling 10-30. Other specified N-contg. surfactants have amine oxide or imidazole ring gps.



$$R-N\begin{cases}(CH_2CH_2O)_pH\\(CH_2CH_2O)_qH\end{cases} \quad (I)$$

The aerosol foam emulsion has good foaming properties, is scum-free and has good scum-dispersing properties with hard water. 27.2.76 as 662282. (5pp931)

ARMO ★ D21 17872B/09 ★US 4140-656

Anhydrous clear gel face cleanser - contg. mineral oil, phosphate ester(s), and high mol. wt. carboxy vinyl polymers

ARMOUR-DIAL INC 07.10.77-US-840209

A96 (A14 A25) (20.02.79) A01n-09 C11d-07/24 C11d-17

Facial cleanser compsn. consists of an anhydrous mixt. (as clear gel) of: (a) 97-49.5 pts. by wt. of mineral oil; (b) 3-50 pts. by wt. of one or more phosphate esters $RZ-(OCH_2CH_2)_x-OP(O)(OH)-OM$ (I) or $[RZ-(OCH_2CH_2)_x-O]_2-P(O)-OM$ (II); and (c) 0.1-5 pts. by wt. of a high mol. wt. carboxy vinyl polymer (III) consisting of acrylic acid crosslinked with a polymer of a copolymerised polyalkenyl polyether. (I) and (II) have solubility in the mineral oil of ≥7% by wt., (where M is a univalent metal cation; R is 9-21C opt. branched hydrocarbyl (0-3 double bonds); Z is CH_2, CO, C_6H_4, NH, $N(R^{11})$, SO_2, CONH, or SO_2NH; x is a no. 1-10 (on average) to keep solubility requirement-depends on R).

Addn. of (I) or (II) to a mixt. of mineral oil and (III) gives an anhydrous clear gel which is minimally irritating to human tissue, has greater rinsability than mineral oil gelled by other methods, is self-emulsifying, and has cleansing efficacy equal to pure mineral oil. 7.10.77 as 840209. (5pp478)

HUBE ★ D21 17911B/09 ★US 4140-757

Silica thickeners for dentifrice compsns. - to reduce costs and improve properties by partially replacing gum thickeners

HUBER J M CORP 06.07.77-US-813323 (21.07.75-US-597621)

A96 B05 E33 (20.02.79) A61k-07/16

Dentifrice compsn. contains (all wt.%) 10-60% abrasive (I), 15-40% humectant (II), 0.4-0.9% gum thickener (III), 1-20% SiO_2 thickener (IV), and 35-50% H_2O.

(II) is pref. glycerol, but may also include other humectants such as sorbitol. (I) include silica abrasives, Ca phosphates, silica xerogels etc. Pref. amt. of (III) is > 0.5-0.8wt.%. (IV) are pref. prepd. as in US 3967563, and have prim. particle size <40 mμ, void vol. 3-6 cc.Hg./g., oil absorption 150-250 pref. >200 cc. oil/g, surface area 100-400 pref. > 250 m^2/g., and wet cake moisture 85% ('Zeo', 'Zeodent', 'Zeosyl', Zeofree', and 'Zeothix' (all RTM)). (IV) is added with (I) towards the end of the mixing procedure of the toothpaste.

Replacement of up to 50% pref. 20-50wt.% of a conventional (III) in a toothpaste compsn. by (IV) reduces costs, improves the cosmetic, lustre and brightening and deaeration properties of the paste, slightly lowers the overall abrasion characteristics, and allows the thickener to be handled easily and to remain effective under all humidity conditions. 6.7.77 as 813323. (5pp478)

COLG D21 88706X/47 =US 4140-758

Oral compsns. e.g. toothpaste, contg. dextranase - and a manganous stabiliser or activator

COLGATE PALMOLIVE CO 12.03.75-US-557855 (08.12.72-US-313304)

*E31 (20.02.79) *US3991-177 A61k-07/28 A61k-37/48*

Dental cream or gel comprises a carrier, dextranase having an activity of 20-400 units/mg. protein in an amt. of 0.001-5wt.% and a non-toxic cpd. (I) which provides 0.001% of Mg ions which stabilise and activate the dextranase. (I) is Mg chloride, sulphate or nitrate. The carrier pref. includes 20-75wt.% of a liq. vehicle and 20-75wt.% of a polishing agent.

Compsn. has improved stability and activity. The Parent Patent claimed a compsn. in which (I) is manganous chloride, sulphate or nitrate. 16.8.76 as 714555, Div. ex 3991177 (+27.11.73-US-419343) (5pp927)

RUBI- ★ D21 17912B/09 ★US 4140-759

Mild liq. protein shampoo - contg. lipoprotein natural detergent complex, aq. glycerine and opt. surfactant

RUBINSTEIN H INC 13.07.77-US-815305

A96 E19 (20.02.79) A61k-07/06

Hair shampoo compsn. consists of an aq. glycerin (I) soln. of a specific lipoprotein natural detergent complex (II) of viscosity 2.45 poises, pH 6, saponification index 12, acid index 2, total proteins 0.65%, and total lipoproteins 3.

The liq. protein shampoo has unusual mildness to hair and scalp, good hair conditioning props., and antibacterial activity.

(II) is suitably the lipoprotein natural detergent complex 'CLP-3' (RTM), which is a 50wt.% soln. of (II) (mixt. of lecithins, phospholipids, lipoprotein, and lipo-oligopeotides) in (I) (5% by wt.) and H_2O. Amt. of 'CLP-3' is 5-30% of total compsn. 13.7.77 as 815305. (9pp478)

See Also

D22 DT 2735805

D22 US 4140798

D23 J5 4008605

D23 J5 4009271

D22: BANDAGES; DRESSINGS

UNIC ★ D22 15999B/09 ★BE-869-953
Shrink wrapped stick of concertina folded tubular sausage casing - facilitates, storage, handling, soaking and filling the casing
UNION CARBIDE CORP 25.08.77-US-827421
Q32 (26.02.79) A22c B65d

A stick of concertina-folded and axially compressed tubular casing, for filling with food prod. such as sausage meta, has a longitudinal passage extending axially right through the stick, and is tightly wrapped in a sleeve of heat-shrunk film.

One end of the wrapping sleeve is folded inwards and tucked inside the entry to the passage through the stick. This end of the stick can later be threaded on to a mandrel of a filling machine. The other end of the wrapping sleeve extends beyond the corresp. end of the stick and forms a tube from which the casing can be axially unfolded for filling. The heat-shrinkable film is pref. perforated.

The hot-shrinking operation is pref. carried out with the stick threaded on to the minor dia. rod of a stepped dia mandrel. The end of the wrapping sleeve to be left open is shrunk temp. on to the major dia. shank of the mandrel.

The wrapping film maintains the folded formation of the casing and protects the casing from contamination. The film controls the longitudinal expansion of the stick during soaking and holds the casing together for convenient loading on a filling machine. 24.8.78 as 869953 (17pp448)

VOST/ ★ D22 B/09 ★CS 7705-401
Additive for cooling system - imparting bactericidal and anticorrosion activity
VOSTA J 17.08.77-CS-005401
E19 M14 (30.11.78) C23f-11

GABE/ ★ D22 16118B/09 ★DT 2735-805
Ozone cpd. sterilisers e.g. for cosmetics therapeutic cpds. and foods - are added in alcoholic soln. to liq. or semi-liq. materials
GABELEIN K 09.08.77-DT-735805
E13 P34 (D13 D21) (22.02.79) A23l-03/34 A61k-07 A61l-13/06

Materials to be sterilised are (i) mixed, while liq. or semi-liq., with O_3 cpds., e.g. sorbic acid ozonides, in EtOH or other alcohol or glycol solns, and (ii) stored at room temp. until free from germs, as determined by bacteriological tests.

The O_3 cpds. sterilise fruit juices, therapeutic cpds. and cosmetics, e.g. 0.03% sorbic acid ozonide can sterilise skin-cream. 9.8.77. as 735805 (5pp200)

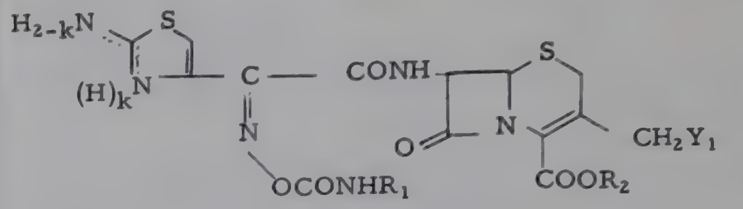
MASO/ ★ D22 16139B/09 ★DT 2736-105
Device for dispensing volatile material e.g. insecticide or deodorant - has air passages such that a movement of ambient air causes movement through the device with evaporation of the material
MASON S I 08.08.77-DT-736105
J01 +P34 (22.02.79) A61l-09/04 B01d-01

Dispenser can dispense material if air movement occurs but only small amts. if no air movement is present. It consists of a housing with an air inlet and an air outlet with a container for the volatile material having an air input opening. This is arranged in the housing so that one part of the air input is mounted opposite the housing inlet. The remainder of the opening is arranged so that a flow of air can occur between this and the housing outlet. When movement of the ambient air occurs, material evaporates and is dispensed.

Used in dispensing deodorants or insecticides to rooms and operates with high efficiency when some movement of the ambient air occurs. 8.8.77. as 736105 (24pp1053)

TAKE ★ D22 16259B/09 ★DT 2834-097
2-Carbamoyl-oximino-acetamido cephalosporin derivs. - useful as broad spectrum antibacterials for human and veterinary medicine and as disinfectants
TAKEDA CHEMICAL IND KK 06.08.77-JA-094469
B02 C02 E13 (22.02.79) A61k-31/54 C07d-501/20

Cephalosporin deriv. of formula (I) and their salts are new.



(I)

In (I) Y_1 is H, OH, carbamoyloxy, acyloxy, quat. ammonium or N-contg. heterocyclylthio gp. R_1 is = alkyl, aralkyl or aryl. R_2 is H or ester residue. k is = 0 or 1, i.e. imino or amino tautomer. (I) have the syn configuration.

(I) are prepd. e.g. by reacting thiourea with an appropriate haloacetyl-acetamido cpd.

(I) are useful for control of Gram-positive and negative bacteria. They are effective against strains which produce β-lactamase and are resistant to other cephalosporins. 3.8.78. as 834097 (139pp1251)

DOWO D22 12650A/07 =GB 1538-378
Blood storage systems - contg. hardenable silicone rubber compounded with calcium hydroxide to absorb carbon di:oxide and retard blood decomposition
DOW CORNING CORP 05.08.76-US-712106
*A96 E33 +P34 (A26) (17.01.79) *DT2735-453 C08k-03/2*
+C08l-83/04

Compsn. contains a curable silicone rubber cpd. with pure $Ca(OH)_2$. Pref. ratio is 100 pts.wt. silicone to 5-30 pts.wt. $Ca(OH)_2$.

Blood is stored by inserting the compounded rubber into a blood storage bag and infusing the bag with whole blood. A storage stable blood is obtd. 3.8.77 as 032527 (4pp)

COMS D22 55819Y/32 =GB 1538-386
Hydrophobic substrate with hydrophilic polymerised inclusions - which contain volatile cpds., e.g. insect repellants, released on exposure to air
COMMISS ENERGIE ATOMIQUE 14.04.76-FR-011056
*A97 C03 +P34 (17.01.79) *BE-853-170 +A61k-07/40 A61k-09*

A hydrophilic polymeric substrate is provided as in the Parent Patent GB 1486288 in which the substance, soluble in polar solvents, stored in the cross-linked polymerised hydrophilic inclusion, is a volatile substance. The volatile substance is releasable from the inclusions on contacting the substrate with a gaseous atmos.

Pref. the volatile substance is an insecticidal or deterrent chemical substance. 4.4.77 as 014157 Add to 1486288 (9pp910)

KEND D22 19360A/10 =GB 1541-348
Multilayered cup-shaped breast pad for nursing mothers - with capillary fluid spread minimised in body contacting layer of nonwoven fabric
KENDALL CO 27.12.76-US-754384
*P21 +P32 P33 (28.02.79) *US4074-721 A61j-13*

A cup-shaped breast pad has first a body-contacting layer of non-woven fabric allowing rapid liq. transmission and low capilliary spread, a second layer of absorbent cellulose wadding allowing a higher degree of capilliary spread centrally disposed on the first layer, and third, fourth and fifth layers of absorbant cellulose fluff, an absorbent cellulose wadding, and light permeable material respectively. The second, third and fourth layers are coextensive as are the first and fifth layers which are united at their peripheries.

Breast irritation caused by lacteal fluid is reduced. 31.10.77 as 045262 (4pp1376)

OREA D22 54084Y/31 =GB 1541-396
Deodorising compsn. contg. weak organic acid and its amine salt - with vehicle to prevent decomposition of sweat on skin
L'OREAL SA 29.01.76-LU-074266
*E19 (28.02.79) *BE-850-849 A61k-07/32*

Deodorant compsn. suitable for application to the human body comprises, admixed with vehicle, a mixt. of (a) > 1 weak organic acid (I); and (b) >1 salt of a weak organic acid with an organic amine.

Acid (I) has formula $C_nH_m(OH)_x(COOH)_y$ (where n is integer 1-6, m is integer 1-8, x is 0, 1 or 2, and y is 1,2 or 3) and mol.wt. <192. Components (a) and (b) are present in such amts. that the compsn. is capable of producing a pH of 3-6 in perspiration on the skin.

Use of conventional astringent substances or bactericid -al substances which completely modify the microbial flora of the skin, is avoided. 28.1.77 as 003561 (6pp936)

TAGU/ ★ D22 16478B/09 ★J5 4006-867
Appts. for removing bad odour or humidity or for purifying water - comprises an absorbent of active carbon, alumina or silica gel in a porous refractory vessel
TAGUCHI C 20.06.77-JA-073468
J01 (D15) (19.01.79) B01d-15 B01d-53/04 B01d-101 C02b-01/14

The device is obtd. by filling an absorbent of active C, alumina or silica gel in a porous refractory vessel. The appts. is regenerated by heating. The vessel is obtd. by mixing silica stone of 30 mesh with water glass, shaping the mixt. in a wood mould, solidifying the shaped substance with introduction of a CO_2, calcining at 1200°F for 1 hr., to obtain a porous refractory vessel of 100 x 150 x 50 mm.

In an example, active carbon was packed in a porous and refractory vessel to obtain a bad odour removing appts. The appts. was used in a freezer for 10 months to reduce activity. The used device was heated in an oven, regenerated, and reused. 20.6.77 as 073468. (2pp51)

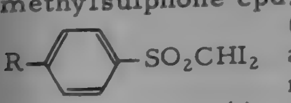
DAIZ ★ D22 16754B/09 ★J5 4008-165
Deodorisation of waste gas - using small pieces of adsorbent, e.g. alumina
DAIDO TOKUSHOKO KK 21.06.77-JA-074218
J01 (22.01.79) B01d-53/06

The object is to provide a deodorising method applicable to various gases contg. various malodorous components and different concns. and to reduce the treating cost. Small pieces of adsorbent are mixed with the gas under treatment to adsorb the malodorous components, and then the pieces are fed into a gas-solid component separator for sepg. them from the gas. The adsorbent may be alumina.

In an embodiment, a mixer is connected to a malodorous gas source through a blower and followed by the gas-solid separator such as cyclone for electrostatic sepn. of the solid component. 21.6.77 as 074218. (2pp26)

YOSH ★ D22 16893B/09 ★J5 4008-704
Fungicidal agent for protection of wood - comprises synergistic combination of a di:iodo methyl sulphone and a tri:alkyl or tri:aryl tin cpd.
YOSHITOMI PHARM IND KK 17.06.77-JA-072716
C03 E14 F09 P63 (C01) (23.01.79) A01n-09/02 B27k-03/40

Antiseptics for wood contain as active component a diiodomethylsulphone cpd. of formula (I):



(I)

(where R is lower alkyl or halogen) and trialkyl tin or triaryl tin cpd. The mixt. shows better fungicidal activity than fungicide alone.

Suitably, cpd. (I) is e.g. diiodomethyl-p-tolyl-sulphone, para-chlorophenyl diiodomethylsulphone, etc. The organic tin cpd. is e.g. bistributyl tin oxide, tributyl tin phthalate, tributyl tin sulphamate, tributyl tin oleate, bistrimethyl tin oxide, bistriethyl tin oxide, bistripropyl tin oxide, etc. Excellent synergistic fungicidal effect has been accomplished when the ratio of (I) cpd. to the organic tin cpd. is 10:1-1:10, esp. 3:1-1:3. 17.6.77 as 072716. (4pp108)

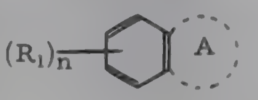
TAIE ★ D22 16899B/09 ★J5 4008-725
Agent for masking odour from sewage treatment etc. - comprises tannic acid or deriv. pref. transition metal tannate
TAIHEI KAGAKU SANGY (OSAP) 15.06.77-JA-071387
*P34 (D15) (23.01.79) A61l-09/**

The agent contains as active component tannic acid and/or tannic acid deriv. The agent can absorb selectively ammonia, organic amine, mercaptan etc. contained in gas exhausted from excrement or sewage treatment.. The agent has the greater absorption capacity than known masking agent. Partic. good effect is obtd. when the agent is used in the form of liq.

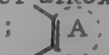
Pref. the tannate is Ti, Cu, Zn or Fe tannate. 15.6.77 as 071387. (5pp108)

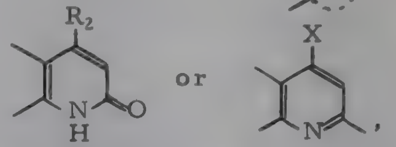
SAKA ★ D22 17042B/09 ★J5 4009-284
Fungicidal quinoline derivs. and their prodn. - by ring closure of N-carboxy:acetyl benzene derivs. and opt. halogenation
OTSUKA PHARM KK 22.06.77-JA-074648
B02 C02 (24.01.79) A61k-31/47 C07d-215/22

Quinoline derivs. of formula (I) are new.



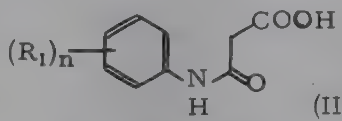
(I)

In (I), R_1 is lower alkoxy or aralkoxy; n is 1 or 2;  is



where R_2 is OH or halogen and X is halogen.

(I) are prepd. by subjecting benzene derivs. of formula (II) to a ring-closure reaction opt. followed by halogenation.



(II)

(I) are useful as germicides and as intermediates for pharmaceuticals.

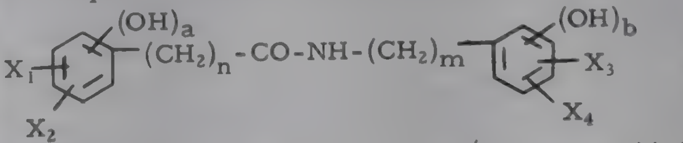
22.6.77 as 074648. (10pp69)

SHMC ★ D22 17174B/09 ★J5 4010-289
Removing nitric oxide from air - by passing through filter contg. sodium chlorite and potassium hydroxide to oxidise the oxide, and through active carbon adsorbing filter
SHIMIZU CONSTRUCTION 25.06.77-JA-075957
J01 P34 (25.01.79) A61l-09 B01d-53/16

The filter is obtd. by supporting sodium chlorite and potassium hydroxide on active alumina to obtain a filter (1) for oxidn. of NO, supporting potassium hydroxide on active carbon to obtain an adsorbing filter (2), positioning the filter (1) in an upper stream to a flow of air to be treated, and positioning the adsorbing filter (2) downstream to it, the filter (1) being in contact with the adsorbing filter (2). 25.6.77 as 075957. (3pp51)

MONS D22 39591T/25 =J7 9002-208
Substd amides - useful in antiseptic detergents
MONSANTO CO 25.11.70-US-092898
*E14 P34 (D25) (03.02.79) *DT2158-305 C11d-09/50 +A01n-09/20 C11d-03/48*

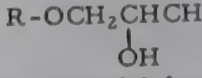
New cpds. of formula:



where each of n and m is 0 or 1 and n+m is ⩾1; each of a and b is 0 or 1 and a+b ⩾1; and each of X_1 X_2 X_3 and X_4 is Cl and/or Br. 24.11.71 as 093746 (clg. 25.11.70-US-092898) C11d-9/50; A01n-9/20 C11d-3/48 (3.2.79) MONSANTO CO. (3pp) (J4 7011128)

KAOS D22 62629X/33 =J7 9002-249
Fungicidal propanediol alkyl ethers - extracted from shark liver oil
KAO SOAP KK 26.00.75-JA-001697
*B05 C03 (05.02.79) *J51076-424 A01n-09/24 A23l-03/34 +A23k-01*

Fungicidal propen-1, 2-diol-3-alkyl ethers of formula (I) (R is normal or branched 8-10C alkyl) are extracted from the liver oil of sharks. The fungicides have higher effect

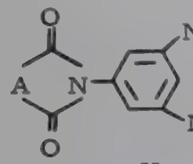


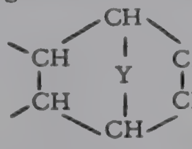
$R-OCH_2\underset{\displaystyle OH}{\underset{|}{C}}HCH_2OH$ (I)

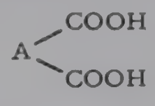
than monoglyceride (monoglyceryl caprylate), have excellent stability, and low toxicity to humans. They are useful for controlling E. coli, Staph. aurous, Bacillus subtilus. Aspergillus niger, Aspergillus terrous and Penicillium citrinum. 26.00.75 as 001697 A01n-9/24;A23k-1/00; A231-3/34 (5.2.79) KAO SOAP KK (3pp) (J5 1076424)

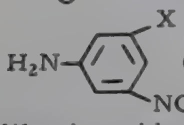
SUMO D22 62760A/35 =J7 9002-257
1-(3-Nitro-5-halophenyl)pyrrolidine-2,5-di:one derivs. - used to treat plants e.g. rice plants
SUMITOMO CHEMICAL KK 00.00.77-JA-150941 (31.01.75-JA-013872)
*C02 (05.02.79) *J53086-035 A01n-09/22 C07d-209/94 C07d-491/18 +C07d-307*

Bactericide for non-medicinal use is composed of 1-(3-nitro-5-halo-phenyl)pyrrolidine-2, 5-dione deriv. of formula (I) as effective ingredient. In the formula, X=halogen,


(I)


(II)


(IV)


(V)

A=cyclohexylene of formula (II) or cyclohexenylene or methylidene ethylene. Y is a bond or $-CH_2-$.

Cpds. (I) are prepd. by condensing dibasic acid or its anhydride of formula (IV) with anilines of formula (V) (I) are useful for prevention and extermination of diseases of rice plants and various vegetables. (I) being well absorbed from the roots, can be applied into the soil. 31.1.75 as 150941/77 Div ex 13872/75 A01n-9/22; C07d-209/94; 491/18; 307/00 (5.2.79) SUMITOMO CHEMICAL KK (8pp) (J5 3086035)

MOTE= ★ D22 17353B/09 ★SU -273-353
Antimicrobial azo dyes prodn. - by treating azo-dye with nitro furyl acrolein in ethanol, used for wool and silk textile finishing
MOSC TEXTILE INST 04.04.68-SU-231149
E21 F06 (29.05.78) C09b-57

Antimicrobial azo dyes are produced by treating the azo dye with 2-(5-nitrofuryl)- acrolein in 95% ethanol.

The dyes are used in one stage dyeing of protein fibres for clothes, blankets, hats etc.

Gorbacheva, I.N., Konkin, A.A., Kozinda, Z.Yu. Bul. 25/5.7.78. 4.4.68. as 231149(2pp1047)

SYNT= ★ D22 17392B/09 ★SU -455-610
Bactericidal azo-dyes prodn. - by reacting di:chloro-triazine azo-dye with amino gp. contg. bactericidal cpd. in weakly acid medium
SYNTH FIBRE PROC 22.12.72-SU-861706
E21 F06 (08.06.78) C09b-62/08

The bactericidal dyes are produced by reacting a dichloro triazine azo dye with a bactericidal preparation.

The yield and quality of the prod. are increased if the bactericidal prepn. contains an amino grp. for example albucide and reaction is in a weakly acidic medium pref. at pH 5.6-6.2.

Liverant, V.L., Timoshpolskaya, I.B., Petrik, L.I. Bul. 24/30.6.78. 22.12.72. as 861706 (2pp1047)

MEDI= ★ D22 17562B/09 ★SU -602-185
Polymeric coating for wounds and burns - obtd. by dissolving collagen in dil. acetic acid, dispersing buckthorn oil, and drying
MEDICAL POLYMER RES (MEDI=) 04.11.75-SU-186791
*A96 P34 (20.03.78) A61l-15/**

Wounds and burns covered with natural polymer coating heal much more rapidly when the coating obtd. by dissolving e.g. collagen (I) in 1% acetic acid (II) contains additional buckhorn oil (III) dispersed in the soln. in amounts of 0.1-25 pts. wt. per 100 pts. of the polymer, prior to drying. Tests show that addition of (II) reduced the healing time by ab. 5 days.

Avakumov, V.M., Ageeva, L.D., Dronov, A.F. et al. Bul. 14/15.4.78. 4.11.75. as 186791 (2pp124)

SHAR/ ★ D22 17700B/09 ★SU -602-489
Penta:chlorophenol antimicrobial for fibrous material prepn. - by alkaline hydrolysis of hexa:chlorobenzene and sepn. using emulsion contg. hydrochloric acid, nonionic surfactant and hydrocarbon solvent
SHAROV V G 03.01.75-SU-090721
E14 F06 (01.04.78) C07c-37/22 C07c-39/24

Pentachlorophenol, used as antiseptic for treating fibrous material, is obtd. by hydrolysis of hexachlorobenzene with aq. alkali and sepd. from reaction mixt. by using an emulsion.

The emulsion comprises HCl, a hydrophobic substance (e.g. hydrocarbon or chlorohydrocarbon) and a non-ionic surfactant used as 1-10 wt.% of pentachlorophenol in hydrolysis mixt.

Sharov, V.G., Simonov, V.D., Bikbulatov, I.Kh. Bul. 14/15.4.78. 3.1.75. as 090721 (3pp1347)

JOHJ ★ D22 17732B/09 ★US 4140-115
Pressure sensitive tapes, bandages etc. - contain unreacted poly:o
in the adhesive for reduced skin damage on removal
JOHNSON & JOHNSON 23.05.75-US-580371 (02.08.72-US
277435)
A81 G03 P32 P34 (A25 A96) (20.02.79) A61f-13 A61l-15

Adhesive material for use on the skin comprises a backin
coated with a water-insoluble pressure sensitive adhesiv
(A) which contains, uniformly dispersed, 4-20(9-13)wt.%
of an unreacted polyol of formula $H\text{-}(OCHR\cdot CHR_1)_x\text{-}OR_2$ (
(x = 4-20; R is H or CH_3; R_1 is H or $-CH_2CH_2-$ (sic); $\geqslant$1
of R and R_1 is H; R_2 is H, sugar or sugar alcohol residue
or their 2-18C fatty acid esters, esp. sorbitol or its monolaurate).

Specified (I) are polyethylene glycol of mol.wt.$\geqslant$200(40
and polyoxy(1-4C)alkylene glycol of mol.wt. $>$200. The
backing is esp. a film of plasticised PVC or vinyl chloric
copolymer and (A) is an acrylic resin or a rubber elastomer contg. a tackifier. 23.5.75 as 580371 (+3.12.73-US-421457) (6pp1251)

MEDP- ★ D22 17735B/09 ★US 4140-12
Surgical tape - of end-sealed silicone elastomer tube with en
inserted into smaller diameter curved needle
MED-PRO LTD 25.02.76-US-661251
A96 P31 (A26) (20.02.79) A61b-17/12

A tape, e.g. for ligating or applying pressure to blood vessels or ducts, comprises a silicone elastomer tube with o.d. $<$ 0.150 inch and with both ends sealed to entra
air at atmospheric pressure, and a hollow curved needle
of smaller i.d. than the tube o.d.

Needle and tube are joined by inserting one tube end fo
a substantial distance within the curved part of the needl
There is pref. a colour-coded silicone elastomer coating
on the tube end opposite to the needle. A clamping pad i
pref. attached to the tube intermediate its ends and has a
elastomeric sleeve fitting over and resiliently holding a
jaw of stiff resilient material with two parts joined by an
integral hinge. 25.2.76 as 661251. (7pp1358)

FARB D22 09739A/05 =US 4140-47
Radiation sterilisation in solid-particle-free atmos. - in airlocke
oven with turbulence-free finely filtered airflow
BAYER AG 13.07.76-DT-631352
*P34 +P33 Q31 Q77 (20.02.79) *NL7707-699 +F27b-09/12*

Process for continuous sterilisation of temp. resistant containers, e.g. glass bottles. The containers pass through (1) an inlet zone past a first air curtain of low particle count; (2) a sterilisation zone; (3) outlet zone where the heated containers are cooled providing a secon
air curtain of low particle count. A low particle count is
maintained in the sterilisation zone by providing a low tu
bulence and low particle count current of air parallel to
the direction of transport through the sterilisation zone b
tween the inlet and cooling zones. 21.6.77 as 808584.
(5pp1363)

CLGE ★ D22 17818B/09 ★US 4140-50
Non-antigenic atelo-peptide collagen fibres for surgical sponge
etc. - formed by digesting collagen with proteinase and subjectin
to moderate shear force
COLLAGEN CORP 24.11.76-US-744536 (22.10.75-US-624678)
A96 B04 (20.02.79) C08l-89/06

Dilute acidic aq. emulsion compsn. contains collagen, 0.01-10% of which is in soln. and the remainder is in the
form of atelopeptide collagen fibres of $\geqslant$500 nm. and app
earing as rope-like structures under the scanning electro
microscope.

As atelopeptide collagen is not antigenic, it can be use
for a wide variety, medical purposes such as surgical sponges, prostheses, films, membranes. Sutures and drug delivery devices and treatment of burns. 24.11.76
as 744536. (7pp916)

ETHI D22 00314B/01 =US 4140-678

Synthetic absorbable fibres for high strength sutures - comprise poly:alkylene oxalate having specified inherent viscosity in e.g. hexa:fluoro-isopropanol

ETHICON INC 13.06.77-US-806048

*A97 F01 P32 P34 (A25) (20.02.79) *DT2825-911 + C08g-63/12*

Sterile absorbable surgical fibre comprises a polymer having a major portion of units of formula $\lfloor R-O-C(=O)-C(=O)-O \rfloor_n$ (I) (where R is 3-16C alkylene and n is the degree of polymerisation) resulting in a fibre forming polymer having an inherent viscosity of $\geqslant 0.4$ (25°C on 0.1% soln. of polymer in chloroform or hexafluoroisopropanol).

Specific fibres are of poly(tetra-, hexa-, octa- and deca-methylene oxalate). Filaments are partic. useful in the prepn. of surgical prosthesis comprising woven or knitted fabrics and meshes. 13.6.77 as 806048. (6pp936)

KEWA- ★ D22 17929B/09 ★US 4140-798

High mol. wt. di:methylamine-epichlorohydrin condensation prod. - is a non-foaming antimicrobial agent, for recirculating waters, cosmetics etc.

KEWANEE IND INC 12.12.77-US-859945 (24.11.76-US-744618)

A97 (A96 D15 D21) (20.02.79) A61k-31/13

Method of inhibiting microorganisms uses the condensation prod. (I) of $HNMe_2$ (II) and epichlorohydrin (III). (I) is prepd. by heating (II) and (III) (mol. ratio (II):(III) = 1-1) for ca. 2 hrs. at 20-30°, then 2-12 hrs. at 40-90°.

(I), a high mol. wt. cpd., has potent antimicrobial properties (even in the presence of nonlionic surfactants or emulsifiers), is non-foaming, and is useful for the control of microorganisms (Aerobacter aerogenes, Pseudomonas aeruginosa) in recirculating H_2O systems (in paper mfg., air conditioners, grinding lubricants etc.), in swimming pools, etc., and for cosmetics. 12.12.77 as 859945. (3pp478)

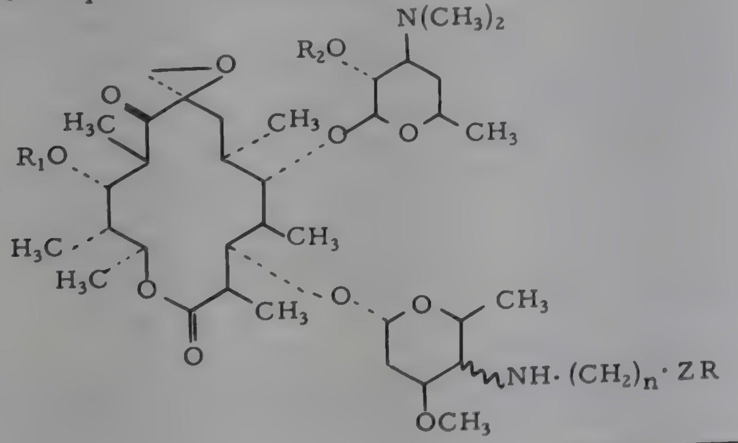
PFIZ D22 42068A/23 =US 4140-848

Antibacterial 4''-substituted-amino-oleandomycin derivs. - active against Gram positive and negative bacteria, for oral or parenteral admin.

PFIZER INC 04.02.77-US-765488 (17.01.78-US-870160)

*B03 E13 (D15) (20.02.79) *US4085-119 C07h-17/08 + A01n-09*

Novel amino derivs. of 4^{11}-deoxy-oleandomycin are epimers of cpds. of formula (I) or their salts.



(I)

R_1 and R_2 are each H, acetyl or propionyl; n is 1-4; Z is O, S, SO, SO_2, CO, CHOH or NH, but if n is 1, Z $\neq$ CO or CHOH; R is (chloro)pyridyl, 2-pyrimidyl or 2-(1-methyl)imidazolyl.

(I) are antibacterials effective against Gram-positive and -negative microorganisms. 17.1.78 as 870160, Div. ex 4085119. (11pp974)

STER D22 01793X/01 =US 4140-860

N,N'-Bridged-bis (2-alkyl-2-hydroxyethylamine) salts - useful in vitro antibacterial agents

STERLING DRUG INC 14.02.73-US-332267 (10.03.71-US-123097)

*B05 E16 (E15) (20.02.79) *US3928-427 A61k-31/27 + C07c-125/06*

N, N^1-(X)-Bis $\lfloor \bar{N}$-(R^1)-Z-(R)-Z (ZO)ethylamine$\rfloor$ of formula $R\cdot CH(OZ)-CH_2-NR^1-X-NR^1-CH_2-CH(OZ)-R$ (I) and its acid addn. is new. In (I), R is alkyl or cycloalkyl; R^1 is tert. alkyl; X is alkylene with bonds to the N atoms at different C atoms or X^1-Y-X^{11} (where R^1 and X^{11} are alkylene with bonds to Y and N atoms at the same or different C atoms and Y is cycloalkylene with bonds to X^1 and X^{11} at the same or different C atoms, phenylene, vinylene or ethynylene.

The sum of C atoms in R and X is $\geqslant 9$; Z is N-phenylcarbamoyl opt. substd. by 1-3 of tert. alkyl, halo or tert. alkoxy or by CF_3, acetamido, NO_2 or methylsulphonyl in the benzene ring. Parent patent claims specific cpds.

(I) have antibacterial activity in vitro and are esp. useful to disinfect and sanitise living and non-living surfaces. 16.6.78 as 916345, Div. ex 3928427; 4022833; 4085114; 4119668 (+14.2.73; 2.6.75; 8.11.76; 15.7.77-US-332267; 582646; 739447; 833485) (11pp982)

See Also

D15 J5 4008723

D23: OILS; FATS; WAXES

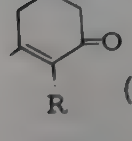
GIVA ★ D23 16070B/09 ★CH -608-777

Prepn. of organoleptic isophorone derivs. for perfumery - by reacting isophorone with methallyl- or crotyl halide

GIVAUDAN L & CIE SA 10.02.75-CH-001544

E15 (31.01.79) C07c-49/48 C11b-09

Isophorone derivs. of formula (I) (where R is methallyl or crotyl) are prepd. by reacting isophorone (II) with a methallyl- or crotyl halide of formula RX (III), (where X is halo) in the presence of a base.



(I)

(I) have organoleptic properties and are used in (i) prepn. of perfumes and perfumed prods., e.g. soaps, solid and liq. detergents, aerosols, cosmetics, oils and (ii) added to tobacco perfume compsns.

(I) have high clining power and are stable in detergents, esp. in perborate-contg. wash powders and soaps. (I) have a fruity, bloomy, spicy, menthol-reminiscent, tobacco-like, clinging odour. 10.2.75 as 001544 (3pp200)

KACV/ ★ D23 B/09 ★CS 7700-234

Paraffinic mixture for drawing candles

KACVINSKA V 14.01.77-CS-000234

(30.11.78) C11c-05

PRUZ/ ★ D23 B/09 ★CS 7706-306

Preliminary refining of vegetable oils - which contain mucous impurities

PRUZINSKY J 29.09.77-CS-006306

(30.11.78) C11b-03/10

AKOR= D23 79488U/52 =DS 2226-293
Adsorbant - contg metal oxide cement and clay or alumina
AS KAZA ORG CATALYS (ORG -) 30.05.72-DT-226293
*E32 (E33) (22.02.79) *DT2226-293 C11b-03/10 +B01j-01/22*

Adsorbent granules are used for purifying vegetable fats from phosphorus cpds and free fatty acids by selective adsorption. The granules contain oxides of metals of Gps. II and III, esp, MgO and Al_2O_3, fillers such as clay and 10-40 wt.% cement which is resistant to temp. change at ⩾500°C.

The presence of the cement reduces the adsorption of oil and the granules are easily regenerated. 30.5.72 as 226293 (5pp068).

HENK D23 74291V/43 =DS 2317-563
Fractionation of fatty materials - by crystallising dispersion in aqueous solution of surfactant-electrolyte
HENKEL KG AUF AKTIEN 07.04.73-DT-317563
*J01 (22.02.79) *BE-813-285 C11b-07 C11c-01/08*

A method of sepg. a mixt. of fatty materials into its constituents which have differing m.pts. utilises the wetting technique. After melting, the mixture is cooled to the point at which the constituents with the higher m.pts. crystallise; the necessary heat absorption being effected by vapourising under vacuum, an aq. phase in direct contact with the mixt.. A dispersion of the separate fluid and solid particles is centrifuged, and the hither m.pt. fatty materials are sepd. from the aq. phase by filtration.

Thehigh investment and operating costs for refrigeration plant, cooling scrubbers, etc. are eliminated by adding an aq. soln. of an electrolyte which is not surface active, to the molten mixt. and vaporising part of the water of the electrolyte by vacuum whilst the mixt. is intensively agitated, until partial or complete crystallisation of the components melting at higher temps. takes place.

Whilst dispersion of the fluid and solid matter is being carried out a soln. of a wetting agent is added; vacuum extn. and vaporising of the water being continued until the sepg. temp. is reached in this stage. 7.4.73 as 317563 (6pp1045).

KANE ★ D23 16821B/09 ★J5 4008-605
Gelation of liq. fatty oil - by blending with pullulan-fatty acid ester, used in prepn. of foods, cosmetics, medicines etc.
KANEBO KK (HAYB) 21.06.77-JA-074229
B07 (D13 D21) (23.01.79) B01f-03/08 B01f-17/34 C11b-15

Method comprises blending a pullulan-fatty acid ester (I) having a substitution degree >1 with a fatty oil (e.g. whale oil) which is liq. at room temp. The prod. is transparent and retains its shape.

(I) is blended in an amt. of >0.1wt.% (pref. 1-5wt.%). The gelification degree (or the stiffening degree) can be regulated by varying the quantity and kind of (I). It is dissolved in the fatty oil at 40-150°C.

(I) is obtd. by reacting a soln. or dispersion of pullulan having mol. wt. 10^3-10^6 (pref. 5×10^3 - 50×10^4) in DMF, toluene, dioxane, etc. and an anhydride or chloride of a satd. 12-18C fatty acid in the presence of a basic catalyst such as pyridine. 21.6.77 as 074229. (5pp170)

KOKA- ★ D23 16903B/09 ★J5 4008-734
Incense sticks prodn. - from powdery peat opt. contg. wood powder, water, fragrant component and caking agent
KOKANDO KK 16.06.77-JA-071779
(23.01.79) A61k-07/46

The method comprises kneading (a) 100-200 pts. of powdery peat which has total cellulose content 20-40$^{w}/_{w}$% on dry basis and has grain size 70-300 mesh, or a wood powder compsn. contg. mainly the powdery peat as above and other wood powder, (b) 100-200 pts. of water, (c) 3-30 pts. of fragrant component and (d) 1-15 pt. of caking agent. The mixt. is extrusion-moulded and the mouldings dried to moisture content 5-15$^{w}/_{w}$%.

The incense sticks are excellent in firing property, burning property, smoking property, fragrance-holding property, etc. and the burning time can be easily regulated. 16.6.77 as 071779. (4pp5)

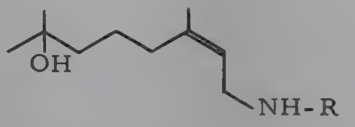
NISC ★ D23 17007B/09 ★J5 4009-208
3,7-Di:methyl-1-octene-3,7-diol prepn. - by hydrogen redn. of O-(3,7-di:methyl-7-hydroxy-1 octene)-N,N-di-methyl-hydroxylamine
NISSAN CHEM IND KK 24.06.77-JA-074984
E17 (24.01.79) B01j-23/72 C07c-29 C07c-33/02

3, 7-Dimethyl-1-octene-3, 7-diol is prepd. by subjecting O-(3, 7-dimethyl-7-hydroxy-1-octene)-N, N-dimethylhydroxylamine to redn. in the presence of ⩾1 of reduced Cu catalyst, Cu chromite catalyst, Ni-Sn catalyst and Co-Sn catalyst at hydrogen pressure not ⩾30 kg./cm^2.

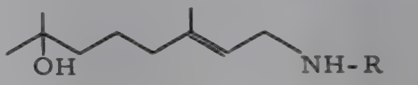
The reaction is pref. at 50-120°C. When a catalyst or Co-Sn catalyst is employed, the atomic ratio or Sn/Ni or Sn/Co is pref. 0.05-20. 24.6.77 as 074984. (3pp75)

TAKS ★ D23 17009B/09 ★J5 4009-212
Hydroxy-citronellal catalytic prepn. - by isomerising 7-hydroxy:geranyl:amine or 7 hydroxy:neryl:amine deriv. with cobalt phosphine or arsine complex, and hydrolysing
TAKASAGO PERFUMERY KK 21.06.77-JA-072770
E17 (24.01.79) B01j-31/22 C07c-45 C07c-47/26

Prepn. of hydroxycitronellal comprises isomerising 7-hydroxygeranylamine of formula (I) or 7-hydroxyneryl-amine deriv. of formula (II):

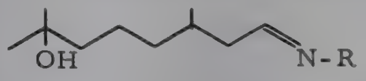


(I)



(II)

(where R is alkyl, cycloalkyl or allyl gp., respectively having 1-6)C, using as the catalyst a low valent Co phosphine (or arsine) complex to give 7-hydroxyaldehyde imine of formula (III) and hydrolysing. The reaction is conducted at 30-150°C for 2-10 hrs. in the presence of the catalyst. The molar ratio of the Co cpd. to (I) or (II) is pref. 200-2000:1.



(III)

The isomerisation can be effected highly efficiently, e.g., the catalyst prepd. from 1 mol. of a Co cpd. isomerises 500-1000 mol. of (I) or (II). 21.6.77 as 072770. (4pp75)

UBEI ★ D23 17020B/09 ★J5 4009-23
Sepn. of alkoxy-formyl-phenol isomers - by solvent extn. from aq soln. and distn.
UBE INDUSTRIES KK 24.06.77-JA-074481
B05 E14 M11 (24.01.79) C07c-45/24 C07c-47/56

A process for isolating each alkoxyformylphenol isomer [2-alkoxy-4-formylphenol (I), 2-alkoxy-6-formylphenol (II) and 2-alkoxy-4, 6-diformylphenol (III)] from their mixt. comprises adjusting an aq. soln. of the alkoxyformylphenols to pH 6-7, extracting (I) and (II) with a solvent, and distilling the extract to yield the solvent, (II) and (I) in turn, and recovering (III) from the aq. layer.

(I) has been used as perfume. (I), (II) and (III) are useful as additives to a plating bath or as pharmaceutical intermediates. The isomers are obtd. in a high state of purity. The aq. mixt. of (I), (II) and (III) may be prepd. by reacting, e.g. 2-methoxyphenol or 2-ethoxyphenol with glyoxylic acid, and oxidising the resultant mixt. under basic conditions. 24.6.77 as 074481. (7pp52)

TAKS ★ D23 17024B/09 ★J5 4009-24
Menthone prepn. in good yield - by isomerising 3-menthene epoxide over perchloric acid catalyst
TAKASAGO PERFUMERY KK 21.06.77-JA-072771
E15 (24.01.79) B01j-27/10 C07c-45/22 C07c-49/31

Menthone is prepd. by isomerising 3-menthene epoxide over perchloric acid catalyst at ⩽100°C until the reaction mixt. becomes brown.

Catalyst is prepd. by diluting ⩾60% aq. perchloric acid with methanol, ethanol, isopropanol, acetone, dioxane or acetic acid. Amt. of catalyst is 0.1-5wt.%, based on amt. of 3-menthene epoxide.

Menthone is obtd. in good yield, typically 80% together with 10% of 3,4-p-menthanediol which can be dehydrated with sulphuric acid into menthone by known methods, whereby the total yield of menthone is raised to 85-90%. 21.6.77 as 072771. (2pp104)

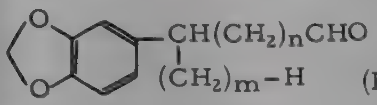
MITU ★ D23 17037B/09 ★J5 4009-271

3',4'-Methylenedioxy-phenyl:butanal cpds. - prepd. by (iso)safrole hydroformylation, and used as perfume material

MITSUBISHI CHEM IND KK (DAAB) 22.06.77-JA-074227

E13 (D21) (24.01.79) A61k-07/46 C07d-317/50

$3^1, 4^1$-Methylenedioxyphenylbutanal cpds. (I) are new,



(I)

(where n and m = 0 or 2 and n+m = 2). They are useful as perfume materials for cosmetics, toilet soap etc. having aroma similar to perfumes of cyclamen flowers or water melon juice.

(II) and (III) are prepd. by catalytically hydroformylating safrole or isosafrole over a catalyst, whereby a mixt. of the cpds. (I), the β-isomer and 4-propyl-1, 2-methylenedioxybenzene obtd. can be sepd. by precise fractional distn. In an example, an autoclave was supplied with safrole (30 ml.), toluene (10 ml.) and rhodium acetate (Rh = 10 mg./l.), air being replaced by argon gas. CO was fed into the autoclave at 90 kg./cm² G pressure. The mixt. was heated at 120°C and H_2 was fed in at 230 kg./cm G (H_2/CO = 1). After 2 hrs., the reaction mixt. was cooled to room temp., released to atmospheric pressure and analysed by gas chromatography. Conversion of safrole was 98%. The prods. comprised α-isomer (I), 7%; β-isomer, 30%; γ-isomer, 42%. 22.6.77 as 074227. (4pp104)

KOKS/ ★ D23 17411B/09 ★SU -491-888

Leaf essential oil content determination - by evaporating in hot airstream and passing through standard calibrated flame ionisation detector

KOKSHAROV A S 07.03.73-SU-891994

R16 (05.06.78) G01n-33

The essential oil content of vegetable material is determined more rapidly by evaporating-off the oil at an air temp. of 140-170°C, passing the vapour through a flame-ionisation detector and constructing a graph. The area of the peaks is measured and the oil content determined from a relationship between peak area for test and standard samples, with allowance for the moisture content of a test sample.

A sample, e.g. of 55-100 mg. mint leaf, is evapd. in an air flow at 140-170°C and the flow is passed through a detector connected to an amplifier and recorder. After obtg. a symmetrical peak the sample is re-weighed in order to calculate moisture content. A known amount of the oil, e.g., 1-3μl, then applied to paper strip and a standard peak is recorded. Calibration is carried out after every 15-20 tests.

Koksharov, A.S. Bul. 42/15.11.75. 7.3.73. as 891994 (2pp1358)

SCEN= ★ D23 17462B/09 ★SU -530-523

Geranium oil fractions used in perfumery and cosmetics - are obtd. by saponifying with alkali at elevated temp. and vacuum distilling the prod.

SCENTED SYNTH NATUR 10.10.74-SU-065812

(22.05.78) C11b-09/02

Fractions I, II and III are obtd. in better yields from geranium oil and in better quality for use in perfumery and cosmetics by (a) saponifying with alkali at 80°-100°C under conditions of total reflux, using an 8-15% aq. alkali soln. and (b) vacuum-rectifying the prod. In a typical run, a 91.3% yield is obtd. comprising 67% fraction I, 14% fraction II and 19% fraction III.

Anisimova, M.A., Gurinovich, L.K., Kustova, S.D. et al Bul. 22/15.6.78. 10.10.74. as 065812 (2pp314)

SCEN= ★ D23 17514B/09 ★SU -595-276

Di:methyl-octanol or its mixt. with acetate used in perfumery - is prepd. by condensing isobutyraldehyde with methyl-isobutyl-ketone, and hydrogenating and hydrating prod.

SCENTED SYNTH NATUR 22.01.76-SU-318311

E17 (30.05.78) C07c-31/02 C07c-67/04

Technologically simpler prepn. of 2,7-dimethyloctan-2-ol (I) or its mixt. with acetate in improved yield is based on condensing isobutraldehyde (II) and methylisobutylketone (III) in aq. alkali at 60-90°C. The formed ketone is hydrogenated in presence of Raney Ni at 160-170°C under 100-110 atmos. The formed sec. unsatd. alcohol is dehydrated in presence of catalyst (H_3PO_4 or silicagel) at 340-350°C. The formed olefin mixt. is hydrated in aq. isopropanol in presence of catalyst (cationexchange resin) or reacted with aq. acetic acid in presence of catalyst (e.g. H_2SO_4).

The prod. is used in perfumery.

Voitkevich, S.A., Gurevich, A.V., Astakhova, I.A. et al Bul. 8/28.2.78. 22.1.76. as 318311 (3pp114)

See Also

D13 US 4140805 D15 SU 229485

D24: SOAP; SOAP DETERGENTS

GUSE= ★ D24 17494B/09 ★SU -580-189

Coating compsn. for producing decorative patterns on glass - contg. pigmented ceramic frit, sodium carboxymethyl-cellulose, industrial soap, ethanol and water

GUSEV GLASS RES INS 25.06.75-SU-148669

A81 L01 (A11) (09.02.78) C03c-17/26

Use of industrial soap (I) as the surface active component reduces the cost of a compsn. used to produce decorative patterns on glass. The compsn. comprises (in wt. %): (I) 0.005-0.04, ethanol (II) 0.005-0.02, Na carboxymethylcellulose (III) 0.15-0.6, pigmented ceramic frit (IV) 62-80 and water the rest. After the application, the coating is dried for 3-5 min. and fired at 680-720°C.

A typical mixt. contains (in wt. %): (I) 0.025, (II) 0.02, (III) 0.15, (IV) 72.2 and water the rest, and it produces a white enamel.

Ivanova, V.M., Denisova, S.S., Utkina, T.D. et al. Bul. 42/15.11.77. 25.6.75. as 148669 (2pp124)

KAOS D24 79454Y/45 =US 4140-456

Polishing cylindrical tablets of toilet soap - in high speed automatic machine using opposed direction fabric polishing bands

KAO SOAP KK 13.07.76-JA-083134

*P61 (20.02.79) *BE-856-567 +B29c-17/12*

Appts. for polishing the circumferential side walls of round soap bars comprises a conveyor for supporting the soap bars and moving them through a polishing station between laterally spaced endless polishing belts. Intermittent rotation of indexing members causes one soap bar at a time to move into a polishing zone and be rotated by the polishing belts which move in opposite lengthwise directions. 6.6.77 as 803620. (4pp1363)

D25: OTHER DETERGENTS

PROC ★ D25 16051B/09 ★CA 1048-365
Detergent compsn. contg. surfactant and coarse abrasive - esp. pumice, used for cleaning clothes or dishes without scratching
PROCTER & GAMBLE CO 09.06.75-CA-228888
A97 E12 P43 (13.02.79) B08b-03/08

Detergent compsn. contains (a) 20-35 wt.% surfactant (I) and (b) 5-20 (10-15) wt.% water-insol. abrasive (II) of particle dia. 300-850 (300-425) µ. (I) are anionic, nonionic, ampholytic and/or zwitterionic; pref. are alkali metal salts of 8-18C alkyl sulphates, of 9-15C alkyl benzene sulphonates or of H_2SO_4 esters of reaction prods. of 1 mole higher fatty alcohol and 1-10 moles ethylene oxide. Pref. (II) are SiO_2, (expanded)perlite, diatomaceous earth, feldspar, bentonite, emery and/or pumice, esp. pumice.

Used for washing clothes or dishes. Although the particle size of (II) is large they do not scratch hard surfaces. 9.6.75 as 728888 (24pp1251)

BALC/ ★ D25 B/09 ★CS 7704-480
Felt and screen cleaning and washing agent
BALCAR C 06.07.77-CS-004480
(30.11.78) C11d-03/60

ATLF D25 36020S/21 =DS 2056-556
Carpet cleaners contng styrene/maleic acid - anhydride copolymers
ATLANTIC RICHFIELD CO 17.11.69-US-877414
*A13 (A16 A97) (22.02.79) *NL7016-788 C11d-03/37*

Aq. carpet shampoo contains a water soluble detergent and/or a foaming agent and a water soluble metal, ammonium or amine salt of a styrene-maleic acid copolymer or its half ester. The polymer contains 1-4(1-3) moles styrene per mole of maleic acid, has a molecular wt. of 600-50,000 (700-5000) and is present in an amt. of 25-95 wt.% based on total solids.

The half ester is pref. a cyclohexyl or n-propyl half ester. The polymer makes the foam easier to remove leaving no adhesive residue. 17.11.70 as 056556 (12pp).

COLG D25 79658U/52 =DS 2326-467
Clear, liq heavy -duty washing compsns - based on non-ionic and anionic surfactants and contg fluorescent brightening agents
COLGATE PALMOLIVE CO 01.06.72-US-258604
*E17 (E23 E24) (22.02.79) *DT2326-467 C11d-03/42*

A clear, homogeneous, liquid, heavy duty detergent contains 30-80 wt.% mixt. of nonionic and anionic detergents in a wt. ratio 15:1 to 1:1; 5-35 wt.% alcohol(s) and 0.5-5 wt.% of a mixt. of fluorescent brighteners, ⩾1 of which is 4,4'-bis-(4-phenyl-1,2,3-triazol-2-yl)-2,2'-stilbene disulphonic acid, and/or 4,4'-diphenylvinylene-2,2'-diphenyl disulphonic acid or their salts.

The nonionic detergent is a 10-30C ether of polyoxyethylene glycol contg. 5-14 ethylene oxide units. The anionic detergent is a 10-20 C ether of a polyoxyethylene glycol (2-6 ethylene oxide units) sulphonic acid alkali metal, ammonium, alkylamino or alkanolamino salt. The compsn. contains no phosphate or N-contg. builders and is resistant to oxidising bleaches. 24.5.73 as 326467 (8pp068).

WACK/ D25 78528A/44 =DS 2717-532
Cleaning device for inclined surfaces - has ridge storing cleansing compsn. having low solubility in water
WACK O 20.04.77-DT-717532
*P43 (22.02.79) *DT2717-532 B08b-03/08*

Sloping surfaces, esp. solar energy collectors, are cleaned using strip contg. a cleansing agent which is slightly sol. in water attached to the upper edge of the surface. A ridge is built out from the strip in such a way that rain water combines with some of the cleaning agent and runs off over the entire width of the surface.

The cleansing agent is pref. a mixt. of builder; phosphate or other anionic or amphoteric detergent; ethylene oxide-propylene oxide adduct or other nonionic detergent; high boiling fat-sol. organic solvent and waxy detergent. 20.4.77 as 717532 (7pp068).

INTE- D25 34473Y/20 =GB 1541-219
Diphthaloyl peroxide from phthalic anhydride and hydrogen peroxide - involves reacting slurry and maintaining min. of aq phase
INTEROX CHEM LTD 18.11.75-GB-047388
*A60 E14 (28.02.79) *BE-848-246 C07c-179/14*

Diphthaloyl peroxide is produced by forming a mobile slurry or paste contg. particulate phthalic anhydride and aq. hydrogen perioxide, maintaining slurry or paste mobile to produce some prod. then separating from aq. paste.

Pref. initial ratio of phthalic anhydride to aq. hydrogen peroxide is 0.5-2.0 g per ml. Initial solid-liq. ratio is such to contain minimum vol. to obtain slurry or paste, mobility is maintained at level at least original level in course of reaction.

Improved yield is obtd. c.f. 8% of max. theoretical yield by conventional methods. 25.10.76 (6pp931)

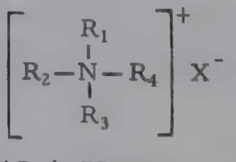
SHEL ★ D25 16372B/09 ★GB 1541-427
Hydroxy-sulpho:betaine(s) mfr. - by reacting tert. amine with halo hydroxyalkane sulphonate salt using basic catalyst and alcoho solvent
SHELL INT RES MIJ BV 01.09.75-GB-035896
E19 (28.02.79) C07c-143/14

Prepn. of hydroxy-sulphobetaines (I) comprises reacting a tertiary amine (II) with a salt (III) of a halohydroxyalkane sulphonic acid in the presence of an alkali(ne earth) metal hydroxide or alkoxide catalyst and in alcohol (-wate mixt.) solvent.

(I) are zevitterionic surfactants suitable for use in a wide variety of detergent applications. Use of the specific catalyst/solvent system improves the conversion of (II) and (III) to (I); c.f. the use of water alone or excess (II) as solvent. 27.8.76 (5pp914)

KAWA- ★ D25 16599B/09 ★J5 4007-40
Solid detergent or soap compsn. - comprises a base of acid aminoacid salt(s) and a cationic ammonium salt surfactant
KAWAKEN FINE CHEM K 17.06.77-JA-071867
E19 (20.01.79) C11d-01/65

A solid detergent contains a base consisting of ⩾1 salt o acidic aminoacid having N-long chain acyl gp., and a qua ammonium salt cationic surfactant. Pref. the acyl gp. i 8-22C (un)satd. fatty acid residue; the aminoacid is aspartic acid, glutamic acid, cysteic acid or homocysteic acid; and the salt is an alkali metal salt, ammonium salt water soluble amine salt or basic aminoacid salt. Pref. the surfactant is of formula: (where R_1 is 8-22C alkyl, alkenyl, or alkylphenoxyethoxyethyl; R_2 is 1-4C (hydroxy alkyl or benzyl; R_3 and R_4 are as R_1 or R_2; and X is halogen), used in an amt. of 1-20wt.%.



$$\left[R_2-\overset{\displaystyle R_1}{\underset{\displaystyle R_3}{N}}-R_4\right]^+ X^-$$

The solid detergent does not have the defects of (1) insufficient richnes of the foam and surface; (2) easy crumbling on contact with water and (3) adhesion to the soap dish.

17.6.77 as 071867. (5pp126)

FMCC ★ D25 B/09 ★J5 4008-1
Stabilised sodium carbonate peroxide prodn.
FMC CORP 17.06.77-US-807698
E34 (22.01.79)
16.6.78 as 072286.

RAKU- ★ D25 17186B/09 ★J5 4010-30
Detergent compsn. contg. stabilised hydrogen peroxide - cont complexed magnesium gp. cpd. and surfactants
RAKUNA YUSHI KK 27.06.77-JA-075578
E33 (E36) (25.01.79) C11d-11/04

A liq. like prod. having hydrophilic properties is prepd. from Mg gp. cpd. and acid, where complexing is caused by adding water. Liq. prod. is added to an aq. soln. of nonionic surfactant and anionic surfactant; and H_2O_2 is added to obtain a detergent.

H_2O_2 in the detergent is preserved for long periods.

Consumption of H_2O_2 during 6-12 months is only $<$ 20wt.%. Therefore, it is quite suitable for sterilisation, washing, and bleaching of heavy dirt such as blood etc. Penetration, emulsification, and dispersing effect are also satisfactory. The detergent is suitable for use on cotton, linter, or polyester fibre prods. contaminated with blood etc. in hospitals or slaughterhouse, or soiled napkin, white hospital dress etc. 27.6.77 as 075578. (3pp126)

KZDO= ★ D25 17359B/09 ★SU -324-769
Domestic hygienic aq. detergent compsn. - contg. tri:ethanolamine salt of lauryl sulphate, alkylamide and sulphate, tetra:borate, pine extract, glycerol and fluorescein soln.
KAZAN DOMESTIC CHEM 20.01.69-SU-299657
E19 (28.03.78) A61k-07

Detergent compsn. for domestic uses is based on synthetic detergents, alcohol and aromatic components.

The compsn. contains (in wt.%) triethanolamine salt of lauryl sulphate 31-33, alkylamides 3-4, prim. satd alkyl sulphate 1-2, $Na_2B_4O_7$ 1-3, glycerol 2-3, pine chlorophyllocarotin paste 3-4, satd. alcoholic soln. of fluorescein 0.5-0.7; the balance is water. The compsn. is highly effective.
Evseev, V.V., Bulankova, L.P., Kuznetsova, T.A. et al
Bul. 45/5.12.75. 20.1.69. as 299657 (1pp70)

PRPO= ★ D25 17576B/09 ★SU -602-215
Granulated sodium perborate based household bleach prepn. - includes mixing components at specified rate, followed by simultaneous cooling and grinding to improve activity
PERM POLY 12.04.76-SU-353428
E34 (29.03.78) B01j-02/20 C01b-15/12

Loss of active oxygen is minimised and higher yields of sodium perborate $NaBO_3.H_2O_2.3H_2O$ (I) bleach obtd. when the mixture contg. e.g. (in wt.%): (I) 30, Na tripolyphosphate 30, Na_2SO_4 35-40 and $MgSO_4$ 0-5, is stirred at the rate of 80-120 revs. $\frac{1}{2}$/min. for 0.1-0.2 min. with the temp. rising spontaneously (due to friction) to 55-60°C.

Subsequent cooling in a fluidised bed with simultaneous passing through a grating, the fluidising gas passed through the bed at the rate of 2.2-2.5 m/sec., yields the product contg. up to 95% of the larger, 1-3 mm. fraction. The treatment prevents the loss of active oxygen and increases the yield of the larger fraction from 38% to 93-95%.
Belyaev, V.M., Pashchenko, V.N., Lozhkin, A.V. et al
Bul. 14/15.4.78. 12.4.76. as 353428 (2pp124)

COLG ★ D25 17866B/09 ★US 4140-641
Conc. single phase liq. detergent-softener compsn. - contg. nonionic surfactant, and imidazolinium quat. ammonium fabric softener
COLGATE PALMOLIVE CO 17.03.78-US-887788
A97 E19 (20.02.79) D06m-13/36

Compsn. contains (a) 40-70wt.% nonionic surfactant (I); (b) 15-30wt.% of a softener (II); and (c) a solvent. (II) is methyl (1) oleylamido ethyl (2) oleyl imidazolinium methyl sulphate, or 1-methyl-1-tallowamido-ethyl-2-tallowimidazolinium methosulphate.

The highly conc. single phase compsns. are pourable and free-flowing, are stable for many months at room temp., and may be used in laundering baths to provide both detergent and softener. 17.3.78 as 887788. (5pp478)

KAOS D25 85014Y/48 =US 4140-647
Cleaning compsn. for removing viscous dirt or wax stains - comprising aq. mixt. of phosphate ester, alkali and anionic and/or nonionic surfactants
KAO SOAP KK 11.05.76-JA-053684
*A97 E11 (E16) (20.02.79) *DT2717-928 C11d-01/83 C11d-03/36*

Detergent compsn. contains 0.01-10wt.% organic phosphoric acid ester of formula $O{=}P\lfloor O\text{-}(CH_2CH_2O)_nC_mH_{2m+1}\rfloor_3$, where n is 1, 2 or 3, and m is 2, 3 or 4; 0.1-20wt.% ammonia or alkanolamine of formula $NH_{n'}(C_{m'}H_{2m'}OH)_{3-n'}$ where n' is 0, 1, 2 or 3 and m' is 2 or 3.

Second component may be a water-soluble inorganic alkaline agent of alkali metal hydroxide, polyphosphate, silicate, metasilicate, carbonate or phosphate; 0.1-10wt.-% water-soluble organic anionic surfactant of 10-20C olefin sulphonates or 10-20C alkyl sulphate, 8-10C alkyl benzene sulphonate and 10-20C alkyl ether sulphate contg. 1-10 moles ethylene oxide and water-soluble organic non-ionic surfactant; balance of water.

Detergent prod. removes rapidly and completely viscous or solid soils and stains esp. of cooking oils and engine oils. 7.4.77 as 785589. (3pp931)

UNIL D25 36663A/21 =US 4140-650
Washing powders prepn. using spray-dried inorganic constituents - contg. salt of specified long chain di:carboxylic acid
LEVER BROS 26.11.76-GB-049425
*E12 (E16) (20.02.79) *BE-861-022 C11d-01/83 C11d-03/07 C11d-11/02*

Detergent powder is mfd. by forming an aq. slurry contg. sodium tripolyphosphate, pyrophosphate, orthophosphate, carbonate, silicate, sulphate or a mixt.; and 0.5-5wt.% of mono- or di-alkali metal or ammonium salt of dicarboxylic acid of formula $R\cdot CH(COOH)\cdot(CH_2)_n\cdot COOH$ (where n is 0 or 1; R is 10-20C prim. or sec. straight chain alkyl or alkenyl).

The slurry is spray dried to form a powder, which is combined with a 7-24C prim. or sec. alcohol ethoxylated with 1-20 moles of ethylene oxide per mole of alcohol. Pref. ethoxylated alcohol comprises 5-15wt.% prod. detergent powder with hydrophobic-lipophilic balance $\leqslant$ 13.

Prod. has low bulk density due to the use of alkenyl succinate salts in crutcher slurry. 25.11.77 as 854943. (3pp931)

LIOY D25 00462A/01 =US 4140-657
Phosphate-free normal quality biodegradable detergent - comprising mixt. of alkyl sulphate, metal alpha olefin sulphonate and polyethylene-alkyl-ether sulphate
LION FAT & OIL KK 18.06.76-JA-071837
*E12 (20.02.79) *DT2727-346 C11d-01/37 + C11d-03/04*

Granular detergent compsn. contains 20-40wt.% mixt. of synthetic organic surfactants and balance of non-phosphate detergent builder.

Mixt. contains alkyl sulphate of formula $ROSO_3M$ where R is 14-15C alkyl and M an alkali(ne earth) metal; alkali(ne earth) metal α-olefin sulphonate contg. 12-18C; poly oxyethylene alkyl ether sulphate with formula $R^1O(C_2H_4O)_n\text{-}SO_3M^1$, where R^1 is 8-12C alkyl; n is 1-8 and M^1 is alkali(ne earth) metal, in proportions defined by hatched polygonal area of equilibrium diagram.

Prod. contains reduced phosphate level, having rich foaming at time of cleansing with easy rinsing and satisfactory biodegradability. 13.6.77 as 806055. (3pp931)

MONS ★ D25 17877B/09 ★US 4140-676
Polymeric acetal carboxylate salts useful as detergent builders - prepd. by saponification of polymeric acetal carboxylate ester
MONSANTO CO 02.03.78-US-882843
A25 (A97) (20.02.79) C08g-02/30

Saponifying a polymeric acetal carboxylate ester to a polymeric acetal carboxylate salt comprises reacting the ester with sufficient alkali metal base, of $\geqslant$ 5 normality, to saponify $\geqslant$ 50%, pref. 95%, of the ester gps.

The pref. alkali metal base is NaOH and is $\geqslant$10N. Pref. the ester is contacted with an immiscible solvent prior to reacting with the alkali metal base. Pref. solvents are toluene and a 1:3 to 3:1 mixt. of benzene and n-hexane.

The polymeric salts are useful as detergent builders. The salt is prepd. more rapidly and in higher purity than in conventional processes. 2.3.78 as 882843. (5pp1390)

CONO ★ D25 17889B/09 ★US 4140-711
Alkane di:sulphonate(s) prepn. - by reacting olefin(s) with alkali metal (bi sulphite in presence of mono:carboxylic acid, useful as detergents and detergent builders
CONTINENTAL OIL CO 31.03.78-US-891952
E17 (20.02.79) C07c-143/04

Prepn. of alkane disulphonates comprises (i) mixing (a) a 2-40C olefin, either α- or internal, (b) a 3-6C monocarboxylic acid and (c) an alkali metal (bi)sulphite, the amt. of (b) being 100-2500 g. per mole of (a) and the amt. of (c) being 1-5 moles per mole of (a); and (ii) adding a free radical initiator to the mixt.

Compared with the use of an aq. alcoholic soln. or acetic acid instead of the 3-6C carboxylic acid (b) in the reaction system, the reaction rate is accelerated and prod. yield is improved. The alkane disulphonates are useful as water-soluble detergents and as phosphate-free detergent builders. 31.3.78 as 891952. (4pp914)

See Also

D22 J7 9002208

AGEN 25.00.75 AGENCY OF IND SCI TECH B04 D16 =J7 9002-268
Selective inactivation and removal of protease - 62653X/33
*AGEN 22.06.77 AGENCY OF IND SCI TECH D15 J01 M25 *J5 4009-451
Treating heavy metals-contg. effluent - 17056B/09
AGRO- 14.01.76 AGROFERM AG A23 D16 E13 F01 =US 4140-741
Isolating poly-(beta)-hydroxy butyric acid from fermentation - 50380Y/29
AIRR 06.11.73 AIRCO INC D15 =CH -608-470
Oxygen dissolving unit for activated sludge plant - 32432W/20
AJIN 03.12.74 AJINOMOTO KK B05 D16 E16 =J7 9002-272
L-Cysteine and/or L-cystine enzymatic prodn. - 38495X/21
AJIN 00.00.75 AJINOMOTO KK B05 D16 E16 =J7 9002-278
Serine and serinol derivs prodn - 54889U/38
AJIN 06.08.75 AJINOMOTO KK B05 D16 E14 =J7 9002-274
L:phenylalanine enzymic prepn. from (5)-benzyl hydantoin - 21095Y/12
AJIN 23.12.75 AJINOMOTO KK B05 D16 E16 =J7 9002-267
Preparing raw material for fermentation of lysine or glutamic acid - 58408Y/33
*AJIN 20.06.77 AJINOMOTO KK D13 *J5 4008-796
Rapid brewing of syoyu - 16921B/09
*AJIN 10.08.77 AJINOMOTO KK B02 C02 D16 *DT 2835-151
Purine arabinoside(s) enzymatic prodn. - 16275B/09
AJIN 10.08.77 AJINOMOTO KK B02 C02 D16 =NL 7808-321
Purine arabinoside(s) enzymatic prodn. - 16275B/09
AKIY/ 05.03.75 AKIYAMA S D15 L02 =J5 1102-345
Oily sludge solidification - 17264B/09
*AKIY/ 05.03.75 AKIYAMA S D15 L02 *J7 9002-023
Oily sludge solidification - 17264B/09
*AKIY/ 21.06.77 AKIYAMA M D13 *J5 4008-751
Removing the bitterness and odour of garlic - 16906B/09
AKOR= 30.05.72 AS KAZA ORG CATALYS D23 E32 (E33) =DS 2226-293
Adsorbant - 79488U/52
ALBR 21.06.77 BUSH BOAKE ALLEN LT D23 E13 =J5 4009-276
Tetra:methyl-oxa-bi:cyclo:decene derivs. - 02358B/02
ALFA 27.02.75 ALFA-LAVAL AB D13 #US 4140-806
Sepn of skimmed milk from milk or cream - 41024W/25
*ALHA/ 17.08.77 ALHAUSER E B07 D15 *GB 2002-736
Pyrogen-free sterile water prodn. by reverse osmosis - 16396B/09
ALKU 22.06.77 AKZO NV A35 D15 E36 J01 =J5 4010-296
Solid carbon-contg. material with metal ion sorption capacity - 02330B/02
*ALOR= 04.01.76 AS LATV ORGANIC SYN C02 D13 *SU -594-980
2,6-Di:methyl-3,5-di:carbethoxy-1,4-di:hydro-pyridine - 17512B/09
*AMAN 17.06.77 AMANO PHARM KK B04 D16 *J5 4008-790
Bacterial prepn. of beta-amylase - 16917B/09
AMCA= 20.07.77 AM USSR CARDIOLOGY D16 G06 =SW 7807-968
Forming visible images by ultrasonic irradiation of ferment plate - 12268B/07
AMCY 23.05.77 AMERICAN CYANAMID CO A96 D22 (A23) =FR 2391-734
Lactide polyester surgical articles, esp. sutures - 84108A/47
AMCY 20.06.77 AMERICAN CYANAMID CO B04 C03 D16 =J5 4009-202
Antibiotic BL 580 ZETA useful as anticoccidiosis agent - 00004B/01
*AMHP 22.08.77 AMERICAN HOME PROD CORP D13 *BE -869-891
Edible, sprayable, lecithin vegetable oil compsn. - 15979B/09
AMHP 22.08.77 AMERICAN HOME PROD CORP D13 =GB 2002-806
Edible, sprayable, lecithin vegetable oil compsn. - 15979B/09
AMIN- 18.07.77 AMINKEMI AB B07 D22 =GB 2002-794
Heparinisation of charged surfaces - 12259B/07
AMIN- 18.07.77 AMINKEMI AB B07 D22 =SW 7708-296
Heparinisation of charged surfaces - 12259B/07
*ANDE/ 15.07.77 ANDERSEN I D15 J01 *DK 7703-230
Distillation plant - B/09
ANDZ 14.05.75 MASCH ANDRITZ AG D15 F07 J01 =CS 7603-119
Dewatering press for fabrics or fibrous materials - 90877X/49
*ANON 20.01.79 ANONYMOUS D14 J02 *RD -178-005
Homogeniser for liq. food and additive - 17310B/09
*ANON 20.01.79 ANONYMOUS D18 F04 *RD -178-020
Appts. for continuous cigarette filter tip mfr. - 17319B/09
ANVR 15.10.76 AGENCE NAT VALORISATION D15 =GB 1541-345
Self-cleaning fish farming tank - 50153A/28
*ARMO 26.01.76 ARMOUR CO D12 *US 4139-926
Sterilisation of rotating meat saw - 17707B/09
*ARMO 07.10.77 ARMOUR-DIAL INC A96 D21 (A14 A25) *US 4140-656
Anhydrous clear gel face cleanser - 17872B/09
ASAH 20.10.76 ASAHI CHEMICAL IND KK B04 D16 =J7 9002-273
Antibiotic colistin active against Gram-negative bacteria - 43223A/24
ASAH 20.06.77 ASAHI CHEMICAL IND KK A88 D15 J01 (A11) =J5 4006-916
Hollow cellulose ester ultrafiltration membrane - 00328B/01
*ASAH 24.06.77 ASAHI CHEMICAL IND KK A97 D16 (A12 A14 A25 D13) *J5 4009-184
Adsorbent for removing organics in protein - 16988B/09
ASHL 09.05.77 ASHLAND OIL INC A96 D25 E17 (A25 A97) =J5 4010-310
Detergent compsn. partic. for shampoos - 82097A/46
ATLF 17.11.69 ATLANTIC RICHFIELD CO A13 D25 (A16 A97) =DS 2056-556
Carpet cleaners contng styrene/maleic acid - 36020S/21
ATOM 07.02.75 ATOMENERGI AB D15 J01 #US 4140-584
Vacuum condenser for salt removal with plastic tubes - 22170W/13
*AUCO= 04.01.74 AS UKR COLLOID CHEM D15 *SU -494-353
Removal of surfactants from waste water - 17435B/09
AYGU/ 09.04.77 AYGUN S T B04 D16 =DT 2759-507
Culturing human foetal cells - 74629A/42
AYGU/ 09.04.77 AYGUN S T B04 D16 =DT 2759-508
Culturing human foetal cells - 74629A/42

BABS- 09.05.75 BABSON BROS CO D15 =CA 1048-337
Processing cattle excrement to recover fibres - 61461X/32
BABS- 09.05.75 BABSON BROS CO D15 =CA 1048-338
Processing cattle excrement to recover fibres - 61461X/32
BABS- 09.05.75 BABSON BROS CO D15 =CA 1048-339
Processing cattle excrement to recover fibres - 61461X/32
*BABW 13.08.77 BABCOCK-BSH AG D11 *DT 2736-549
Thermal treatment of viscous material e.g. gluten - 16166B/09
BADI 30.05.75 BADISCHE MASCHINENF D18 =SU -602-122
Leather ironing and embossing machine - 94487X/51
BADI 13.01.77 BASF WYANDOTTE CORP A97 D23 F09 =ZA 7800-231
Skimming aid for tall oil soap recovery - 42006A/23
BADI 23.05.77 BASF AG A97 D25 E17 (A25 E16) =FR 2392-108
Synergistic low foaming surfactant compsn. - 87977A/49
BADI 25.05.77 BASF WYANDOTTE CORP D25 E19 (E36) =FR 2392-106
Thickened cleaning concentrate for metal surfaces, esp. vehicles - 70835A/40
BADI 09.08.77 BASF AG D16 E19 F06 (E37) =GB 2002-831
Peroxide bleaching of textile material contg. cellulose - 09987B/06
BADI 09.08.77 BASF AG D16 E19 F06 (E37) =NL 7808-327
Peroxide bleaching of textile material contg. cellulose - 09987B/06
*BALC/ 06.07.77 BALCAR C D25 *CS 7704-480
Felt and screen cleaning and washing agent - B/09
*BALM/ 01.08.76 BALMASOV V P D12 *SU -602-152
Water-separator for fish-water-air pulp - 17551B/09
*BARI/ 02.01.78 BARINKA J C03 D13 (D18) *CS 7800-039
Feedstuff protein concentrate prodn. - B/09
*BATZ 25.08.77 BATEMAN E L LTD D17 *ZA 7705-144
Treating effluent from regeneration of sugar refining ion exchangers - 17984B/09
*BATZ 25.08.77 BATEMAN E L LTD D17 *ZA 7705-145
Treating rinsing liquor from sugar refining ion exchange columns - 17985B/09
BEEC 20.04.74 BEECHAM GROUP LTD B02 C02 D16 =OE 7502-985
Clavulanic acid and derivs. - 72840W/44
BEEC 09.10.74 BEECHAM GROUP LTD B02 C02 D16 =OE 7702-051
Clavulanic acids and derivs - 72840W/44
BEHW 22.12.73 BEHRINGWERKE AG B04 D16 =DS 2364-317
Choleragen-prodn. from culture filtrate solns. - 44652W/27
BENC 16.11.74 BENCKISER-KNAPSACK D25 E33 (E34) =OE 7508-657
Mixed granules of sodium tripolyphosphate and alkali meter silicate - 28354X/16
BENC 29.03.77 BENCKISER-KNAPSACK D15 E11 F09 =OE 7800-972
(N)-Sulpho-alkane-aminoalkane-phosphonic acids - 55139A/31
BEPE- 23.05.77 BEPEX CORP D15 F09 J01 (D14 D16) =FR 2391-755
Continuous disc type filter press for dewatering slurries - 88131A/49
BERO- 11.07.77 BERO-ENERGIE BERATU D15 J08 =NO 7802-382
Recovering waste heat from buildings - 23309A/13
*BIER- 11.08.77 BIERDRIVE AG D16 *DT 2736-281
Pressurised beer tank fitting - 16150B/09
*BIER- 11.08.77 BIERDRIVE AG A92 D16 *DT 2736-282
Beer tank charging system - 16151B/09
*BIER- 11.08.77 BIERDRIVE AG D16 *DT 2736-283
Spherical storage tank mount - 16152B/09
BIER- 11.08.77 BIERDRIVE AG A92 D16 =DT 2736-284
Reinforcement of joints in spherical GRP pressure vessels - 89699A/50
BIER- 11.08.77 BIER-DRIVE AG A92 D16 =NL 7808-283
Reinforcement of joints in spherical GRP pressure vessels - 89699A/50
BIER- 11.08.77 BIER-DRIVE AG D16 =NL 7808-285
Pressurised beer tank fitting - 16150B/09
BIER- 11.08.77 BIER-DRIVE AG D16 =NL 7808-286
Spherical storage tank mount - 16152B/09
*BIOL- 15.07.77 BIOLOGISK AVFALLSHA D15 *SW 7708-243
Rectangular biological effluent treatment vessel - B/09
*BIOS= 10.10.74 BIOSYNTH PROTEINS C03 D15 (D13) *SU -597-648
Protein prepn. from surplus active sediment of aq. waste - 17520B/09
BOEH 29.07.75 CELAMERCK & CO GMBH B03 C02 D22 =OE 7605-090
(1)-Acylamino-(2,2,3)-trichloropropyl-triazoles and -imidazoles - 09294Y/06
BOHT 00.00.75 BOHME DR T KG D18 =DS 2629-537
Treating fur and leather in organic solvents - 04373A/03
*BOHU/ 21.11.77 BOHUNICKY K D16 (D11) *CS 7707-635
Yeast evaluation by fermentation power measurement - B/09
BOLI 26.05.77 BOLIDEN AB D25 E34 =FR 2392-110
Granulated silicate compsn. with outer layer of tri:poly:phosphate - 88151A/49

BONG- 22.07.76 BONGARD & CIE SA D11 =BE -871-272
Multideck baking oven control - 08601A/05
BORS/ 12.08.77 BORST A H D15 =DT 2834-717
Combined waste water treatment and rubbish disposal - 89700A/50
BORS/ 12.08.77 BORST A H D15 =DT 2834-718
Combined waste water treatment and rubbish disposal - 89700A/50
BORS/ 12.08.77 BORST A H D15 =GB 2002-647
Combined waste water treatment and rubbish disposal - 89700A/50
BORS/ 12.08.77 BORST A H D15 =NL 7808-434
Combined waste water treatment and rubbish disposal - 89700A/50
BORS/ 12.08.77 BORST A H D15 =NL 7808-435
Combined waste water treatment and rubbish disposal - 89700A/50
BOSS/ 05.03.77 BOSSERT E C03 D13 =US 4140-649
Rinsing agents for cleaning foodstuffs - 65570A/37
*BRAV/ 29.08.77 BRAVERMAN A A97 D13 *US 4140-807
Freezable confection with chewy, non-icy consistency - 17936B/09
*BRBL 22.10.77 BRAUNSCHWEIG MASCH C04 D15 H09 *BE -871-371
Drying aq. sludge to mfr. fertiliser, solid fuel, pigments, etc. - 16030B/09
BREW 18.01.77 BREWING PATENTS LTD D16 =ZA 7800-328
Extracting alpha acids from hops for brewing - 53445A/30
BRIM 31.01.73 BRISTOL MYERS CO B02 C02 D13 =FR 2391-728
3-Heterocyclyl thiomethyl cephalosporins - 57268V/32
BRIM 27.06.75 BRISTOL MYERS CO B04 C03 D16 (D22) =FR 2391-731
Antibiotic figaroic acid complex - 03938Y/03
BRWI 13.04.77 BROWN & WILLIAMSON CORP D18 (D16) =US 4140-136
Denicotinising tobacco biochemically - 55997Y/32
BUCM 22.12.75 BUCHERGUYER MASCH D14 =US 4140-051
Press for separating fluids from solids esp. fruit juices - 47279Y/27
BUCM 21.04.76 BUCHERGUYER MASCH D13 =OE 7801-967
Fruit juice extraction drum - 81426Y/46
BUCM 27.07.76 BUCHERGUYER MASCH D15 =US 4140-737
Aeration of foaming liquors - 10641A/06
BURR- 26.11.76 BURRUS F J & CIE D18 =CH -608-347
Continuously producing cigarette filter tips - 25317Y/15

CALG 23.09.74 CALGON CORP D15 E16 J05 =J5 1057-302
Scale prevention in steam generators - 39736X/21
CALG 23.09.74 CALGON CORP D15 E16 J05 =J7 9002-330
Scale prevention in steam generators - 39736X/21
CALP- 13.08.77 CALPIS FOOD IND CO D11 E17 =DT 2835-149
Treatment of wheat flour - 14566B/08
CANA 18.04.75 CANADIAN PAT & DEV LTD D13 #US 4140-803
Proteinaceous snack foods prodn. from non-oilseed legumes - 45615Y/26
CARL- 04.02.74 CARLTON & UTD BREWE D16 E12 =OE 7706-553
Isohumolone-metal complex and alkali metal cpd. beer-bittering compsn. - 40991W/25
CEDE- 11.07.77 CEDERROTHS AB D22 =DK 7801-999
Adhesive medical plaster with impregnated gauze dressing - 80223A/45
CEDE- 11.07.77 CEDERROTHS AB D22 =NO 7801-532
Adhesive medical plaster with impregnated gauze dressing - 80223A/45
CELF- 11.08.77 CELFIL CO D18 F09 =NL 7807-950
Mfr. of paper band for cigarette filter tips - 89704A/50
CHAS/ 04.07.74 CHASTAN-BAGNIS L D15 =CA 1048-420
Cleaning the surfaces or stretches of polluted water - 07809X/05
*CHEM- 16.08.77 CHEMAP AG A96 D16 *GB 2002-814
Cultivating animal cells as monocellular layer - 16413B/09
CHIN 20.12.71 CHINOIN GYOGYSZER B05 D13 E14 =CA 1048-535
1,3-diphenylpropan-1-ones - 39024U/28
CHRI- 08.08.77 CHRIST FILS SA D13 (D15 D16) =DT 2824-442
Proteinaceous food made by controlled fermentation of waste water - 25801A/14
CHRI- 08.08.77 CHRIST FILS SA D13 (D15 D16) =NL 7806-660
Proteinaceous food made by controlled fermentation of waste water - 25801A/14
*CHUS 18.08.77 CHUGAI SEIYAKU KK B02 C02 D13 *DT 2835-936
Animal e.g. cattle, sheep or pigs growth promotion - 16289B/09
CIBA 17.08.73 CIBA GEIGY AG B04 D16 =CA 1048-430
Fermentative prodn. of desacetoxycephalosporin C - 16346W/10
CIBA 03.12.76 CIBA GEIGY AG A60 D21 E16 F06 (E13) =FR 2392-105
Textile softening and hair rinsing product - 40337A/23
CIBA 26.05.77 CIBA GEIGY AG B04 C03 D13 (D16) =FR 2391-655
Avilamycin antibiotic as animal feed additive - 86132A/48
CIBA 04.07.77 CIBA GEIGY AG A60 D25 E23 F06 =GB 2002-749
Bis:triazinyl-amino-stilbene derivs. - 01921B/02
CIBA 20.07.77 CIBA GEIGY AG A26 B07 C03 D22 (A18 A96 B04) =GB 2002-788
Water insoluble polysiloxane hydrogel - 09935B/05
CLAR 27.05.77 CLARKE CHAPMAN LTD A88 D15 J04 =FR 2391-768
Ion exchange resin regeneration - 87800A/49
*CLGE 22.10.75 COLLAGEN CORP A96 B04 D22 *US 4140-537
Non-antigenic atelo-peptide collagen fibres for surgical sponges, etc. - 17818B/09
*CNRM 20.10.78 CENT RECH METAL D15 H09 *BE -871-436
Removing phenol, thiocyanate, and complex cyanide s) from waste water - 16043B/09
*CNRM 20.10.78 CENT RECH METAL A97 D15 H09 *BE -871-437
Treating effluents from coke mfr. using stripping column - 16044B/09
COAG- 19.08.77 LA COMM AGRICOLA S D14 =GB 2002-645
Mixing and distributing machine for farm animal fodder - 89679A/50
COLG 01.06.72 COLGATE PALMOLIVE CO D25 E17 (E23 E24) =DS 2326-467
Clear, liq heavy -duty washing compsns - 79658U/52
COLG 08.12.72 COLGATE PALMOLIVE CO D21 E31 =US 4140-758
Oral compsns. e.g. toothpaste, contg. dextranase - 88706X/47
COLG 12.08.74 COLGATE PALMOLIVE CO D22 =OE 7506-238
Quilted diaper having absorbent interlayer - 01552X/01
COLG 24.02.75 COLGATE PALMOLIVE CO A96 D22 F07 =CH -608-698
Absorbent pad - 56071X/30
COLG 24.02.75 COLGATE PALMOLIVE CO A96 D22 F07 =CH -608-699
Diaper having perforated thermoplastic upper sheet - 53796X/28
COLG 07.07.75 COLGATE PALMOLIVE CO D22 F07 =CH -608-369
Baby's disposable nappy - 86993X/47
COLG 04.06.76 COLGATE PALMOLIVE CO A96 D21 (A25) =ZA 7703-077
Toilet soap contg. polyethylene oxide powder - 70788Y/40
COLG 27.12.76 COLGATE PALMOLIVE CO B05 D21 =OE 7709-111
Non-staining oral hygiene compsns. - 30312A/17
COLG 25.05.77 COLGATE PALMOLIVE CO B06 D21 E34 =FR 2391-719
Dentifrice compsn. contg. mono:fluorophosphate and fluoride - 68966A/39
COLG 09.06.77 COLGATE PALMOLIVE CO B06 D21 E13 =J5 4008-732
Stable dentifrice compsn. for unlined aluminium tube - 74354A/41
COLG 13.06.77 COLGATE PALMOLIVE CO B05 D21 E11 #J5 4008-712
Buccal hygiene composition or dentifrice - 75934Y/43
COLG 15.07.77 COLGATE PALMOLIVE CO D25 =DK 7803-148
Toilet soap contg. polyethylene oxide and fatty acids - 82204A/46
COLG 15.07.77 COLGATE PALMOLIVE CO D25 =SW 7807-559
Toilet soap contg. polyethylene oxide and fatty acids - 82204A/46
COLG 10.08.77 COLGATE PALMOLIVE CO D22 =DT 2829-923
Baby's disposable napkin with adhesive securing straps - 87884A/49
COLG 10.08.77 COLGATE PALMOLIVE CO D22 =NL 7806-982
Baby's disposable napkin with adhesive securing straps - 87884A/49
COLG 17.08.77 COLGATE PALMOLIVE CO A97 D24 (A14 D25) =GB 2002-807
Soap tablet contg. fatty acid salt and interpolymer - 89696A/50
*COLG 17.03.78 COLGATE PALMOLIVE CO A97 D25 E19 *US 4140-641
Conc. single phase liq. detergent-softener compsn. - 17866B/09
COLO- 24.05.77 COLOPLAST INT A/S A96 D22 (A18) =FR 2392-076
Non-irritating stoma bag sealing or closing material - 89980A/50
COMS 14.04.76 COMMISS ENERGIE ATOMIQUE A97 C03 D22 =GB 1538-386
Hydrophobic substrate with hydrophilic polymerised inclusions - 55819Y/32
*CONO 31.03.78 CONTINENTAL OIL CO D25 E17 *US 4140-711
Alkane di:sulphonate(s) prepn. - 17889B/09
*CORG 28.09.77 CORNING GLASS WORKS B04 D16 J04 *US 4140-581
Immunoassay of Neisseria bacteria - 17840B/09
CORP 16.06.77 CPC INTERNATIONAL INC B03 C02 D13 (D16 D17) =J5 4008-737
Syrups of high fructose content prodn. from sucrose - 91482A/51
CSIR 04.05.70 COMMONWEALTH SCIENT ORG A97 D15 J01 =DT 2167-145
Phase sepn process - 74209S/47
CSIR 04.05.70 COMMONWEALTH SCIENT ORG A97 D15 J01 =DT 2167-146
Phase sepn process - 74209S/47
*CSIR 10.12.75 COMMONWEALTH SCIENT ORG D15 J04 *US 4140-487
Appts. for analysis of water - 17794B/09
CTPR 07.02.78 COTTON INC C03 D13 E17 F09 (E13) #ZA 7800-739
Chemical de:lintering cottonseed hulls - 45562A/25

*DAAB 22.06.77 SHIONO KORYO KK D23 E13 (D21) *J5 4009-271
3',4'-Methylenedioxy-phenyl:butanal cpds. - 17037B/09
*DAID- 23.06.77 DAIDO SANSO KK D15 E11 M25 *J5 4009-193
Extracting molybdenum and tungsten from aq. soln. - 16996B/09
*DAIL 17.06.77 DAICEL KK A88 D18 (A11) *J5 4008-800
Tobacco smoke filter - 16922B/09
*DAIL 23.06.77 DAICEL KK A88 D15 J01 *J5 4009-168
Sleeve insert for micro-filtration, ultrafiltration or reverse osmosis - 16975B/09
*DAIZ 21.06.77 DAIDO TOKUSHOKO KK D22 J01 *J5 4008-165
Deodorisation of waste gas - 16754B/09
DARD/ 23.01.75 DARDIK I I D22 =OE 7505-416
Prothetic elements for mammals - 81514W/50
*DAUC 23.06.77 DAIICHI PHARM KK D13 E24 *J5 4008-770
Stabilising crystalline neopurpuratin red-purple colourant - 16913B/09
DDSK- 24.01.77 DDS-KROVER AS D17 =ZA 7800-396
Starch hydrolysates prepd. from wheat, barley or rye - 38592A/22
DEBA- 30.07.76 DEBAG DEUT BACKOFEN D11 =OE 7705-501
Circular dough kneading machine - 10590A/06
DEGS 00.00.74 DEUTSCHE GOLD AND SILBER D15 E33 J01 =DT 2735-271
Mfr. of aluminosilicate cation exchangers contg. surfactants - 09982B/06
DEGS 29.05.76 DEUTSCHE GOLD & SILBER D15 E35 =OE 7703-803
Purifying waste waters contg. ammonia or ammonium salts - 55869Y/32
DEGS 26.05.77 DEUTSCHE GOLD & SILBER D22 E16 (E12 E37) =FR 2391-976
Deodorising liquid manure esp. of pigs and poultry - 86111A/48

DEGS 18.06.77 DEUTSCHE GOLD AND SILBER D25 E33 =J5 4008-198
Aluminosilicate cpds. contg. combined surfactants - 91495A/51
*DIAC- 27.06.77 DIA CHEMIFA KK D13 E36 J01 *J5 4010-290
Powdered iron bonded to base sheet, used to remove oxygen - 17175B/09
*DIAC- 27.06.77 DIA CHEMIFA KK D13 E36 J01 *J5 4010-291
Powdered iron bonded to base sheet, used to remove oxygen - 17176B/09
DIAS 25.05.77 DIAMOND SHAMROCK CORP D15 E36 J03 (E34) =FR 2392-140
Maintaining efficiency of sea-water electrolysis cells - 45573A/25
*DIAT- 22.06.77 DIA TOKKYO PROJECTK D13 E36 G04 *J5 4008-186
Antioxidant used for preserving food etc. - 16773B/09
*DNII 23.06.77 DAINIPPON INK INST CHEM D15 E16 *J5 4009-182
Adsorption of heavy metal contg. anions e.g. from waste water - 16987B/09
*DNIN 23.06.77 DAINIPPON INK CHEM KK D15 E16 *J5 4009-182
Adsorption of heavy metal contg. anions e.g. from waste water - 16987B/09
DORO 03.01.75 DORR OLIVER INC D15 =CH -608-471
Removal of grit and fibres from activated sludge - 42029X/23
DORO 25.08.76 DORR OLIVER INC D15 =ZA 7703-821
Rotating skimmer arm for square settling tank - 62835Y/35
*DORY- 21.06.77 DORYOKURO KAKUNENRY D15 K07 L02 *J5 4008-300
Solidifying radioactive waste organic solvent - 16794B/09
DOWO 29.09.75 DOW CORNING CORP A88 D15 J01 =GB 1541-283
Liquids distillation by solar energy - 23834Y/14
DOWO 05.08.76 DOW CORNING CORP A96 D22 E33 (A26) =GB 1538-378
Blood storage systems - 12650A/07
DRAG- 25.05.77 DRAGOCO GERBERDING D23 E14 =FR 2391-984
Formaldehyde di:aryl acetal(s) - 90929A/50
DRAG- 25.05.77 DRAGOCO GERBERDING D23 E17 =FR 2391-986
2,3,5,5-Tetra:methyl hexanal - 89833A/50
DRAG- 27.06.77 DRAGOCO GERBERDING D21 E17 =OE 7707-665
Glycerine:tri-3,5,5-tri:methyl-hexanoate - 06187B/04
DRED 26.11.73 VEB ARZNEIMITTEL DRESDEN B04 D16 =CH -608-521
Prodn. of streptococcal metaboltes esp. streptokinase - 24375W/15
*DSIL/ 28.06.76 RIBEIRO DA SILVA A D16 *FR 2392-117
Continuous crystalliser to extract crystals from wine by cooling - 16330B/09
DSOM- 04.12.73 DSO MLECHNA PROMISH D13 (D16) =CA 1048-429
Bulgarian yoghourt ferments prepn - 32466W/20
*DTUR/ 30.08.77 DE TURVILLE C M D C03 D13 E19 H09 (C04) *US 4140-344
Extraction of organic matter from marine sediment - 17777B/09
DUPO 04.09.68 DU PONT DE NEMOURS CO A24 D15 J01 =DS 1941-932
Perm selective membranes from linear aromatic - 12670R/08

EAST 10.12.76 EASTMAN KODAK CO B04 D16 =FR 2392-113
Alpha-glycero-phosphate oxidase microbiological prodn. - 44391A/25
EAST 10.12.76 EASTMAN KODAK CO B04 D16 J04 =FR 2392-384
Compsn. for analysing lactate in blood - 42201A/24
*EBAI 20.06.77 EBARA INFILCO KK D15 *J5 4007-758
Treating nitrate and/or nitrite-contg. waste water - 16684B/09
*EBAI 20.06.77 EBARA INFILCO KK D15 *J5 4007-759
Controlling organic carbon added in biological denitrification - 16685B/09
*EBAI 22.06.77 EBARA INFILCO KK D15 *J5 4009-452
Removing BOD and organic nitrogen components from waste water - 17057B/09
ECCH- 08.04.72 EC CHEMICAL IND KK A21 D15 G04 =DS 2317-158
Coagulating agents and viscosity modifiers - 64283U/43
*EDWA/ 11.03.77 EDWARDS G W A60 C03 D13 E19 (A41 D23) *US 4140-805
Alfalfa or clover extraction to separate lipid(s) - 17935B/09
EFFE- 15.08.77 EFFEM FOODS PTY C03 D13 =DT 2835-516
Animal food, esp. for cats and dogs, based on animal blood - 14161B/08
*EGRE/ 26.05.77 EGRETIER M D16 *FR 2392-115
Winemaking maceration process of the carbonic type - 16329B/09
*EICH/ 12.08.77 EICHLER J B07 D14 *DT 2736-362
Pills and sweets coating machine - 16155B/09
ELAS- 18.07.73 ELASTIN-WERK AG A21 D12 (A97) =CA 1048-335
Thin tubular film e.g. for sausage skins - 09101W/06
ELBI- 18.08.77 ELBICON ELTRN PVBA D14 =GB 2002-899
Foreign body detection by reflected polarised infrared light - 06418A/04
ELIL 09.06.76 ELI LILLY AND CO B02 D16 =ZA 7703-467
(1)-Hydroxy-(6,6)-dimethyl-hexahydro-(9H) dibenzo (b,d)-pyran derivs. - 86592Y/49
ELIL 05.08.77 ELI LILLY & CO A96 D21 G02 (A14 A82) =DT 2757-773
Nail varnish based on aq. polymer emulsion - 42204A/24
ELLE/ 05.08.77 ELLENBERGER W C03 D13 =DT 2735-297
Hydrolysing casein with aq. acid avoiding darkening - 87876A/49
ELPA 19.12.73 EL PASO PROD CO D23 E15 (D13) =CH -608-482
3-Alkyl-cyclopentane-1,2-diones prepn - 32506W/20
ELRO 26.05.77 ELEKTROKEMISKA AB D25 E34 =FR 2392-110
Granulated silicate compsn. with outer layer of tri:poly:phosphate - 88151A/49
ENVI- 02.01.74 ENVIRONMENTAL SCIEN D15 =J7 9002-022
Improving quality of leachate from sanitary landfills - 75460V/43
ERAP 08.07.77 SOC NAT ELF AQUITAI A96 D22 E17 =DK 7803-065
Compsns. contg. di:thiol cpds. for protecting the skin against UV - 80241A/45
*EROC/ 29.06.76 EROCHINA L I B02 D16 *CS 7704-290
Inosine prepn. - B/09
ETHI 13.06.77 ETHICON INC A97 D22 F01 (A25) =US 4140-678
Synthetic absorbable fibres for high strength sutures - 00314B/01

FARB 13.07.76 BAYER AG D22 =US 4140-479
Radiation sterilisation in solid-particle-free atmos. - 09739A/05
FARB 25.05.77 BAYER AG A96 D21 (A14 A25) =FR 2391-706
Polyurethane elasticised PMMA dental moulding - 86137A/48
FARB 26.05.77 BAYER AG D15 E11 M14 =FR 2391-961
Phosphono:carboxylic acid-alcohol reaction products - 89841A/50
FARB 28.05.77 BAYER AG A25 D21 (A96) =FR 2391-705
Prodn. of polyurethane with vinyl gps. for dental impressions - 86157A/48
FARB 16.07.77 BAYER AG B02 C02 D22 E13 =DK 7803-182
Penicillin and cephalosporin analogues - 08255B/05
FARB 16.07.77 BAYER AG B02 C02 D22 E13 =DK 7803-183
Antibacterial cephalosporin cpds. - 08261B/05
FARH 12.06.74 HOECHST AG D13 E12 =CA 1048-538
Adduct of sorbic acid and potassium sorbate - 00047X/01
FARH 18.07.74 HOECHST AG B03 D13 E13 =OE 7707-089
6-Methyl-3,4-dihydro-1,2,3-oxathiazin-4-one 2,2 dioxide prepn - 09488X/06
FARH 28.06.75 HOECHST AG D25 E34 (E12) =OE 7604-657
Alkali phosphates with high degree of whiteness - 04109Y/03
FARH 15.04.76 HOECHST AG B05 C03 D22 E19 =CH -608-715
Disinfectant compsn. contg. aminopropyl-phosphonate - 75854Y/43
FARH 09.07.77 HOECHST AG A97 D25 E11 =DK 7803-078
Liquid cleaning prod. for articles with a hard surface - 01923B/02
FARH 11.08.77 HOECHST AG A81 D18 F06 G03 =DT 2736-147
Water vapour absorbent and permeable adhesive compsn. - 12365B/07
FARH 11.08.77 HOECHST AG A82 D22 F08 (A83 A84 A96) =DT 2736-205
Water vapour absorbent and permeable rubber web - 12364B/07
FARH 19.08.77 HOECHST AG A97 D25 E11 (E34) =DT 2737-409
Detergent additive contg. sodium sulphate and/or tri:poly:phosphate - 11931B/07
FARH 19.08.77 HOECHST AG A97 D25 E11 (E34) =GB 2002-808
Detergent additive contg. sodium sulphate and/or tri:poly:phosphate - 11931B/07
*FESH/ 18.02.75 FESHCHENKO N S D14 *SU -602-159
Fruit and vegetables classifier - 17557B/09
FIND- 29.11.76 PROD FINDUS SA D14 =CH -608-345
Machine for trimming vegetables etc. partic. cauliflower - 15940A/09
FIRM 02.07.75 FIRMENICH SA D13 E13 =CH -608-344
Diketopiperazine foodstuff aromatiser - 09683Y/06
FIRM 24.05.77 FIRMENICH SA A96 D23 =FR 2391-720
Stabilisation of perfume materials - 82089A/46
FIRM 17.06.77 FIRMENICH SA D23 E13 (D13 D21) =J5 4009-275
Tri:cyclic norbornane derivs for perfumery use - 02215B/02
FMCC 17.06.77 FMC CORP A97 D25 E19 (A25 E34) =J5 4008-193
Stabilised sodium carbonate peroxide or sodium perborate - 03917B/02
*FMCC 17.06.77 FMC CORP D25 E34 *J5 4008-197
Stabilised sodium carbonate peroxide prodn. - B/09
FOOD 17.06.77 FOOD RESEARCH INST D13 =J5 4008-753
Textured protein prodn. from krill - 09921B/05
*FORM/ 27.09.76 FORMAN L C03 D13 *CS 7606-219
Complex granules and pellets prodn. for farm animals - B/09
FREU 23.08.75 FREUDENBERG, CARL FA C03 D13 (D16) =OE 7606-201
Water soluble protein hydrolysate food additive mixt. - 14891Y/09
FRIT- 06.08.75 FRITZSCHE DODGE OLC B05 D13 E17 (D18 E15) =US 4140-134
Aromatising compsns. contg. dialkyl diacyl succinates - 13243Y/08
*FRIY 07.07.75 FRITO-LAY INC D13 *US 4140-801
Potato prods. having good colour characteristics - 17932B/09
FRNG 22.12.75 FRINGS H FA D16 =OE 7609-255
Vinegar prodn. with high acetic acid concn. - 47311Y/27
FRRR 17.12.75 FERRERO P & CIA SPA D14 =CH -608-696
Industrial prodn. of food items cut by laser beam - 29160Y/17
FRRR 05.03.76 FERRERO P & CIA SPA B07 D13 =OE 7701-410
Coatings for dragees - 47002Y/27
FRUC/ 26.01.76 FRUCHTNICHT E A D15 =US 4140-079
Pisciculture water treatment circuit - 55990Y/32
FUJI 19.11.75 FUJISAWA PHARM IND KK B03 D16 =OE 7608-513
Microbial prodn. of Nocardicine A antibiotic - 36211Y/21
*FUJI- 18.06.77 FUJI SANGYO PLANT K A35 D15 *J5 4007-756
Water-insoluble cpd., e.g. synthetic resin, sepn. from waste water - 16682B/09

*GABE/ 09.08.77 GABELEIN K D22 E13 (D13 D21) *DT 2735-805
Ozone cpd. sterilisers e.g. for cosmetics therapeutic cpds. and foods - 16118B/09

GENA 10.06.77 GAF CORP A96 D21 (A14) =J5 4008-730
Hair setting and conditioning compsn. - 00430B/01
*GENO 04.06.70 GENERAL FOODS CORP D13 *US 4140-809
Frozen soup concentrate of plastic consistency - 17937B/09
GENO 14.04.77 GENERAL FOODS CORP D13 #GB 1538-387
Coffee flavour-aroma for soluble coffee prodn. - 76696A/43
*GENO 21.07.77 GENERAL FOODS CORP D13 *SW 7708-438
Fine grinding of roast coffee beans - B/09
*GERB 26.08.77 GERBER PRODUCTS CO D13 *US 4140-802
Sterile barley malt flour prodn. - 17933B/09
GIOV- 19.09.74 GIOVANOLA FRERES SA D16 =OE 7507-123
Fermentation of substrates - 26723X/15
*GIVA 10.02.75 GIVAUDAN L & CIE SA D23 E15 *CH -608-777
Prepn. of organoleptic isophorone derivs. for perfumery - 16070B/09
GIVA 11.08.77 GIVAUDAN L & CIE SA D13 E13 =DT 2835-368
4-Cyano-tetra:hydro-furan-3-one(s) and 4-hydroxy derivs. - 14604B/08
GIVA 11.08.77 GIVAUDAN L & CIE SA D13 E13 =NL 7808-366
4-Cyano-tetra:hydro-furan-3-one(s) and 4-hydroxy derivs. - 14604B/08
GLAS/ 07.02.77 GLASSMAN J A D22 #FR 2391-660
Double use nappy - 58954A/33
*GONZ/ 15.03.77 GONZALEZ-SICILIA M D13 *OE 7701-770
High value and easily digestible protein prodn. - B/09
*GORL/ 18.12.75 GORLATOV A S D14 (D12) *SU -602-155
Frozen fish block defrosting appts. - 17554B/09
GOTT/ 17.04.75 GOTTSCHE R D15 F06 J01 (F09) =DS 2517-041
Alkaline industrial wastes neutralization - 83390X/45
GOUN 23.06.77 GOULD F E INC A25 B07 C03 D21 (A85 A88 A96 D22) =J5 4010-398
Polyurethane polyether contg. lactone gps., or hydroxy and carboxy gps - 04379B/03
GRAI 02.01.75 GRAIN PROCESSING CORP D13 =OE 7600-016
Extracting protein from vegetable material - 40035X/22
*GULW 29.12.75 GULF & WESTERN CORP A97 D18 (A11) *US 4140-135
Hydrophobic coating film for reconstituted tobacco - 17736B/09
*GUSE= 25.06.75 GUSEV GLASS RES INS A81 D24 L01 (A11) *SU -580-189
Coating compsn. for producing decorative patterns on glass - 17494B/09

*HABU- 16.06.77 HABUTAE DOFU KK C03 D13 *J5 4010-195
Fish feedstuff prepn. - 17120B/09
HAHG 06.10.73 HAHN DR C KG B05 D21 (B01) =OE 7805-266
Compsns. for treating the skin and scalp - 24166W/15
HAND- 29.04.71 A HANDTMANN METALLG D12 =SU -602-100
Sausage-making machine - 77338T/49
HAND- 12.03.76 HANDTMANN A AG D12 =OE 7701-675
High speed hanger conveyor for loops of sausages - 67096Y/38
HART/ 29.08.75 HART U L A97 D22 E19 (E37) #CA 1048-406
Deodorising soiled diapers using hypertonic soln. - 62104W/37
*HAWK 03.11.76 HAWKER SIDDELEY WAT D15 J01 *GB 1541-293
Scum removal from a liq. settling tank - 16368B/09
*HAYB 21.06.77 HAYASHIBARA BIOCHEM B07 D23 (D13 D21) *J5 4008-605
Gelation of liq. fatty oil - 16821B/09
*HEAT= 08.06.76 HEAT MASS EXCHANGE D14 J08 *SU -580-428
Finely disperse material thermal treatment - 17495B/09
HEBE- 25.03.72 HEBENSTREIT GMBH D11 =OE 7605-623
Automatic filled wafer machine - 61989U/42
HENK 07.04.73 HENKEL KG AUF AKTIEN D23 J01 =DS 2317-563
Fractionation of fatty materials - 74291V/43
HENK 18.06.73 HENKEL KG AUF AKTIEN D25 E17 =CH -608-775
Nonionic ethoxylated products for washing compsns. - 00028W/01
HENK 27.08.73 HENKEL KG AUF AKTIEN B03 C01 D13 E11 (D15 D21 D25) =CH -608-503
Pyrrolidone-5,5-diphosphonic acids - 17439W/11
HENK 27.08.73 HENKEL KG AUF AKTIEN B03 C01 D13 E11 (D15 D21 D25) =CH -608-504
Pyrrolidone-5,5-diphosphonic acids - 17439W/11
HENK 00.00.74 HENKEL KG AUF AKTIEN D15 E33 J01 =DT 2735-271
Mfr. of aluminosilicate cation exchangers contg. surfactants - 09982B/06
HENK 07.06.74 HENKEL KG AUF AKTIEN D23 E15 =CH -608-478
Acetals useful in perfumery - 84972W/52
HENK 02.04.77 HENKEL KG AUF AKTIEN D25 E16 =BR 7802-033
Textile detergent for use in cold water - 72701A/41
HENK 22.04.77 HENKEL KG AUF AKTIEN A97 D25 E33 (A25 E19) =OE 7702-839
Phosphate free washing powder compsn. contg. aluminosilicate - 76322A/43
HENK 04.05.77 HENKEL KG AUF AKTIEN A97 D25 E19 (A23) =OE 7703-164
Detergent for cold-washing textiles - 84360A/47
HENK 28.05.77 HENKEL KG AUF AKTIEN A97 D25 (A25) =FR 2392-107
Rinsing prod. for dish washing machines, contg. draining cpd. - 86153A/48
HENK 18.06.77 HENKEL KG AUF AKTIEN D25 E33 =J5 4008-198
Aluminosilicate cpds. contg. combined surfactants - 91495A/51
HENK- 28.05.77 HENKELL & CO D16 =FR 2392-116
Deacidification of must or wine contg. tartaric and maleic acids - 61867A/34
HERC 25.05.77 HERCULES INC A11 D22 F01 =FR 2392-069
Highly absorbent cellulose fibres coated with water-insoluble polymer - 86128A/49
*HIEJ 20.06.77 HITACHI PLANT ENG CONST A97 D15 *J5 4007-760
Purificn. of oily waste water e.g. coolant water - 16686B/09
*HIEJ 20.06.77 HITACHI PLANT ENG CONST D15 *J5 4007-761
Fluorine-contg. waste water purificn. - 16687B/09
*HIEJ 20.06.77 HITACHI PLANT ENG CONST D15 *J5 4007-762
Purificn. of fluorine cpd.-contg. waste water - 16688B/09
*HITF 24.06.77 HITACHI SHIPBLD ENGG KK D15 J01 (J03) *J5 4010-284
Desalting a soln. in electrodialytic appts. - 17170B/09
HOFF 06.07.76 HOFFMANN-LA ROCHE AG D13 =OE 7704-783
Hard caramel prepn. using xylitol - 02120A/02
HOFF 18.02.77 HOFFMANN-LA ROCHE AG D16 =ZA 7800-809
Microorganism detection by liquid and solid culture media - 62154A/35
HOFF 12.08.77 HOFFMANN-LA ROCHE AG D23 E15 =NL 7807-700
2,2,4-Tri:methyl-cyclopent-4-en-1,3-di:one prepn. - 14605B/08
HOFF 09.11.77 HOFFMANN-LA ROCHE INC B02 D13 E13 =US 4140-697
Optically pure (D)-tryptophan and its derivs. prodn. - 00013A/01
*HOKK- 27.06.77 HOKKAIDO TOGYO KK C04 D16 *J5 4010-171
Prepn. of compost for use as soil conditioner or fertiliser - 17117B/09
HOLT 29.10.75 HOLLYMATIC CORP D12 =CA 1048-388
Meat tenderising by reciprocating knife blades - 43063Y/24
*HOND/ 24.06.77 HONDA H D15 J01 *J5 4010-283
Filter assembly for reverse osmosis - 17169B/09
*HOOL 22.06.77 NIHON PARKERIZING D15 J01 *J5 4009-450
Sepg. oils from defatted liquor - 17055B/09
HOWM- 23.06.77 HOWMEDICA INC D21 M26 =J5 4010-224
Hot-workable cobatl-chromium-nitrogen alloys - 00491B/01
HOYE- 10.02.75 HOYER O G A/S D13 =US 4140-736
Gas-liquid mixing system for aerating stream of ice cream base - 65257X/35
*HUBE 21.07.75 HUBER J M CORP A96 B05 D21 E33 *US 4140-757
Silica thickeners for dentifrice compsns. - 17911B/09
HUTT- 26.11.75 HUTTER S & CO GMBH D15 =DS 2552-934
Boiler cleaning process - 40157Y/23
*HVIZ/ 14.12.77 HVIZDAL Z D15 *CS 7708-373
Sediment scraper - B/09

ICIL 10.04.73 IMPERIAL CHEM INDS LTD B03 D22 E13 (D21) #CH -608-490
Bis-imidazolium cpds - 50337V/28
ICIL 09.08.77 IMPERIAL CHEM INDS LTD D16 (D13) =NL 7808-171
Industrial aerobic fermentation - 11897B/07
IGUA- 30.04.75 IGUANA SRL D15 =GB 1541-317
Sea water desalination plant - 87252X/47
INFL 07.08.73 INT FLAVORS & FRAGR INC D13 E13 =CA 1048-516
Thiafuran and furanthiol flavouring agents for food - 14727W/09
INGW 02.08.77 INGENIOR N WEIBULL D17 J01 #US 4140-269
Centrifuge scraper interlock - 14351A/08
INRG 06.11.69 INST NAT RECH AGRON D16 J04 =DS 2051-189
Apparatus for measuring bacterial culture - 34077S/20
*INRG 01.09.77 INST NAT RECH AGRON D13 *BE -869-990
Obtaining food proteins from vegetable materials esp. soya - 16009B/09
INSP 08.08.77 INST PASTEUR A97 D16 (A14) =NL 7808-266
Coated supports for cell culture - 09966B/06
INTE- 18.11.75 INTEROX CHEM LTD A60 D25 E14 =GB 1541-219
Diphthaloyl peroxide from phthalic anhydride and hydrogen peroxide - 34473Y/20
INTE- 08.04.77 INTEROX D25 E34 =ZA 7801-090
Super-oxidised sodium perborate mfr. in fluid bed - 72728A/41
INTE- 27.05.77 INTEROX CHEMICALS D15 E16 (E36) =FR 2391-960
Disinfecting water esp. domestic and drinking water - 86113A/48
INTE- 14.06.77 INTER OCEAN INVEST A97 D15 (D22) =ZA 7703-557
Algicidal, bactericidal swimming-pool water treatment - 02204B/02
ITSH 09.10.75 INT SHOE MACHINERY CORP D18 =CA 1048-211
Roughing last-mounted shoe upper with attached insole - 68418X/36

JAAT 23.05.72 JAPAN ATOMIC ENERGY RES D15 E34 =J4 9015-250
Decomposing sodium thiosulphate in effluent - 17263B/09
*JAAT 23.05.72 JAPAN ATOMIC ENERGY RES D15 E34 *J7 9002-020
Decomposing sodium thiosulphate in effluent - 17263B/09
*JANA- 01.08.77 JANAR CO INC A96 B06 D21 (A25) *DT 2832-005
Fluorided dental floss - 16236B/09
JANA- 01.08.77 JANAR CO INC A96 B06 D21 (A25) =GB 2002-830
Fluorided dental floss - 16236B/09
JAPM 13.11.75 JAPAN MONOPOLY CORP B04 D16 =J7 9002-269
Pyrophosphatase-phosphodiesterase prepn. - 46195Y/26
*JASK/ 17.08.77 JASKOWSKI M C A96 D21 E17 *GB 2002-833
Hair shaping compsn. for all types of hair - 16424B/09
JETA- 20.06.77 JET AERATION CO A89 D15 J04 =J5 4008-160
Appts. for treating waste fluids with chemical agents - 40406A/23
*JOHJ 02.08.72 JOHNSON & JOHNSON A81 D22 G03 (A25 A96) *US 4140-115
Pressure sensitive tapes, bandages etc. - 17732B/09
JOHJ 11.11.74 JOHNSON & JOHNSON A96 D22 =OE 7508-340
Surgical drape with adhesive on top and bottom - 78386W/47

JOHJ 23.09.75 JOHNSON & JOHNSON D13 =GB 1541-461
Dry powder mixt. for prepn. of hypotonic drinks - 22245Y/13
JOHJ 27.05.76 JOHNSON & JOHNSON D21 M26 =ZA 7703-187
Dental alloy with reduced silver content - 84732Y/48
JOHJ 27.05.76 JOHNSON & JOHNSON D21 M26 =ZA 7703-188
Silver-copper-tin-indium dental alloys - 46714Y/26
JOHJ 23.06.76 JOHNSON & JOHNSON A96 D22 =ZA 7703-753
Absorbent bandage contg. thin flexible support film - 02572A/02
JOHJ 25.04.77 JOHNSON & JOHNSON D22 #CA 1048-204
Disposable diaper adhesive tape tab - 84463Y/47
JOHJ 17.06.77 JOHNSON & JOHNSON A96 D25 E16 =J5 4007-407
Mild cosmetic detergent compsn. esp. for shampoos and baths - 91499A/51
*JONK/ 16.08.77 JONKERS M K P B07 D21 *GB 2002-637
Fluorine compsn. teeth treatment device - 16378B/09
JUDD- 24.08.73 JUDD RINGER CORP D16 =CA 1048-290
Rapid, hot composting mixt. - 48551Y/27

KABI 06.10.75 KABI AB B04 D16 J04 =OE 7607-239
Determining enzymatic and other biological activity - 11217Y/07
*KACV/ 14.01.77 KACVINSKA V D23 *CS 7700-234
Paraffinic mixture for drawing candles - B/09
KAFF- 31.07.76 KAFFEE-VEREDELUNGS A91 D13 =OE 7705-207
Decaffeination of coffee - 15358A/08
*KAGR= 26.03.76 KAZA AGRIC ELEC MEC D18 *SU -602-458
Hides salting container - 17686B/09
*KAJI/ 15.06.77 KAJI H D13 *J5 4008-767
Calcium enriched soft drink - 16910B/09
KALI 10.06.77 KALI-CHEMIE AG B04 D16 =J5 4008-789
Water-insoluble immobilised enzyme prod. prepn. - 63596A/36
*KANE 20.06.77 KANEBO KK D13 *J5 4008-764
Prepn. of caramel with liq. centre - 16909B/09
*KANE 21.06.77 KANEBO KK B07 D23 (D13 D21) *J5 4008-605
Gelation of liq. fatty oil - 16821B/09
*KANE 21.06.77 KANEBO KK D21 E19 *J5 4008-607
Liq. shampoo compsn. - 16823B/09
KANF 14.11.73 KANEGAFUCHI CHEM KK D16 =J7 9002-266
Increasing growth rate of yeast culture - 24211W/15
*KANF 22.06.77 KANEGAFUCHI CHEM KK B03 D13 E13 *J5 4008-768
Decolourisation of stevia extract - 16911B/09
*KANF 22.06.77 KANEGAFUCHI CHEM KK B03 D13 E13 *J5 4008-769
Concentrating soln. of stevioside by reverse osmosis - 16912B/09
KAOS 26.00.75 KAO SOAP KK B05 C03 D22 =J7 9002-249
Fungicidal propanediol alkyl ethers - 62629X/33
KAOS 11.05.76 KAO SOAP KK A97 D25 E11 (E16) =US 4140-647
Cleaning compsn. for removing viscous dirt or wax stains - 85014Y/48
KAOS 13.07.76 KAO SOAP KK D24 =US 4140-456
Polishing cylindrical tablets of toilet soap - 79454Y/45
*KAWA- 17.06.77 KAWAKEN FINE CHEM K D25 E19 *J5 4007-406
Solid detergent or soap compsn. - 16599B/09
*KDFO= 16.11.76 KRASD FOOD IND RES D18 *SU -599-794
Fermenting low grade tobacco - 17523B/09
KEND 27.12.76 KENDALL CO D22 =GB 1541-348
Multilayered cup-shaped breast pad for nursing mothers - 19360A/10
*KEWA- 24.11.76 KEWANEE IND INC A97 D22 (A96 D15 D21) *US 4140-798
High mol. wt. di:methylamine-epichlorohydrin condensation prod. - 17929B/09
KIKK 13.11.75 KIKKOMAN SHOYU KK D13 =J5 2061-257
Enzymic decomposition of fish prod. to obtain seasoning - 17289B/09
*KIKK 13.11.75 KIKKOMAN SHOYU KK D13 *J7 9002-262
Enzymic decomposition of fish prod. to obtain seasoning - 17289B/09
*KIKK 21.06.77 KIKKOMAN SHOYU KK D13 (D16) *J5 4008-785
Mfr. of protein hydrolysate with high free glutamic acid content - 16915B/09
KING/ 16.06.77 KING A S D15 =J5 4006-860
Removing contaminants, e.g. surfactants, from water - 78156A/43
*KITA 21.06.77 KITASATO RES INST B04 D16 *J5 4009-201
Enzyme inhibitor KM-2753, for inhibiting human blood elastase - 17004B/09
*KLIN/ 13.06.77 KLINE L D11 (D16) *US 4140-800
Freeze-dried sour dough bread starter - 17931B/09
KNEE/ 23.09.74 KNEER F X D22 J01 =CH -608-384
Purification of waste gases - 26675X/15
*KOBM 17.06.77 KOBE STEEL KK D15 *J5 4007-757
Treating waste aq. suspensions - 16683B/09
*KOBM 20.06.77 KOBE STEEL KK D15 J01 *J5 4006-873
Cleaning tubular membrane separator - 16483B/09
*KOBM 24.06.77 KOBE STEEL KK D15 J01 *J5 4010-288
Adsorbent for oxyacid ions, e.g. sulphate or phosphate ions - 17173B/09
*KOKA- 16.06.77 KOKANDO KK D23 *J5 4008-734
Incense sticks prodn. - 16903B/09
*KOKS/ 07.03.73 KOKSHAROV A S D23 *SU -491-888
Leaf essential oil content determination - 17411B/09
KOLE/ 19.07.77 KOLEHMAINEN S C03 D13 J04 =SW 7807-859
Determn. of somatic cell count in milk to detect mastitis - 08518B/05
*KOMA/ 31.07.67 KOMAROV P N D13 E14 (D23 E13) *SU -229-485
Vanillin and heliotropin, prepn. - 17342B/09
KONN 26.01.77 GIST-BROCADES NV B04 C03 D16 =ZA 7800-421
Orally-administrable rabies vaccine - 56795A/32
*KORY- 20.06.77 KORYU KOGYO KK A97 D15 E19 M14 (A25) *J5 4006-829
Corrosion prevention compsn. for circulating soft water systems - 16462B/09
*KRAM/ 28.11.75 KRAMARENKO S S D15 *SU -602-478
Cleaner for waste water - 17691B/09
*KRAM/ 11.08.77 KRAMPITZ J D15 J02 *DT 2736-271
Mixing gas into liquid - 16149B/09
KULA= 25.04.72 VEB KULAUTOMAT D14 J07 =SU -510-164
Revolving freezer - 32103U/23
*KUNI/ 07.04.77 KUNIAK L A11 D16 *CS 7702-325
Chromogenic polysaccharide gel prepn. - B/09
*KUNI/ 18.04.77 KUNIAK L A11 D16 *CS 7702-536
Chromogenic starch prepn. - B/09
KUNZ/ 15.04.75 KUNZ P D13 =GB 1541-239
Tilting pressure vessel for steam peeling unit - 84362X/45
KURE 22.07.76 KUREHA KAGAKU KOGYO B04 D16 =GB 1538-399
Prodn. of polysaccharide with antitumour activity - 06341A/04
KURE 22.07.76 KUREHA KAGAKU KOGYO B04 D16 =US 4140-578
Prodn. of polysaccharide with antitumour activity - 06341A/04
*KURK 25.06.77 KURITA WATER IND KK D15 (D14) *J5 4010-271
Sludge treatment in protein recovery, juice sepn. etc. - 17159B/09
KURS 23.05.77 KURARAY KK B05 C03 D23 E15 =FR 2391-983
Ionone and irone cpds. prepn. - 90931A/50
KYOW 12.11.73 KYOWA FERMENTATION KK D13 =J5 0076-252
Improving flavour of fish paste or salty or pickled foods - 17288B/09
*KYOW 12.11.73 KYOWA FERMENTATION KK D13 *J7 9002-260
Improving flavour of fish paste or salty or pickled foods - 17288B/09
*KZDO= 20.01.69 KAZAN DOMESTIC CHEM D25 E19 *SU -324-769
Domestic hygienic aq. detergent compsn. - 17359B/09

*LANG- 26.08.77 LANG APPARATEBAU D15 *BE -869-972
Proportional dosing of liq. additive, esp. disinfectant, into water - 16003B/09
*LEES/ 07.02.77 LEE S Y D16 *US 4140-489
Test tube with annular region for growth of microbial colonies - 17796B/09
LEIS/ 10.09.75 LEISTNER K D15 =DS 2540-284
Anaerobic and aerobic water treatment - 20235Y/12
*LEME= 04.01.76 LENGD MEAT IND PRODN TRU D12 *SU -602-151
Sausage making and cooking installation - 17550B/09
*LEMI 27.05.75 LENINGRAD PLEKHANOV MINE D16 *SU -527-912
Frozen microbiological specimen sampler - 17459B/09
LEPE 29.06.76 GRUPPO LEPETIT SPA B04 D16 =OE 7704-583
Antibiotic L13365 from Actinoplanes sarveparensis CBS 305.76 - 02040A/02
*LERE= 10.08.76 LENGD REFRIG IND D13 *SU -602-144
Roller-screw press butter-processing machine - 17546B/09
*LERO= 04.01.76 LENGD ROSREMMEKHPRO D12 *SU -602-151
Sausage making and cooking installation - 17550B/09
LEYB 18.04.75 METAL HOBOKEN-OVERP D15 E11 J01 M28 (M25) =OE 7602-484
Extn of arsenic, antimony and bismuth impurites - 83499X/45
*LFOD= 04.01.76 LATV FODDER IND INST C02 D13 *SU -594-980
2,6-Di:methyl-3,5-di:carbethoxy-1,4-di:hydro-pyridine - 17512B/09
LINM 17.09.76 LINDE AG D16 (D13) =OE 7706-642
Foodstuff yeast prodn. - 23473A/13
LIOC 11.10.75 LION DENTIFRICE KK A96 D21 E13 =GB 1541-463
Complex emulsion of the type water-oil-water - 49133Y/28
LIOC 16.06.77 LION DENTIFRICE KK D13 E13 =J5 4008-733
Spiro-5-isopropyl-bi:cyclo(3,1.0)hexane-2,2′ oxirane isomers - 76755A/43
*LIOC 23.06.77 LION DENTIFRICE KK D21 E19 *J5 4008-729
Antiperspirant, cosmetic stick prepn. - 16901B/09
LIOT- 02.07.74 LIOT SA D13 =CH -608-695
Liquid foodstuff conservation - 03884X/03
LIOY 18.06.76 LION FAT & OIL KK D25 E12 =US 4140-657
Phosphate-free normal quality biodegradable detergent - 00462A/01
LIOY 19.05.77 LION FAT & OIL KK A96 D21 E17 (A17) =DT 2820-417
Stable cosmetic base comprising 24-36C satd. aliphatic hydrocarbon - 06819B/04
*LIOY 16.06.77 LION FAT & OIL KK A17 D18 (A97) *J5 4008-701
Softening and oiling agent for leather - 16891B/09
*LIOY 21.06.77 LION FAT & OIL KK A96 D21 *J5 4008-688
Cation-denatured polypeptide used in cosmetics - 16882B/09
*LIOY 21.06.77 LION FAT & OIL KK D21 *J5 4008-728
Cosmetic base of cation-modified protein - 16900B/09
LOOS- 05.03.75 LOOSLI A MASCH D16 J02 =CH -608-723
Propellor for liquid manure prepn. - 65930W/40
*LUCN/ 02.02.78 LUCNY M D11 *CS 7800-671
Surfactant additive for bakery products - B/09
*LYCK 18.10.77 LYCKEBY STARKEISEFORADIN D13 *BE -871-364
Enzyme hydrolysis of whole grain esp. wheat - 16027B/09

*MAKE= 19.01.76 MAKEEVKA CIVIL ENG D15 E14 *SU -602-479
Purificn. of aromatic nitro-cpds. from waste water - 17692B/09

*MARC/ 28.01.77 MARCHAND B D14 *FR 2391-820
Flattened metal cage hygienic sheath for carving knives etc. - 16309B/09

*MARI= 09.08.76 MARINE FISH OCEANOG D12 (D16) *SU -602-156
Nutritive protein hydrolysate prepn. - 17555B/09

*MASO/ 08.08.77 MASON S I D22 J01 *DT 2736-105
Device for dispensing volatile material e.g. insecticide or deodorant - 16139B/09

MASO/ 08.08.77 MASON S I D22 J01 #NL 7708-737
Device for dispensing volatile material e.g. insecticide or deodorant - 16139B/09

*MAZA/ 00.00.77 MAZACEK M D16 *CS 7702-683
Dry bacteriophage prepn. - B/09

*MCDD 03.05.76 MCDONNELL DOUGLAS CORP B04 D16 J04 *US 4140-580
Broth medium for detection of yeasts and fungi - 17839B/09

MCNA/ 06.07.77 MCNALLY R A84 D22 =DK 7803-058
Plastics disinfectant- or deodorant-contg. lavatory seat - 08423B/05

MCNA/ 06.07.77 MCNALLY R A84 D22 =NO 7802-309
Plastics disinfectant- or deodorant-contg. lavatory seat - 08423B/05

*MEAC 22.08.77 MEAD CORP A92 D13 *BE -869-890
Aseptic packaging of acid foodstuffs - 15978B/09

MECH- 26.07.77 VEB MECHAN LEIPZI D11 =DT 2831-200
Doughnut icing applicator - 12250B/07

*MEDI= 04.11.75 MEDICAL POLYMER RES A96 D22 *SU -602-185
Polymeric coating for wounds and burns - 17562B/09

*MEDI= 04.11.75 MEDICAL INST A96 D22 *SU -602-185
Polymeric coating for wounds and burns - 17562B/09

*MEDP- 25.02.76 MED-PRO LTD A96 D22 (A26) *US 4140-125
Surgical tape - 17735B/09

MEGG 07.12.76 MEGGLE MILCHIND GMB C03 D13 =OE 7705-290
Milk substitute for mammals, e.g. calves - 42436A/24

MEIJ 27.05.75 MEIJI SEIKA KAISHA D13 #CH -608-343
Sugar coating of food by spraying liquefield droplets - 92763X/50

*MEIJ 16.06.77 MEIJI KK B03 D16 *J5 4008-793
Biochemical prepn. of macrolide antibiotics SF 837A-1 and SF-837A-2 - 16919B/09

MERI 05.08.77 MERCK & CO INC B04 D16 =DT 2834-144
Preserving vaccine from polysaccharide(s) of Neisseria meningitidis - 07792B/04

MICH/ 21.02.78 MICHAELI D B03 C02 D22 #ZA 7801-019
Medicaments for desensitising flea bites - 62157A/35

*MICU/ 14.02.78 MICULKA Z D18 *CS 7800-938
Semi-wet processing of leather - B/09

MIFI 25.05.77 MILLIPORE CORP A88 D22 J01 (A32) =FR 2391-837
Continuous casting of microporous membranes - 89960A/50

MILE 14.02.75 MILES LABORATORIES INC B04 D16 J04 =CA 1048-390
Determn. of specific gravity of urine samples - 21294A/11

MILE 28.10.77 MILES LABORATORIES INC D13 =BE -871-325
Juicy self-basting sausage-like food prods. - 07733B/04

*MINA- 23.06.77 MINAMOTO KK D15 *J5 4009-453
Night soil treatment using less treating agent - 17058B/09

MINN 10.10.73 MINNESOTA MINING CO A96 D22 =CA 1048-363
Adhesive bandage - 42356W/25

MINN 19.10.73 MINNESOTA MINING CO A88 D15 J01 =DS 2450-103
Separation of esp. oil in water emulsions - 82372V/47

MINN 29.07.77 MINNESOTA MINING CO A96 D21 (A14) =GB 2002-632
Sun protection compsns. - 14474B/08

*MISK 21.06.77 MITSUBISHI KAKOKI KAISHA D15 J01 *J5 4008-168
Gas-solid contact device for treatment of waste water etc. - 16757B/09

*MIST 20.06.77 MITSUBISHI ACETATE A88 D18 J01 (A11) *J5 4007-679
Porous cellulose acetate fibre filter - 16680B/09

*MITB 16.06.77 MITSUI SHIPBUILDING ENGG C03 D13 *J5 4010-195
Fish feedstuff prepn. - 17120B/09

MITK 17.09.73 MITSUI TOATSU CHEM INC D15 J01 (D16) =J5 0054-961
Solids sepn. from liq. fermentation suspension - 17304B/09

*MITK 17.09.73 MITSUI TOATSU CHEM INC D15 J01 (D16) *J7 9002-409
Solids sepn. from liq. fermentation suspension - 17304B/09

MITN 09.01.75 MITSUBISHI GAS CHEM IND D16 E17 =J7 9002-271
L-malic acid prodn by fermentation - 65576X/35

*MITN 17.06.77 MITSUBISHI GAS CHEM IND C02 D15 E13 (D22) *J5 4008-723
Compsn. for controlling propagation of microorganisms - 16898B/09

*MITQ 17.06.77 MITSUBISHI ELECTRIC CORP D15 *J5 4006-861
Dehydrating waste sludge contg. colloidal organic material - 16474B/09

*MITQ 24.06.77 MITSUBISHI ELECTRIC CORP D15 *J5 4010-272
Sludge treating appts. - 17160B/09

*MITQ 24.06.77 MITSUBISHI ELECTRIC CORP D15 *J5 4010-273
Sludge treating appts. - 17161B/09

*MITR 24.06.77 MITSUBISHI RAYON KK A88 D15 J01 (A14) *J5 4010-282
Hollow fibre filter membrane made from acrylonitrile polymer - 17168B/09

MITU 17.05.76 MITSUBISHI CHEM IND KK B05 D13 E16 =FR 2391-955
L-cysteine cpds. prodn. - 02965A/02

*MITU 22.06.77 MITSUBISHI CHEM IND KK D23 E13 (D21) *J5 4009-271
3',4'-Methylenedioxy-phenyl:butanal cpds. - 17037B/09

*MITV 21.06.77 MITSUBISHI METAL KK D15 K07 L02 *J5 4008-300
Solidifying radioactive waste organic solvent - 16794B/09

MLCW 15.07.77 MALLINCKRODT INC A96 D21 E17 (A14 E14) =GB 2002-795
Nail varnish compsns. - 09322B/05

MLCW 15.07.77 MALLINCKRODT INC A96 D21 E17 (A14 E14) =SW 7807-815
Nail varnish compsns. - 09322B/05

*MOEC= 09.12.75 MOSC ECONOMY INST D14 *SU -602-237
Fruit and vegetables classifier - 17594B/09

*MOMD 15.12.75 MOSCOW MEAT DAIRY INST D14 J01 *SU -602-228
Centrifugal separator drum - 17586B/09

*MOME= 08.05.75 MOSC MEAT DAIRY IND D12 *SU -533-100
Roasting meat by infrared irradiation - 17464B/09

*MOMI 28.05.75 MORINAGA & CO LTD D11 *GB 1541-457
Appts. for producing roll cake - 16373B/09

MOMO/ 30.08.73 MOMOSE T D13 =J5 0047-885
Granulation of powdery foodstuffs, e.g. instant coffee or aminoacid - 17287B/09

*MOMO/ 30.08.73 MOMOSE T D13 *J7 9002-259
Granulation of powdery foodstuffs, e.g. instant coffee or aminoacid - 17287B/09

*MONC/ 04.04.77 MONCLA B J B04 D16 J04 *US 4140-579
Detection of phospholipase-A and phospholipase-C - 17838B/09

MONS 25.11.70 MONSANTO CO D22 E14 (D25) =J7 9002-208
Substd amides - 39591T/25

MONS 06.11.75 MONSANTO CO D22 E13 =CA 1048-501
Drying trichloro triazine trione - 32792Y/19

MONS 20.06.77 MONSANTO CO D22 E15 (D21 D25) =J5 4008-726
Space deodorant compsn., used esp. as aerosol spray - 00325B/01

*MONS 02.03.78 MONSANTO CO A25 D25 (A97) *US 4140-676
Polymeric acetal carboxylate salts useful as detergent builders - 17877B/09

MONT 10.05.76 MONTEDISON SPA A97 D15 (A14) =FR 2392-043
Macro-crosslinked, porous, absorbing resins for water clarification - 81187Y/46

MORG 11.08.76 MORINAGA MILK KK D13 =US 4140-811
Momen Tofu prepd. from soybean milk - 26440A/14

MORG 26.05.77 MORINAGA MILK KK D17 E13 =FR 2392-031
Non-hygroscopic lactulose powder prodn. - 67108A/38

*MOTE= 04.04.68 MOSC TEXTILE INST D22 E21 F06 *SU -273-353
Antimicrobial azo dyes prodn. - 17353B/09

MRSC 10.06.74 MARS LTD D13 =CA 1048-333
Food prods. comprising expanded sintered amorphous dried particles - 01268X/01

*MSCY- 22.07.76 MSC YG A96 D21 (A11) *J5 3015-467
Cyclodextrin-contg., orally refreshing material - 16437B/09

MULL 09.04.75 FA MULLER H D16 (D13) =CH -608-519
Fermentation-produced single cell protein processing - 02328X/02

MULL- 28.04.75 FA MULLER H D17 E13 =CH -608-830
Dextrose and dextrin prodn. from starches contg. proteins - 89076X/48

MULL/ 04.12.73 MULLER H D16 J02 =OE 7409-653
Gasifier for liquids - 27562W/17

*MULL/ 17.02.75 MULLER H D15 J01 *CH -608-381
Drinking water filter bed surface layer regenerator - 16063B/09

*MULL/ 22.11.77 MULLER E D13 *DS 2752-017
Puffed cereal prodn. - 16085B/09

*MURA/ 18.06.77 MURAO S D16 *J5 4010-156
Basidiomycetes fruit mass prepn. - 17114B/09

NAGA 18.02.75 VEB KOMBINAT NAGEMA D13 =CH -608-386
Mixing and kneading installation esp. for masses of chocolate - 40092X/22

NATY 22.04.76 NABISCO INC D13 =GB 1538-390
Non-sugar contg. coating compsn. for food prod. esp. cereals - 04416B/03

*NAVA= 21.05.66 NAVAL FEET RES INST D15 E34 *SU -217-282
Anti-scaling additive for boilers used in evaporation of sea water - 17339B/09

NEDR- 18.06.76 NEDRE NORRLANDS PRO A97 D13 =GB 1538-392
Low-calorie mayonnaise-type dressings prepn. - 02503A/02

NEDR- 18.06.76 NEDRE NORRLANDS PRO A97 D13 =US 4140-808
Low-calorie mayonnaise-type dressings prepn. - 02503A/02

*NEDR- 28.10.77 NEDRE NORRLANDS PRO D13 *BE -871-324
Whey based products prepn. from milk serum from cheese or caseinate - 16020B/09

NEST 28.05.74 SOC PROD NESTLE SA D16 =DS 2522-478
Microbial protein prodn - 77091W/47

NEST 02.03.77 NESTLES PRODUCTS LT D13 =ZA 7801-042
Sterilised processed cheese having creamy texture - 65647A/37

NEST 23.05.77 SOC TECH NESTLE SA D13 =FR 2391-653
Demineralisation of whey - 89955A/50

NEST 16.01.78 NESTLES PROD LTD D13 #ZA 7800-268
Butter prepn. by mixing fat and viscous aq. phase - 45843A/26

NIIG 16.07.77 NIIGATA ENG KK D12 =SW 7807-852
Heat sterilisation of blood powder - 06436B/04
NIOC 26.05.77 NIPPON OIL KK B02 D16 E12 =FR 2392-111
Fermentative prodn. of vitamin/B12 - 09077B/05
*NIPK 18.08.77 NIPPON KAYAKU KK B02 C02 D13 *DT 2835-936
Animal e.g. cattle, sheep or pigs growth promotion - 16289B/09
*NIPS 22.06.77 NIPPON SODA KK D15 *J5 4008-166
Removing heavy metals from exhaust smoke treating soln. - 16755B/09
*NISC 24.06.77 NISSAN CHEM IND KK D23 E17 *J5 4009-208
3,7-Di:methyl-1-octene-3,7-diol prepn. - 17007B/09
*NISH- 18.06.77 NISHIYAMA STAINLESS A35 D15 *J5 4007-756
Water-insoluble cpd., e.g. synthetic resin, sepn. from waste water - 16682B/09
*NISS- 21.06.77 NISSHIN SEITO KK D17 (D13) *J5 4008-736
Sugar-vitamin/C mixt. - 16904B/09
*NITO 15.06.77 NITTO BOSEKI KK B04 D16 *J5 4008-788
Fixing enzymes or microbial body - 16916B/09
*NOVO 23.08.77 NOVO INDUSTRI A/S D16 (D17) *BE -869-869
Glucose isomerase activated by water-soluble iron salt - 15971B/09
*NOVY/ 18.01.77 NOVY J D15 *CS 7700-318
Aq. effluent purification appts. - B/09

*OHAR- 27.06.77 OHARA KK D21 M22 (M26) *J5 4010-210
Dental alloy ingot produced by powder metallurgy technique - 17122B/09
OHKA- 27.02.76 OHKAWARA MFG KK D14 J04 =DS 2707-809
Pellets or granules coated in revolving drum - 63342Y/36
OLIN 12.08.77 OLIN CORP A41 C04 D15 E16 (E35) =NL 7804-522
Hydrolysing urea contained in effluents - 45658A/25
OLYU 05.04.77 OLYMPUS OPTICAL KK A88 D16 (A26) =DT 2849-564
Fluid feed device for automatic incubator - 65664A/37
*ONOD/ 20.06.77 ONODERA H B04 D13 *J5 4008-772
Medicinal material prodn. from water oats, bulrush and lotus - 16914B/09
OREA 26.06.75 L'OREAL SA D21 E24 =OE 7604-674
Oxidising hair dyeing compsns. - 04270Y/03
OREA 29.01.76 L'OREAL SA D22 E19 =GB 1541-396
Deodorising compsn. contg. weak organic acid and its amine salt - 54084Y/31
ORGO- 23.05.74 ORGONICS INC A97 C04 D15 (A21 C03 D13) =CA 1048-291
Odourless fertilizer or animal feedstuff additive - 70797W/43
*OSAP 15.06.77 OSAKA PREFECTURE D22 (D15) *J5 4008-725
Agent for masking odour from sewage treatment etc. - 16899B/09

*PECH/ 30.03.77 PECHAN Z D15 J01 *CS 7702-095
Mechanical separator of solid particles and suspensions - B/09
*PEND/ 03.01.78 PENDL J D16 E12 *CS 7800-063
Normal sodium citrate prepn. - B/09
PERS 23.05.77 PERSONAL PRODUCTS CO A96 D22 =FR 2391-713
Sanitary pad contg. perfume avoiding perfume migration - 86106A/48
PETL 01.07.77 PETROLITE CORP D23 (D13) #OE 7704-683
Colour improvement of organic liquid - 70460Y/39
PFIZ 17.01.78 PFIZER INC B03 D22 E13 (D15) =US 4140-848
Antibacterial 4''-substituted-amino-oleandomycin derivs. - 42068A/23
PHAR- 18.03.75 PHARMA-VERTRIEB AG A97 B05 C03 D22 =OE 7601-991
Potentiated germicidal compns - 61601X/33
PHIM 08.08.77 PHILIP MORRIS INC D18 =DT 2834-501
Swelling tobacco by impregnating with liquid carbon di:oxide - 87871A/49
PHIM 08.08.77 PHILIP MORRIS INC D18 =NL 7808-268
Swelling tobacco by impregnating with liquid carbon di:oxide - 87871A/49
PILL 18.07.77 PILLSBURY CO D11 =SW 7806-450
Paste base for pizzas, etc. pref. for freezing - 06060B/04
*POLA= 08.07.75 POLAR SEA FISH ECON D12 *SU -576-880
Fish lateral bones detector - 17489B/09
*POPP/ 25.03.77 POPPER K D17 *US 4140-541
Ion exchange treatment of crude sugar juice - 17819B/09
*POTA= 08.06.73 POTATO IND RES C03 D16 *SU -478-058
Potato virus serodiagnosis chamber - 17402B/09
PROC 11.01.74 PROCTER & GAMBLE CO A97 D25 =OE 7500-155
Granular low foaming detergent compsn. - 49693W/30
PROC 30.12.74 PROCTER & GAMBLE CO D13 #CA 1048-336
Potato dough for French fried potatoes - 87347X/47
PROC 03.03.75 PROCTER & GAMBLE CO B05 D16 =OE 7601-531
Optically pure N-acyl-L-methionines - 49824X/26
*PROC 09.06.75 PROCTER & GAMBLE CO A97 D25 E12 *CA 1048-365
Detergent compsn. contg. surfactant and coarse abrasive - 16051B/09
PROC 23.05.77 PROCTER & GAMBLE CO C03 D12 (D13) =FR 2391-654
Rapidly rehydratable simulated meat prod. - 86090A/48
PROT- 24.04.74 PROTECON BV D12 =CA 1048-334
Ram press - 74108W/45
*PROT= 12.01.73 PROTEIN BIOSYNTH D16 *SU -492-118
Microorganisms pressure disintegrator - 17413B/09
*PRPO= 12.04.76 PERM POLY D25 E34 *SU -602-215
Granulated sodium perborate based household bleach prepn. - 17576B/09
*PRUZ/ 29.09.77 PRUZINSKY J D23 *CS 7706-306
Preliminary refining of vegetable oils - B/09

*QPPP 17.06.77 Q.P. CORP D13 *J5 4008-762
Prepn. of dry yolk compsn. - 16908B/09
QUEN/ 10.08.77 QUENTIN G D17 =NL 7808-274
Purifying technical sugar solns. using ion exchangers - 89697A/50

*RADI/ 04.10.76 RADIGOIS J M A97 D11 *FR 2391-689
A soft pad for supporting biscuits during buttering - 16298B/09
*RAKU- 27.06.77 RAKUNA YUSHI KK D25 E33 (E36) *J5 4010-309
Detergent compsn. contg. stabilised hydrogen peroxide - 17186B/09
*RASA 22.06.77 RASA SHOJI KK D15 L02 *J5 4008-624
Concrete prodn. using industrial waste - 16834B/09
*RASC/ 11.03.78 RASCHIK P A11 D12 *CS 7801-539
Collagen sheet prodn. - B/09
*RASC/ 16.03.78 RASCHIK P A11 D12 *CS 7801-664
Collagen sheet prodn. - B/09
REGC 27.05.77 UNIV OF CALIFORNIA B04 D16 =FR 2392-033
Plasmid contg. gene from a higher organism - 70827A/40
RETO 23.12.74 R J REYNOLDS TOBACC D16 (D17) =OE 7509-587
Flocculating active enzyme microbial cells - 11025X/06
RHON 24.01.75 RHONE-POULENC INDUSTRIES D25 E33 =CH -608-829
Crockery/textile cleaning compsn. - 60177X/32
RHON 09.12.75 RHONE-POULENC INDUSTRIES A25 D25 (A97) =OE 7609-113
Polyurethane with hydrophobic and hydrophilic gps. - 41678Y/24
RHON 04.08.77 RHONE-POULENC INDUSTRIES B02 C02 D13 =GB 2002-759
Antibiotic 35665 RP useful as animal growth promoter - 09974B/06
*RHON 11.08.77 RHONE-POULENC INDUSTRIES B02 C02 D16 *DT 2736-238
Antifungal di:amino-carboxy-alkyl purine deriv. - 16148B/09
*RICT 25.08.77 RICHTER GEDEON VEGY C03 D15 (D13 D15) *BE -869-978
Sewage sludge used to mfr. nutritious animal feed - 16007B/09
RIED 23.06.77 RIEDEL DE HAEN AG D21 E33 G01 L02 =J5 4010-287
Fluorescent pigments for artificial teeth - 00487B/01
RIES/ 23.07.77 RIESS G A96 D21 =ZA 7800-919
Artificial tooth root of plastic loaded with a bioactive phosphate - 47821A/27
*RIHA/ 03.11.77 RIHA J D15 *CS 7707-162
Disinfection of potable or waste water - B/09
*ROAN= 27.03.74 ROST ANTI-PLAGUE D16 *SU -492-544
Nutrient medium for growing pathogenic microorganisms - 17428B/09
*ROBE/ 09.09.77 ROBERTS T M B B06 C03 D13 (B05) *ZA 7705-432
Animal foodstuff and/or medicine - 17989B/09
ROHM 22.06.76 ROHM & HAAS CO A91 D15 (A97) =GB 1541-385
Crosslinked anion exchange resin contg. microbicide - 00017A/01
ROHM 10.12.76 ROHM & HAAS CO A18 D22 J04 M25 (D17) =ZA 7707-052
Crosslinked boron-contg. resin - 44395A/25
*ROME= 16.07.74 ROST MEDICAL INST B04 D16 *SU -602-183
Influenza virus diagnostic compsn. prepn. - 17560B/09
*RUBI- 13.07.77 RUBINSTEIN H INC A96 D21 E19 *US 4140-759
Mild liq. protein shampoo - 17912B/09

SADA/ 19.07.72 SADA P D21 =CH -608-714
Cosmetic preparation preservation - 09762V/06
SAGA 19.05.77 SAGAMI CHEM RES CENTRE B05 D13 E16 (E14) =J5 4009-226
Di:peptide amino acid addition cpds. - 57088A/32
*SAKA 22.06.77 OTSUKA PHARM KK B02 C02 D22 *J5 4009-284
Fungicidal quinoline derivs. and their prodn. - 17042B/09
SAKA/ 17.06.77 SAKAKIDA K B04 D16 =J5 4008-710
Antitumour emitanin prodn. - 65669A/37
*SAKI= 03.07.73 SAKI CHEM WKS D15 E34 *SU -492-483
Dehydration of sea- or lake-salt soln. - 17423B/09
SALI- 12.08.77 CIE MIDI EST D22 E19 =DT 2835-683
Stabilising halogenated organic bactericides in hygroscopic salts - 87849A/49
SANM- 26.05.77 SANMATSU KOGYO LTD B04 D17 E13 J01 (D15 E17) =FR 2391-754
Columnar chromatographic separation - 91666A/51
SANO 14.01.74 SANDOZ LTD B04 D16 =US 4140-762
Extn. of immunogens hemagglutine and neuraminase - 50924W/31
SANO 13.07.77 SANDOZ AG B04 C03 D16 =DK 7803-029
Isolating antigenic glyco:protein from para:myxovirus - 04043B/03
SAXH/ 03.05.69 SAXHOLM R D16 =US 4140-582
Support body for diffusion method for - 82152R/44
*SCEN= 10.10.74 SCENTED SYNTH NATUR D23 *SU -530-523
Geranium oil fractions used in perfumery and cosmetics - 17462B/09
*SCEN= 22.01.76 SCENTED SYNTH NATUR D23 E17 *SU -595-276
Di:methyl-octanol or its mixt. with acetate used in perfumery - 17514B/09
SCHA/ 14.07.77 SCHANZE R C03 D13 =DK 7803-049
Dairy by/products, e.g. whey, conversion into animal feed - 10072B/06
SCHR- 05.04.77 SCHREIBER-KLARANLAG D15 #NL 7703-742
Cleaning rake arrangement for a drain channel grid - 65175Y/37

*SCHR/ 13.08.77 SCHREIBER A D15 *DT 2736-565
Biological treatment of highly concentrated wastes - 16167B/09
SCHU- 24.02.75 SCHUYLKILL CHEM CO B03 D21 E13 =CA 1048-510
Allantoin glycine complex - 86754W/52
SEAL- 11.12.73 SEALEYS PROD CO INS B05 D16 =J7 9002-248
Concentrated vitamin compsn. contg. yeast - 61340W/37
SEAR 04.02.75 SEARLE G D & CO A96 B04 D16 =GB 1541-435
Cytotoxic immunoglobulin preparations - 61881X/33
SEAR 00.00.76 SEARLE G D & CO A96 B04 D16 =GB 1541-436
Cytotoxic immunoglobulin preparations - 61881X/33
SEEG- 15.01.71 SEEGER C MASCHFAB D16 =DS 2101-848
Malting plant - 49195T/31
SELE/ 04.07.77 SELEGNY E D16 =DK 7803-012
Detection of microorganisms, esp. bacteria in media - 01932B/02
*SELE/ 15.02.78 SELECKY J D13 *CS 7800-988
Continuous prodn. of cheese specialities - B/09
*SERV- 15.08.77 SERV-A-PORTION INC D13 *US 4140-543
Emptying and cleaning tomato paste storage drum - 17820B/09
*SEYM/ 14.05.76 SEYMOUR J J D11 *US 4140-804
Prepn. of cake with internal and external icing - 17934B/09
*SHAR/ 03.01.75 SHAROV V G D22 E14 F06 *SU -602-489
Penta:chlorophenol antimicrobial for fibrous material prepn. - 17700B/09
*SHEL 01.09.75 SHELL INT RES MIJ BV D25 E19 *GB 1541-427
Hydroxy-sulpho:betaine(s) mfr. - 16372B/09
*SHIG/ 12.06.77 SHIGETOMI Y A97 D15 J01 *J5 4008-185
Composite adsorbent for treating waste water or sea water - 16772B/09
SHIK- 20.12.74 SHIKIBO O KK A14 D15 =DS 2557-443
Purification of waste solns. contg. polyvinyl alcohol - 52557X/28
*SHIO 16.06.77 SHIONOGI KK B04 D16 *J5 4008-792
Ribostamycin prepn. - 16918B/09
*SHIO/ 25.06.77 SHIOZAWA S C03 D13 (D16) *J5 4010-175
Animal feedstuff prepd. from chaff - 17119B/09
*SHMC 25.06.77 SHIMIZU CONSTRUCTION D22 J01 *J5 4010-289
Removing nitric oxide from air - 17174B/09
*SHOH- 23.06.77 SHOHU TOSHI SEIZO D21 M26 *J5 4009-115
Nickel-chromium alloy for dental use - 16947B/09
*SHOS 20.06.77 SHOWA SANGYO KK D13 *J5 4008-738
Meat-like textured vegetable protein prepn. - 16905B/09
SIEI 12.02.76 SIEMENS AG D13 (D12) =OE 7609-308
Preparing biological samples esp. food for analysis - 41790Y/24
SIMC 09.11.74 SIMON-BARRON LTD C03 D13 =CH -608-744
Fodder pellet press - 40384X/22
*SIMC 01.08.77 SIMON-CARVES AFRICA D15 J01 *ZA 7704-648
Liquid purificn. appts. - 17978B/09
*SKAL/ 28.12.77 SKALA J D15 *CS 7708-944
Oil products trapping system - B/09
*SKLE/ 20.09.77 SKLENAR J D15 J01 *CS 7706-074
Swimming pool water filtration - B/09
*SLIT 11.11.75 SCHLITZ J BREWING CO D16 *US 4140-799
Fermenting brewer's wort - 17930B/09
SMIK 14.04.75 SMITHKLINE CORP D16 =OE 7602-671
Micro-organism culture making device - 53942X/28
SMIK 20.10.75 SMITHKLINE CORP D16 =OE 7607-727
Device for culturing carbon dioxide requiring organisms - 47641X/25
SMIN 19.08.77 SMITH & NEPHEW PHAR A97 D22 E36 (A14 E19) =DT 2836-207
Solid sterilising compsn. contg. iodophor and aldehyde cpd. - 00044B/01
SNAM 05.07.77 SNAMPROGETTI SPA D17 E13 (D16) =DK 7803-022
Fructose prepn. from glucose solns. - 01939B/02
SNAM 12.07.77 SNAMPROGETTI SPA D14 =NO 7802-419
Sterilising milk and other liquid foods with hydrogen peroxide - 04054B/03
*SNKM 24.06.77 SANKIN KOGYO KK D21 M26 *J5 4010-223
Castable nickel alloy used in dentistry - 17132B/09
*SORG/ 11.08.77 SORG E C03 D16 (D13) *DT 2736-180
Protein-rich nutrient material prepn. from cellulose material - 16143B/09
*SOYU= 27.07.73 SOYUZVODOKANALPROEK D15 H05 *SU -600-091
Cleaner removing petroleum products from waste water - 17530B/09
SPED- 20.04.77 LAB SPED B05 D21 E14 =J5 4009-491
Endodontic treatment paste used esp. for filling infected teeth - 76290A/43
*SPIT/ 19.07.76 SPITZER J G A97 B07 D21 G04 *CA 1048-453
Compressed gas propellant aerosol spray - 16055B/09
SQUI 04.08.72 SQUIBB E R & SONS INC B02 C02 D22 =CS 7305-525
Cyano-methylthio-acetamido-cephalosporanic acids - 11360V/07
SQUI 04.08.72 SQUIBB E R & SONS INC B02 C02 D22 =CS 7701-590
Cyano-methylthio-acetamido-cephalosporanic acids - 11360V/07
*STAD 03.08.77 STANDARD OIL CO (IND) D13 *US 4140-812
Texturing protein material with soluble spacing agent - 17938B/09
STAD 19.08.77 STANDARD OIL CO (IND) D13 =GB 2002-624
Simulated french fried potatoes - 11930B/07
STAH 07.02.78 STANDARD OIL CO (OHIO) A13 B07 D21 G02 (A14 A82 A96 A97) #ZA 7800-728
Crosslinked maleic anhydride-indene copolymer - 49747A/28
STAL 20.06.77 STALEY A E MFG CO A11 C03 D22 F06 (A87 A97) =J5 4008-694
Water absorbent starch copolymer contg. hydrophilic gps. - 70620A/39
STAL 12.07.77 STALEY A E MFG CO D17 E13 #DK 7703-162
Non-compacting solid anhydrous dextrose - 86388Y/48
STER 10.03.71 STERLING DRUG INC B05 D22 E16 (E15) =US 4140-860
N,N'-Bridged-bis (2-alkyl-2-hydroxyethylamine) salts - 01793X/01
*STEW/ 06.04.77 STEWART W G D14 *US 4140-049
Conversion of charcoal griller to food smoker - 17722B/09
*STRK 15.10.76 STORK FRIESLAND BV D16 *FR 2392-114
Treating wine making residues to recover alcohol and calcium tartrate - 16328B/09
*STRK 08.08.77 STORK FRIESLAND BV D13 *NL 7708-756
Prepn. of concentrates of vegetable and animal prods., esp. tomatoes - 17305B/09
STWE 03.05.77 STONE & WEBSTER ENG CORP D15 E17 H09 J09 =BR 7801-644
Methanol prodn. from solid waste in an integrated process - 84359A/47
SUDC 22.05.75 SUD-CHEMIE AG D17 E13 =GB 1541-407
Xylose soln. prodn. from oat husks - 92715X/50
SUDC 15.06.77 SUD-CHEMIE AG D15 E33 =J5 4006-899
Silicate adsorber suitable for treating hard water - 00188B/01
*SUGA- 23.11.74 SUGARCUP BISCUIT CO D11 (D13) *GB 1541-212
Appts. for forming confectionery cases - 16365B/09
SUHL/ 08.07.77 SUHLING P D14 =DK 7803-070
Appts. for making batches of sliced food prod. - 04520B/03
SUME 21.06.77 SUMITOMO ELEC IND KK A88 D15 J01 =J5 4008-669
Hydrophilic porous fluorocarbon resin structure - 14398A/08
SUMO 31.01.75 SUMITOMO CHEMICAL KK C02 D22 =J7 9002-257
1-(3-Nitro-5-halophenyl)pyrrolidine-2,5-di:one derivs. - 62760A/35
*SUNS- 18.06.77 SUN STAR HAMIGAKI D21 E14 (E31) *J5 4008-731
Non-stimulating hair dye - 16902B/09
*SYNT= 22.12.72 SYNTH FIBRE PROC D22 E21 F06 *SU -455-610
Bactericidal azo-dyes prodn. - 17392B/09

TABA- 24.06.76 FAB TABAC REUNIES D18 E36 =CH -608-346
Absorbent cigarette filter contg. carbon and silicic acid - 75961Y/43
*TAGU/ 20.06.77 TAGUCHI C D22 J01 (D15) *J5 4006-867
Appts. for removing bad odour or humidity or for purifying water - 16478B/09
*TAIE 15.06.77 TAIHEI KAGAKU SANGY D22 (D15) *J5 4008-725
Agent for masking odour from sewage treatment etc. - 16899B/09
TAKE 08.09.76 TAKEDA CHEMICAL IND KK B02 C02 D22 =OE 7704-424
Cephalosporin antibiotics active against resistant strains - 00060A/01
*TAKE 06.08.77 TAKEDA CHEMICAL IND KK B02 C02 D22 E13 *DT 2834-097
2-Carbamoyl-oximino-acetamido cephalosporin derivs. - 16259B/09
TAKE 06.08.77 TAKEDA YAKUHIN KOGY B02 C02 D22 E13 =GB 2002-761
2-Carbamoyl-oximino-acetamido cephalosporin derivs. - 16259B/09
*TAKE/ 17.06.77 TAKEUCHI M C03 D13 (D16) *J5 4010-174
Highly nutritive feedstuff prepn. - 17118B/09
*TAKE/ 19.08.77 TAKEUCHI S D11 *DT 2836-241
Bread prodn. in kneading and baking oven - 16291B/09
*TAKS 21.06.77 TAKASAGO PERFUMERY KK D23 E17 *J5 4009-212
Hydroxy-citronellal catalytic prepn. - 17009B/09
*TAKS 21.06.77 TAKASAGO PERFUMERY KK D23 E15 *J5 4009-247
Menthone prepn. in good yield - 17024B/09
TAKS 28.07.77 TAKASAGO PERFUMERY KK D23 E15 =GB 2002-755
Substd. norbornene and norbornane cpds. - 12307B/07
TAKS 08.08.77 TAKASAGO PERFUMERY KK D23 E15 =DT 2834-500
4-Hydroxy-4-methyl-cyclohex-2-en-1-one - 14601B/08
TAKS 08.08.77 TAKASAGO PERFUMERY KK D23 E15 =NL 7808-253
4-Hydroxy-4-methyl-cyclohex-2-en-1-one - 14601B/08
TAMA/ 29.00.75 TAMAI M D15 =J7 9002-004
Soil consolidating matl. - 64137X/34
TANA 25.04.73 TANABE SEIYAKU CO A14 D17 =CH -608-520
Dextro-fructose prepn from dextro-glucose - 81244V/47
*TBIL= 24.05.76 TBILISSI FORESTRY D14 *SU -602-158
Conifer cone opening appts. - 17556B/09
TEEP 14.12.73 TEE PAK INC A11 D12 G02 (A82 A97) =CA 1048-354
Printed regenerated cellulose sausage casing - 72422W/43
TEIJ 25.05.77 TEIJIN KK A88 D15 J01 (A21) =FR 2391-752
Permselective membrane contg. epoxy polymer - 88152A/49
TEIN- 10.08.77 CENT TECH INTERPROF D14 =DT 2834-217
Centrifugal disc husking machine for small seeds, e.g. rapeseed - 09971B/06
TEIN- 10.08.77 CENT TECH INTERPROF D14 =NL 7808-131
Centrifugal disc husking machine for small seeds, e.g. rapeseed - 09971B/06
*TEKH= 04.02.76 TEKHRYBPROM EXP PRO D12 *SU -602-153
Internal-organs removal from fish sections - 17552B/09
*TEKH= 23.08.76 TEKHRYBPROM EXP PRO D12 *SU -602-154
Fish smoking oven transporter - 17553B/09
TEMC- 15.12.76 TEMCA CHEM UNION GM D22 =OE 7705-060
Zigzag folded incontinence absorbent pad - 45961A/26
TENC 12.07.77 TENNECO CHEM INC D22 E13 G02 =DK 7803-121
Aq. pigment dispersion contg. polyoxymethylene oxazolidine biocide - 82193A/46

TENC 12.07.77 TENNECO CHEMICALS D22 E13 G02 =NO 7802-418
Aq. pigment dispersion contg. polyoxymethylene oxazolidine biocide - 82193A/46
TENC 22.08.77 TENNECO CHEM INC A81 D22 E13 G03 =GB 2002-793
Aq. adhesive compsns. contg. polyoxymethylene oxazolidine cpds. - 82192A/46
TENS- 01.07.75 TENSEI SUISAN KK D13 (D12) =J7 9002-261
Extracting odourless, nutritive animal essences - 15544Y/09
THOM/ 27.02.75 THOMPSON J A97 D21 E16 (A25 E13) =US 4140-648
Aerosol foams esp. for shaving - 49204Y/28
*THOM/ 27.05.76 THOMPSON J B A97 D11 *GB 1538-360
Low calorie diet bread - 16358B/09
*TOJV 24.06.77 TOKAI DENKA KOGYO K D15 E31 L03 M14 *J5 4009-161
Copper removal from aq. solns. - 16969B/09
*TOKE 21.06.77 TOKYO SHIBAURA ELEC LTD D15 *J5 4008-180
Desalting water - 16767B/09
TOPP 21.06.77 TOPPAN PRINTING KK D13 E37 =J5 4008-740
Foodstuff freshness keeping agent - 02461B/02
TORA 07.01.72 TORAY INDS INC D16 =J4 8073-375
Sewage treatment plant - 43068U/31
TORA 07.01.72 TORAY INDS INC D16 =J7 9002-024
Sewage treatment plant - 43068U/31
TOSC- 09.01.74 TOSCARA ANST D13 =OE 7500-090
Cream cheese and yoghurt prodn. - 40955W/25
TOXS 27.12.74 TOYO ENGINEERING CORP D15 E19 =J7 9002-021
Treatment of waste water contg chlorinated organic cpds - 62678X/33
*TOXW 20.06.77 TOYO INK MFG KK D13 E36 G04 *J5 4006-888
Oxygen absorbent used to treat foods and for sterilisation - 16497B/09
TOYJ 19.05.77 TOYO SODA KK B05 D13 E16 (E14) =J5 4009-226
Di:peptide amino acid addition cpds. - 57088A/32
TSUK/ 26.02.75 TSUKAMOTO S D18 =GB 1541-235
Improving activity of active charcoal used in cigarette filters - 78214X/42
TSUK/ 26.02.75 TSUKAMOTO S D18 =GB 1541-236
Improving activity of active charcoal used in cigarette filters - 78214X/42

*UBEI 24.06.77 UBE INDUSTRIES KK C04 D15 *J5 4009-163
Moisture-rich sludge treatment - 16971B/09
*UBEI 24.06.77 UBE INDUSTRIES KK B05 D23 E14 M11 *J5 4009-236
Sepn. of alkoxy-formyl-phenol isomers - 17020B/09
UGIN 27.05.77 UGINE KUHLMANN D13 (D16) =FR 2392-112
Protein prodn. by metabolising methanol with microorganisms - 38508A/22
UGIN 08.07.77 UGINE KUHLMANN D15 =DK 7803-062
Denitrification of biological effluents - 08436B/05
UGIN 08.07.77 UGINE KUHLMANN D15 =NO 7802-380
Denitrification of biological effluents - 08436B/05
UNAC 27.03.74 UNITED TECHNOLOGIES CORP D12 =OE 7502-319
Shirred sausage casing stick with end plug - 47636W/28
UNAC 18.06.74 UNITED TECHNOLOGIES CORP A96 D22 F04 =OE 7504-633
Diaper insert comprising absorbent pad - 40665W/24
UNDE- 19.07.77 UNDERBERG-HANDELS A D16 =SW 7807-909
Prepn. of bubbling, sparkling and champagne type wines - 84154A/47
UNIC 17.09.74 UNION CARBIDE CORP D13 =J7 9002-263
Grinding condiment esp. mustard at cryogenic temp. - 24418X/14
UNIC 30.10.75 UNION CARBIDE CORP A97 D12 =OE 7608-053
Packaged shirred tubular plastics casing - 14372Y/08
UNIC 19.07.76 UNION CARBIDE CORP D12 =OE 7705-170
Fastening for gathered end of large sausage casing etc. - 06362A/04
*UNIC 25.08.77 UNION CARBIDE CORP D22 *BE -869-953
Shrink wrapped stick of concertina folded tubular sausage casing - 15999B/09
UNIL 26.03.75 UNILEVER LTD A92 D11 =GB 1538-428
Prepn of cooked food prods in packages - 75689X/41
UNIL 28.08.75 UNILEVER NV A97 D25 E34 =OE 7606-311
Alkaline spray-dried detergent washing powder compsn. - 14553Y/09
UNIL 07.11.75 UNILEVER NV D13 =OE 7608-270
Low fat, margarine type emulsion compsn. - 32796Y/19
UNIL 24.05.76 UNILEVER LTD D25 E19 (E34) =ZA 7703-064
Homogeneous liquid detergent compsn. - 84671Y/48
UNIL 24.05.76 UNILEVER LTD A97 D25 E12 (A18 E34) =ZA 7703-065
Heterogeneous liquid detergent compsns. - 84672Y/48
UNIL 03.06.76 UNILEVER LTD A96 D22 =ZA 7703-309
Tampons enclosing absorbant gel laminated to permeable covers - 84762Y/48
UNIL 24.09.76 LEVER BROTHERS CO D13 =US 4140-810
Frying fat compsn. contg. proteose-peptone - 23361A/13
UNIL 26.11.76 LEVER BROS D25 E12 (E16) =US 4140-650
Washing powders prepn. using spray-dried inorganic constituents - 36663A/21
UNIL 19.01.77 UNILEVER NV A97 D22 J01 (A11) #DK 7700-201
Insoluble starch absorbent with high urine retention - 55280A/31
UNIL 25.05.77 UNILEVER NV D24 E32 =FR 2392-109
Detergent compsn. contg. titanium or zirconium peroxy cpds. - 86096A/48
UNTC 10.03.75 ECODYNE CORP D15 =CA 1048-663
Aeration appts for home sewage treatment unit - 63328X/33
UPJO 24.10.75 UPJOHN CO B01 D16 =DT 2660-261
(9)-Alpha-hydroxy-androstenedion fermentation prodn. - 33075Y/19
*UPRO= 27.02.74 UKR PROV EQUIP RES D11 *SU -602-150
Biscuit-dough blanks patterning equipment - 17549B/09
*UPRO= 11.06.75 UKR PROV EQUIP RES D11 *SU -602-149
Bread-making ingredients mixer - 17548B/09
*URAL= 03.09.76 URALS HEAT TECH RES D15 J03 *SU -602-477
Water electro-coagulation treatment appts. - 17690B/09
*URBA/ 29.07.76 URBANCIK L D15 J01 *CS 7604-981
Highly pure water prodn. by distillation - B/09
USBO 20.06.77 US BORAX & CHEM CORP A97 D22 E19 (A25 D25) =J5 4008-721
Antimicrobial cleaning compsn. for bathroom hard surfaces - 83908A/46
*USDA 08.09.76 US SEC OF AGRICULTURE B04 C03 D16 *US 4140-763
Foot/and/mouth disease synthetic vaccine - 17914B/09
USRU 24.03.75 UNIROYAL LTD A11 D13 (A97) =GB 1541-272
Clear elastic gels for desserts - 47960X/25

VEHN- 21.07.77 VEHNA OY AB D17 F09 G03 =SW 7808-017
Unmodified starch adhesives for corrugated cardboard - 11280B/06
*VETE= 12.03.76 VETERINARY VIROLOGY D15 *SU -602-184
Waste water steriliser - 17561B/09
VOAG= 04.01.73 VORON AGRIC INST C03 D13 =SU -549-136
Protein-enriched animal feed dressing - 09804A/05
*VORO= 11.02.76 VOROSHILOVGRAD MECH D15 *SU -602-224
Electromagnetic separator effluent clarification - 17583B/09
*VOST/ 17.08.77 VOSTA J D22 E19 M14 *CS 7705-401
Additive for cooling system - B/09

WABU- 12.01.76 WABU-ANSTALT D15 =CH -608-771
Water purification system - 52543Y/30
*WACK 12.08.77 WACKER CHEMIE GMBH A96 D21 (A26) *DT 2736-421
Dental casts and casting spoons prepn. - 16163B/09
WACK/ 20.04.77 WACK O D25 =DS 2717-532
Cleaning device for inclined surfaces - 78528A/44
WARN 18.02.75 WARNER-LAMBERT CO A96 B04 D22 =CH -608-889
Soluble acid collagen bovine serum albumen prepn - 67219X/36
*WASS- 20.05.77 INST WASSERWIRTSCHA D15 J01 *DT 2819-848
Mechanical sepn. of emulsions - 16229B/09
*WATE= 11.09.72 WATER STORAGE RES A88 D15 J01 (A25) *SU -462-375
Waste water purification filter - 17396B/09
*WAUT/ 17.10.78 WAUTERS M D14 *BE -871-318
Flower bulb washing appts. - 16018B/09
*WDAI- 07.11.77 WESTERN DAIRY PRODS D14 J01 *US 4140-270
Removing dense impurities e.g. metal fragments, from food slurry - 17762B/09
WELL 14.06.77 WELLCOME FOUNDATION LTD B04 D16 =J5 4008-791
Thymidine phosphorylase - 88218A/49
WESS 21.08.76 WESTFALIA SEPARATOR AG D13 =OE 7704-345
Recovery of juices from chopped vegetables - 16140A/09
*WESS 22.11.77 WESTFALIA SEPARATOR AG D13 *ZA 7706-952
Appts. for sepg. fruit pulp from seed kernel and skin - 17994B/09
WESS 23.11.77 WESTFALIA SEPARATOR AG D13 #OE 7708-404
Appts. for sepg. fruit pulp from seed kernel and skin - 17994B/09
WILK 03.06.75 WILKINSON SWORD LTD D18 E15 (E13) =FR 2391-722
Taste modifying agents for foodstuffs and tobacco - 94284X/51
WILL/ 22.02.77 WILLEMSEN W H D13 =NL 7708-771
Mixer extruder unit for shaped pieces of dough - 45906A/26
WILL/ 22.02.77 WILLEMSEN W H D13 =ZA 7800-835
Mixer extruder unit for shaped pieces of dough - 45906A/26
WILZ/ 31.03.77 WILZ-PAULS R D16 =OE 7703-844
Separating turbidity-forming materials, e.g. protein(s), from beer - 74555A/42
WITC 04.11.74 WITCO CHEMICAL CORP D21 =CA 1048-412
Spray-dried foam bath compsn - 38358X/21
*WOOD/ 11.08.77 DEWITT WOODY G D11 (D13) *DT 2835-278
Decorative icing machine - 16277B/09
WOOD/ 11.08.77 WOODY G D D11 (D13) =NL 7808-311
Decorative icing machine - 16277B/09
*WYSS 25.05.77 ESCHER WYSS SA D13 *FR 2391-656
Prepn. of rapidly dissolving vegetable prods. e.g. peas - 16295B/09

YAMA/ 27.05.77 REIICHI Y D21 E33 (E32) =FR 2391-732
Dental sealing composition - 88144A/49
YAMA/ 09.08.77 YAMAMURA Y A96 B04 D16 =DT 2834-893
Antitumour compsn. - 14567B/08
YAMA/ 09.08.77 YAMAMURA Y A96 B04 D16 =NL 7808-337
Antitumour compsn. - 14567B/08
YAMS 25.07.73 YAMASA SHOYU KK C03 D16 (C04 D13) =J7 9002-265
Odour removal from and utilisation of waste sludge - 67711X/36

*YAMS 17.06.77 YAMASA SHOYU KK B02 D16 *J5 4008-794
5-Adenosyl-L-methionine prepn. - 16920B/09
*YASU- 22.06.77 YASU KAGAKU KOGYO D13 *J5 4008-761
Collagen protein-based food prodn. - 16907B/09
*YOSH 17.06.77 YOSHITOMI PHARM IND KK C03 D22 E14 F09 (C01) *J5 4008-704
Fungicidal agent for protection of wood - 16893B/09
*YOSH/ 18.06.77 YOSHIDA K B04 D21 *J5 4008-713
Dentifrice contg. carcinostatic, anti:neoplastic drugs etc. - 16896B/09

ZAID 24.05.71 MICROBIOCHEM RES FO B02 D16 =J7 9002-277
Streptomyces metabolite ka 10-e2 isolation - 47702U/34
ZAID 27.07.74 ZH BISEIBUTSU KAGAKU KEN B03 D16 =DS 2532-568
Antitumour antibiotic aclacinomycin-A and -B - 85012W/52
*ZEME/ 16.02.77 ZEMEK J D16 *CS 7701-021
Alpha-amylase enzyme prepn. - B/09
ZIEG/ 03.06.76 ZIEGLER R D11 =OE 7703-918
Dough extracting and metering device - 90463Y/51
ZIEG/ 30.08.76 ZIEGLER-HASLER R D11 =CH -608-694
Dough extracting and metering device - 90463Y/51
*ZOJA 04.08.77 AESCULAPIUS LAB CHI B05 D13 E11 *GB 2002-631
Extn. process for recovery of phospholipid(s) from animal organs - 16374B/09

12670-R ADJ
BE -737-710 R08+
NL 6913-516 R11
DT 1941-932 R19
DT 1941-022 R23
ZA 6905-667 R39
FR 2017-387 R40
GB 1259-170 T01
CH -523-702 T34
CA -909-996 T39
SU -514-562 A13
J7 8043-540 A50+
DS 1941-932 B09+

82152-R D
NL 7006-564 R44
BE -758-109 S17
FR 2047-264 S21
GB 1315-031 U17
CH -536-494 U29
US 3985-608 X43
J7 6044-192 X52
US 4140-582 B09

34077-S DJ
NL 7016-218 S20
DT 2051-189 S22
FR 2067-508 S46
CH -517-178 T13
US 3714-445 U07
DS 2051-189 B09

36020-S AD
NL 7016-788 S21
DT 2056-556 S22
FR 2069-559 S49
GB 1333-786 U42
CA -946-704 V21
J7 4026-687 V32
BE -759-066 S22
DS 2056-556 B09

74209-S ADJ
DT 2122-045 S47
NL 7106-097 S47
J4 6006-191 S51
ZA 7102-851 T06
FR 2088-313 T12
GB 1336-908 U46
US 3890-224 W26
US 3923-651 W51
CA -979-373 W52
CA -986-421 X16
US 3951-799 X18
DT 2167-145 B09
DT 2167-146 B09

39591-T DE
DT 2158-305 T25
J4 7011-128 T29
FR 2116-023 T44
US 3706-796 T52
GB 1338-800 U48
US 3870-646 W12
CA -981-691 X05
J7 9002-208 B09

49195-T D
DT 2101-848 T31
DS 2101-848 B09

77338-T D
DT 2121-006 T49
FR 2134-713 U09
CH -540-647 U47
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GB 1372-298 V44
US 3883-925 W22
OE 7203-484 W35
SU -602-100 B09

32103-U DJ
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DT 2312-905 U47
SU -510-164 B09

39024-U BDE
NL 7216-684 U28
DL -104-287 V24
DT 2258-304 U29
FR 2164-676 U42
J4 8068-552 U48
GB 1418-305 W51
CS 7208-559 X02
SU -451-235 X10
US 3956-375 X21
IL --41-003 X45
CH -583-166 Y02
CA 1048-535 B09

43068-U D
DT 2300-273 U31+
FR 2167-782 U45
GB 1372-511 V44+
US 3924-139 W51+
J4 8082-656 V06
J4 8073-375 B09
J7 9002-024 B09

47702-U BD
J4 8001-186 U34
J7 9002-277 B09

54889-U BDE
DT 2310-471 U38+
NL 7302-882 U39
FR 2174-964 U52
J4 8103-793 V17
J4 8088-282 V08
US 3871-958 W13+
GB 1417-067 W50+
CH -570-364 X07+
J7 6006-239 X13
J5 1067-788 X30
J7 7046-313 Y51
J7 9002-278 B09+

61989-U D
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GB 1420-938 X03
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OE 7605-623 B09

64283-U ADG
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GB 1382-547 W06
US 3872-000 W13
CH -578-486 X39
DS 2317-158 B09

79488-U DE
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FR 2188-612 V11
US 3862-054 W05+
DS 2226-293 B09

79658-U DE
DT 2326-467 U52
FR 2186-531 V10
GB 1432-462 X16
CA -995-863 X38
DS 2326-467 B09

09762-V D
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FR 2192-800 V17
J4 9132-246 W08
GB 1444-184 X31
CH -608-714 B09

11360-V BCD
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FR 2194-417 V18
ZA 7304-512 V27
DL -107-698 V42
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J5 0105-680 W42
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US 3932-396 X04
US 3944-546 X13
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GB 1437-221 X22
CH -580-107 X42
AR -203-371 X46
CA 1010-054 Y21
CH -587-239 Y22
CS 7701-590 B09
CS 7305-525 B09

50337-V BDE
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NL 7304-808 V43+
SW 7305-054 V49+
DK 7301-975 V51+
J4 9127-968 W06
CA 1000-280 X50+
SU -488-412 Y16
CS 7302-417 Y47+
CH -608-490 B09+

57268-V BCD
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NL 7401-361 V33+
BE -810-477 V35+
FR 2215-942 V48+
J4 9101-395 W05+
ZA 7400-665 W06
GB 1439-419 X25+
CA 1035-353 A32+
FR 2391-728 B09+

74291-V DJ
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SW 7403-235 V49
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DK 7401-329 V50
FR 2224-542 W05
DL -111-692 W23
J5 0052-106 W27
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IL --44-577 Y12
GB 1470-825 Y16
CH -590-916 Y36
SU -568-359 A25
CA 1037-490 A37
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75460-V D
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BE -824-042 W21
NL 7416-830 W29
DT 2461-640 W29
SW 7415-637 W34
NO 7404-689 W35
J5 0098-132 W40
DK 7406-687 W41
FR 2256-114 W42
ZA 7407-926 X13
GB 1462-148 Y03
CA 1030-305 A20
DS 2461-640 A22
J7 9002-022 B09

81244-V AD
DT 2420-102 V47
FR 2227-324 W08
J4 9132-290 W15
GB 1443-269 X30
DS 2420-102 X47
J7 7047-036 Y51
US 4081-327 A20
CH -608-520 B09

82372-V ADJ
US 3847-821 V47
DT 2450-103 W18
NL 7413-277 W19
SW 7412-670 W24
FR 2248-068 W30
GB 1488-854 Y41
IT 1021-860 A21
DS 2450-103 B09

00028-W DE
BE -816-340 W01
NL 7406-835 W01
DT 2331-014 W03
SW 7406-814 W07
FR 2233-306 W13
J5 0036-408 W22
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OE 7404-967 X40
GB 1464-620 Y07
CA 1029-749 A18
CH -608-775 B09

09101-W AD
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NL 7409-745 W06
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DK 7403-827 W16
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GB 1482-152 Y32
CS 7405-099 A13
CH -606-248 A48
OE 7405-933 A48
CA 1048-335 B09

14727-W DE
DT 2437-890 W09+
NL 7408-383 W09+
US 3872-111 W13
US 3873-731 W14
J5 0042-073 W24+
FR 2250-754 W35+
GB 1441-491 X27+
DT 2462-673 A09+
CH -602-022 A33+
SU -583-133 A43
CA 1045-891 B05
CA 1048-516 B09

16346-W BD
DT 2438-100 W10+
BE -818-924 W10+
NL 7410-058 W10+
SW 7409-375 W15
DK 7403-859 W22+
J5 0048-191 W26+
PT --62-442 W30+
FR 2252-406 W37+
FR 2257-682 W44+
GB 1480-379 Y29+
CH -596-306 A15
CA 1048-430 B09+

17439-W BCDE
BE -819-187 W11
NL 7410-367 W11
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DT 2343-147 W15
DK 7404-116 W22
OE 7409-121 W23
J5 0050-365 W27
FR 2245-370 W27
OE 7409-120 X07
US 3960-888 X24
GB 1452-027 X41
US 4034-086 Y28
CA 1027-576 A12
IT 1020-065 A14
CA 1043-341 A50
CH -608-504 B09
CH -608-503 B09

22170-W DJ
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GB 1483-393 Y33+
US 4140-584 B09+

24166-W BD
BE -820-347 W15
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SW 7412-528 W22
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FR 2246-272 W28
DK 7405-215 W28
J5 0064-442 W30
GB 1456-590 X48
CA 1032-080 A24
DT 2366-217 A46+
OE 7407-883 A48
OE 7805-266 B09

24211-W DH
BE -822-067 W15+
DT 2454-048 W31+
FR 2250-822 W35+
J5 0076-283 W46
J5 1048-480 X24
GB 1446-979 X34+
J7 9002-266 B09

24375-W BD
DL -111-096 W15
SW 7414-798 W29
NO 7403-368 W30
DK 7406-107 W35
HU T012-535 X50
OE 7406-814 A13
RU --62-709 A34
CS 7408-077 B06
CH -608-521 B09

27562-W DJ
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DL -114-909 W50
FR 2271-865 X11
GB 1464-784 Y07
US 4029-724 Y25
IT 1025-992 A46
OE 7409-653 B09

32432-W D
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NL 7413-332 W21
SW 7411-730 W26
FR 2249-844 W34
ZA 7406-555 X03
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BR 7409-231 X22
GB 1450-612 X39
OE 7408-906 Y01
IL --45-829 Y16
DS 2452-295 A06
IT 1022-500 A28
CA 1040-759 A44
CH -608-470 B09

32466-W D
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PT --63-227 X19
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DS 2457-303 Y16
GB 1474-586 Y21
OE 7409-665 Y39
CH -606-419 A48
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32506-W DE
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GB 1429-287 X13
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CH -608-482 B09

40665-W ADF
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BE -830-343 X02
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SW 7506-952 X07
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DK 7502-705 X12
FR 2275-162 X15
ZA 7503-886 X26
GB 1476-285 Y23
CH -594-376 A09
OE 7504-633 B09

40955-W D
BE -822-974 W25+
NL 7500-275 W30+
DT 2500-224 W30+
SW 7415-116 W35+
DK 7406-323 W39+
FR 2267-031 X05+
FR 2275-144 X15
GB 1458-760 X51+
US 4003-490 Y05+
US 4058-630 Y47
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OE 7500-090 B09+

40991-W DE
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DK 7500-362 W43
FR 2259-544 W47
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ZA 7500-570 X13
US 3956-513 X21
DL -121-133 X36
SW 7501-084 X38
GB 1452-871 X43
DL -127-568 A06
DL -129-289 A14
OE 7500-815 A18
OE 7706-553 B09

41024-W D
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NL 7501-704 W39
SW 7403-019 W44
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J5 0121-461 W47
DK 7500-900 W50
SF 7500-239 W51
FR 2262-910 W52
GB 1451-747 X41
CH -581-424 X52
OE 7501-811 A40
US 4140-806 B09+

42356-W AD
US 3888-247 W25
SW 7412-268 W25
DK 7405-143 W27
FR 2247-197 W29
DT 2448-664 W36
GB 1494-643 Y49
DS 2448-664 Y50
CA 1048-363 B09

44652-W BD
DT 2364-317 W27
BE -823-768 W28
NL 7416-430 W28
SW 7415-982 W33
J5 0095-421 W39
DK 7406-704 W39
FR 2255-382 W41
US 3972-858 X33
GB 1464-647 Y07
CA 1034-497 A30
DS 2364-317 B09

47636-W D
US 3892-869 W28
BE -827-211 W42
NL 7503-631 W42
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SW 7503-575 W47
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DK 7501-308 X02
SF 7500-926 X04
BR 7501-797 X04
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ZA 7501-927 X17
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CH -590-613 Y36
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DK 7704-012 A01
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OE 7502-319 B09

49693-W .AD
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BE -824-293 W30+
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SF 7500-059 W40+
J5 0113-504 W44+
FR 2257-680 W44
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OE 7500-155 B09+

50924-W BD
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DK 7500-014 W40
SF 7500-014 W40
FR 2257-305 W44
DL -116-239 X05
PT --63-220 X27
ZA 7500-259 X37
CH -589-453 Y34
US 4064-232 A01
GB 1498-261 A03
OE 7500-214 A06
IL --46-426 A09
CS 7500-255 A51
HU T015-993 B07
US 4140-762 B09

61340-W BD
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J7 9002-248 B09

62104-W ADE
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CA 1048-406 B09+

65930-W DJ
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SW 7503-050 W46
OE 7502-079 Y09+
CH -596-873 A15
CH -608-723 B09

70797-W ACD
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NL 7506-124 W50
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FR 2272-044 X11
US 3942-970 X12+
BR 7503-184 X19
US 4057-392 Y46+
IL --47-342 A14
GB 1515-324 A25
CA 1048-291 B09

72422-W ADG
US 3912-839 W43+
CA 1048-354 B09

72840-W BCD
DT 2517-316 W44+
BE -827-926 W44+
NL 7504-621 W45+
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J5 0142-591 X02+
FR 2267-778 X06+
DK 7501-672 X07+
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J5 0142-789 X02+
SW 7504-541 X15+
PT --63-645 X27+
ZA 7502-492 X31+
DL -121-799 X41+
J7 7001-996 Y06+
J5 2085-189 Y35
J7 7046-957 Y51+
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SF 7800-202 A24+
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OE 7702-055 A26
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OE 7702-052 A48
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OE 7702-051 B09
OE 7502-985 B09

74108-W D
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SW 7504-684 W52+
FR 2268-470 X07+
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US 3974-526 X35
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GB 1493-459 Y48+
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OE 7505-416 B09+

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86754-W BDE
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CA 1029-902 A19
OE 7506-238 B09

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US 4119-668 A42+
US 4140-860 B09+

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SW 7505-634 X06+
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CH -608-519 B09

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OE 7707-089 B09

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GB 1465-034 Y07
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38495-X BDE
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J5 1067-790 X30
FR 2290-423 X37+
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GB 1529-315 A42+
J7 9002-272 B09

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GB 1473-488 Y19+
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SW 7514-770 Y32+
DK 7505-942 Y46+
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OE 7600-016 B09

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40384-X CD
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SW 7602-751 X43
DK 7600-878 X48
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GB 1529-633 A43
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52557-X AD
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DS 2557-443 B09

53796-X ADF
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NL 7601-793 X37
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BR 7601-126 X45
DK 7600-773 X45
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NL 7600-705 X33+
SW 7600-646 X37+
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DK 7600-283 X42+
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PT --64-736 Y03+
DS 2602-357 Y50+
FR 2360-662 A18+
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GB 1524-302 A37+
GB 1524-301 A37+
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61461-X D
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61881-X ABD
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GB 1541-436 B09+
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62629-X BCD
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J7 9002-249 B09

62653-X BD
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62678-X DE
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63328-X D
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64137-X D
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65257-X D
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DK 7500-484 X44
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65576-X DE
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J7 9002-271 B09

67219-X ABD
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DK 7600-614 X46
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CH -608-889 B09

67711-X CD
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J7 9002-265 B09+

68418-X D
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GB 1521-428 A33
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78214-X D
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GB 1541-235 B09

83390-X DFJ
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83499-X DEJM
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CA 1044-825 B02
OE 7602-484 B09

84362-X D
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FR 2307-479 Y07
GB 1541-239 B09

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PT --65-323 Y27
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BR 7604-413 A08
CH -608-369 B09

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FR 2309-477 Y09
GB 1541-317 B09

87347-X D
GB 1455-677 X47
CA 1048-336 B09+

88706-X DE
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US 4115-546 A39+
US 4140-758 B09+

89076-X DE
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J5 1142-548 Y04+
FR 2309-638 Y09+
ZA 7602-556 Y19
DL -124-479 Y21+
GB 1495-220 Y50+
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92763-X D
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NL 7608-362 Y08+
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GB 1519-914 A31+
OE 7605-090 B09+

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GB 1495-228 Y50+
GB 1495-227 Y50+
US 4088-649 A26+
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CH -608-344 B09

11217-Y BDJ
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15544-Y D
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J7 9002-261 B09

20235-Y D
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DS 2540-284 B09

21095-Y BDE
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J7 9002-274 B09

22245-Y D
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GB 1541-461 B09

23834-Y ADJ
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J5 2041-168 Y19
FR 2325-402 Y26
GB 1541-283 B09

25317-Y D
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SW 7613-147 Y27+
SW 7613-757 Y29
OE 7509-341 Y31
SF 7603-508 Y34
DK 7605-488 Y35+
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PT --65-940 Y49+
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CA 1040-047 A43+
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OE 7609-308 B09

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45615-Y D
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46195-Y BD
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J7 9002-269 B09

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OE 7701-410 B09

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GB 1541-463 B09+

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GB 1538-386 B09

55869-Y DE
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55997-Y D
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58408-Y BDE
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SW 7807-554 B08
DK 7803-029 B09

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SW 7807-815 B09+
GB 2002-795 B09+

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NL 7807-505 B08
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NL 7808-171 B09+

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GB 2002-794 B09

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27 APR 79
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CENTRAL PATENTS INDEX
CLASSIFIED ALERTING BULLETIN

Section D:

FOOD
DETERGENTS

ABSTRACTS

INDEXES
- **II – PATENTEE**
- **V – BASIC NUMBER**
- **VII – PATENT NUMBER**

COUNTRY	PUB. DATE(S)	NUMBER RANGE
BELGIUM		
-Delayed	27 FEB - 5 MAR 79	869,997 - 870,237
-Non Delayed	15 FEB 79	871,490 - 871,722
BRAZIL	20 FEB 79	7,702,310 - 7,806,048
CANADA	20 FEB 79	1,048,701 - 1,049,200
DENMARK	12 FEB 79	7,702,805 - 7,803,278
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-DAS	1 MAR 79	1,551,648 - 2,829,412
-OLS	1 MAR 79	2,614,055 - 2,837,277
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JAPAN		
-Unexamined	—	47,033,477 - 51,047,880
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-Examined	8 FEB - 14 FEB 79	79,002,481 - 79,002,880
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PORTUGAL	15 FEB 79	59,423 - 67,602
SOVIET UNION	—	602,495 - 603,621
SWEDEN	19 FEB 79	7,706,474 - 7,811,755
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-Reissues	27 FEB 79	Re29,919 - Re29,922
-Patents	27 FEB 79	4,141,082 - 4,142,251

*Printed patents actually published early - mid February, 1979

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Arrangement of Abstracts

See Appendix I for definition of 'Major' and 'Minor' Countries.

'MAJOR' COUNTRIES – An alerting abstract of every basic and examined equivalent document is provided except for equivalents from Canada, East Germany and Switzerland. The abstracts are arranged in CPI class order and within any one of the 135 classes are in country and patent number order.

'MINOR' COUNTRIES – Basic headings are included in sequence with the entries from the 'Major' countries.

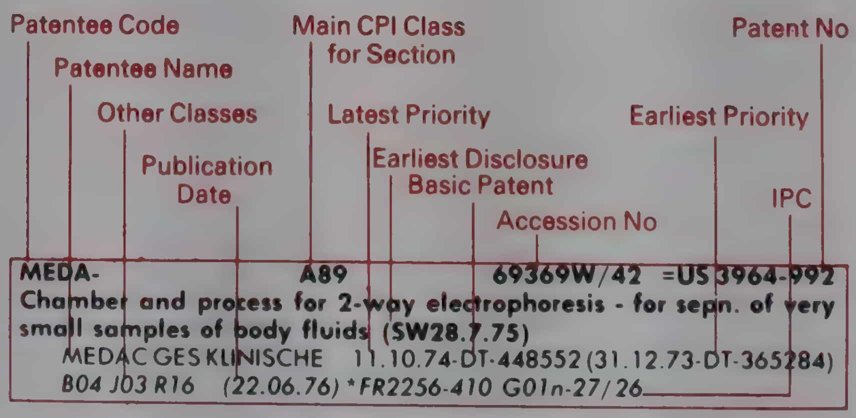
CPI Section Headings

See inside cover for further details.

A	Polymer Chemistry
A+	Polymer Applns.
AE	Polymer & General Chemistry
B	Pharmaceuticals
C	Agricultural Chemistry
D	Food, Disinfectants, Detergents
E	General Chemistry
E+	General Chemistry Applns.
F	Textiles, Paper, Cellulose
G	Printing, Coating, Photographic Chemistry
H	Petroleum
J	Chemical Engineering
K	Nucleonics, Explosives, Protection
L	Refractories, Ceramics
M	Metallurgy

Typical Abstract Heading

See CPI/WPI Instruction Manual No. 1A for explanation of the various flagged descriptors.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Other Classes
Publication Date
Main CPI Class for Section
Latest Priority
Earliest Disclosure
Basic Patent
Accession No
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MEDA- **A89** **69369W/42 =US 3964-992**
Chamber and process for 2-way electrophoresis - for sepn. of very small samples of body fluids (SW28.7.75)
MEDAC GES KLINISCHE 11.10.74-DT-448552 (31.12.73-DT-365284)
*B04 J03 R16 (22.06.76) *FR2256-410 G01n-27/26*

Copies of Specifications may be ordered from our PATENTS SUPPLY DIVISION.

D1: FOOD; FERMENTATION

D11: BAKING

GRAN- ★ D11 18061B/10 ★BE -871-553
Small oven for browning pre-baked loaves etc. on rollers - which are mounted in withdrawable chassis for easy servicing
GRANDS MOULINS PARI 27.10.77-FR-032479
(15.02.79) A21b

The oven is of the type has a heated cooking chamber in which the prod. is continually turned on rotating, parallel, supporting rollers. The rollers are now mounted alongside each other in a chassis which can be removed like a sliding drawer through one wall of the oven. Drive transmission to the rollers is pref. disc-connected mechanically as withdrawal of the chassis commences, so there is no possibility of the rollers being rotated as they become accessible.

Mechanical disconnection of drive transmission is pref. by axial withdrawal of roller shaft extensions drom driving engagement with the bores of driven gears. A heat reflective tray fitted under the rollers can be pulled out of the chassis, drawer-fashion.

The appts. is easy to service and clean. 26. 10. 78 as 871553 (13pp448)

STEI- ★ D11 18092B/10 ★CA 1048-848
White bread with increased fibre content - obtd. by incorporating yellow field pea hull fibres with flour
STEINBERG INC 28.12.76-US-755021
(20.02.79) A21d-08/02

High fibre content white bread is prepd. using a compsn. comprising 100 pts. wt. flour and 5-20 pts. wt. yellow field pea hull fibres of particle size 0. 25-2 mm. A dry mix for making the bread pref. also contains 1-10 pts. wt. sugar, and sufficient leavening.

The fibres are biologically active and do not spoil the appearance of the bread. 14. 12. 77 as 293080 (11pp955)

LIPP/ ★ D11 18290B/10 ★DT 2738-778
Dough kneading machine - with eccentric kneading bell in segmented kneading trough for diameter and inclination adjustment
LIPPELT W 27.08.77-DT-738778
(01.03.79) A21c-07/04

A circular dough kneading machine consists of a circular kneading trough and a revolving kneading bell inside it with a drive shaft moving along a circle concentric to the trough axis. The trough is subdivided into segments which can be moved to adjust the inside trough diameter. The side walls of the trough can also be varied in their inclination.

This machine can be adapted to dough of varying consistency and to lumps of dough of different sizes. It allows a greater range of special bread types to be kneaded. 27.8.77 as 738778 (13 pp39).

NISS D11 50334Y/28 #GB 1541-504
Preventing cave-in of baked goods - by applying mechanical shock immediately after baking
NISSHIN FLOUR MILL KK 27.01.76-US-652887 (27.01.76-GB-003095)
*(07.03.79) *US4034-119 +A21b-03*

Baked articles (e.g. bread and cakes) are prevented from collapsing by applying a mechanical shock to the article a sufficient size to be transmitted to the article centre at a temp. ≮5°C below the baking temp. The shock is equivalent to dropping the baking tin 3cm.

The shock is pref. applied using vibrations, letting it fall onto a rigid surface, letting it slide down a slope onto a rigid surface, passing it over an uneven path, or striking it laterally or from underneath. 27. 1. 76 as 003095 (11pp1376)

SPEC- D11 83190Y/47 =GB 1541-797
Alimentary paste and pastry prepn. using soya - as flour or granules, treated to remove bitterness and inactivate trypsin (NL 16.11.77)
SPECIAL FOODS CORP 14.05.76-DT-621545
*(07.03.79) *DT2621-545 A21d-02/36 A23l-01/16*

Pasta comprises an unleavened mixt. of cereal, eggs, water and soya prepd. using a debittered soya prod. in the form of flour and/or grits. Soya prod. is subjected to a treatment for deactivation or removal of trypsin inhibitor.

Pref. pasta contains additional soya protein extract. Soya is pref. free of oil, and present in an amt. of 5-65 wt. % pasta (esp. 10-25 wt. %) in a fresh condition. Amt. of soya, including soya protein extract, is such that the total amt. of protein is 25wt. % w. r. t. pasta (esp. 40 wt. %). Additional wheat bran or pulses are pref. added as bulking agent. Soya prod. is pref. grit with particle size 0. 3-1mm

Prod. has improved flavour characteristics with better consistency in doughs using soya flour. 11. 5. 77 as 019813 (2pp931)

KANE ★ D11 19342B/10 ★J5 4014-373
Water soluble granular moulding e.g. biscuit prodn. - from powdered food, using moulding plates mounted on endless moving belt
KANEBO KK 04.07.77-JA-080127
P71 (02.02.79) A21c-11/02 B01j-02/22 B30b-11/14

Moulding plates, each having moulding holes are demountably disposed on a capterpillar conveyor, above which are disposed means for feeding the moulding plate onto the conveyor, powder feed hopper, press roller, and means for taking out the moulding plate along the running way of the conveyor. The powder is charged in the holes of each moulding plate and the conveyor from the hopper, pressed by the roller, heated for a while, and taken out from the conveyor.

The process is simple and provides biscuits etc. in high yield. 4.7.77. as 080127 (4pp26)

UFOO= ★ D11 19634B/10 ★SU -603-360
Raw dough emulsion coating machine - comprises emulsion tank, coating brush and feeder mounted on a reciprocating carriage, to improve coating uniformity
UKR FOOD MECH ENG 01.09.76-SU-397999
(15.04.78) A21c-09/04

Raw dough emulsion coating machine has the emulsion tank, coating brush and feed mechanism mounted on a reciprocating carriage for reduced material usage and more uniform coating.

The machine is used in the baking industry and comprises chaintransporter with carriage on guides. A platform is mounted on a rod attached to the carriage and tank with drum chute with perforated base the feeding coating brush. Float vale 10 controls tank 7 level from reservoir 12 by line 11.

Zolotov, E.B., Markushenko, N.I., Tkachenko, I.P. et al. Bul. 5/25.4.78. 1.9.76. as 397999 (2pp129)

ZIEM/ ★ D11 19974B/10 ★US 4141-998
Powdered sour:dough bread flavouring compsn. - comprising acetic acid adsorbed on carbohydrate carrier with glyceride stabiliser
ZIEMKE W H 12.05.77-US-796146 (31.12.75-US-645537)
A97 (27.02.79) A21d-02/08

Ingredient for sourdough bakery prods. is a flowable powder comprising 2-15 wt. % acetic acid and opt. 1-8 wt. % of fumaric, tartaric and/or citric acids absorbed onto a finely-divided solid edible absorbent (A).

(A) is a starchy polysaccharide or an edible cellulosic material, and the compsn. is stabilised against loss of acid(s) by blending with a small amt. of normally solid, edible fatty glyceride (B). (B) holds the acid(s) in (A) and reduces their evapn. during baking. (A) is pref. (pre)gelatinised wheat, starch, edible wood-flour, carboxymethylcellulose or methylcellulose.

Compsns. are easily handled, stored and transported without loss of flavour. They can also be used to improve the flavour of white bread, biscuits, pancakes, etc. The parent patent uses acetic acid and lactic acid. 12.5.77 as 796146 C.i.p. 4034215 (6pp1251).

See Also

D13 DS 2600219 D13 US 4141999

D12: MEAT; FISH PROCESSING

CROM- ★ D12 18019B/10 ★BE-870-134
Hand tool to open bivalve shellfish esp. oysters - has self aligning blade to obviate shell splinters in edible prod.
CROMBACH INVESTMENT 01.09.78-BE-870134
P27 (01.03.79) A22c A47g

The tool has a baseplate with a support for the hinged end of the shell while a blade is forced between the shell halves at the other end, progressing towards the hinge until the shell is opened. The blade is pivoted about an axis perpendicular to the longitudinal axis, i.e. the axis of travel, of the blade. The pivotal axis pref. takes the form of a stub shaft with a bearing in the blade. The stub shaft is pref. linked to a hand lever which can be actuated to force the shaft towards the support on the base.

Used for opening mussels, oysters, clams, etc. The leading edge of the blade is self-aligning to suit random shapes and sizes of shell. 1.9.78 as 870134 (7pp448)

HAVE- D12 19307W/12 =DS 2450-277
Animal stunning tongs - for use in slaughter house providing mechanical and electrical shocks
HAVERHILL MEAT PROD 23.10.73-GB-049348
*+P14 R59 (01.03.79) *BE-821-271 A22b-03/06*

A pair of tongs for stunning animals in an abattoir, has an electrical switching circuit timed to work with the operating mechanism which pulls the electrode heads on extending arms towards each other, so that first of all power is laid on to the electrodes. As the electrode heads touch th the head of the animal, an electronic impulse of predetermined waveform, frequency and tension is produced during a predetermined interval of time, between the electrode heads.

The tongs work in the most humane manner possible, and in partic. prevents the convulsive flexing of the muscles by a frightened animal which hinders bleeding and makes the flesh tough. 23.10.74 as 450277. (8pp1045)

REKA/ ★ D12 18288B/10 ★DT 2738-731
Fish smoking chamber - with hearth above tubular water coil embedded in fireclay for heat recovery
REKATZKY H 27.08.77-DT-738731
(01.03.79) A23b-04/04

Fish smoking chamber has underneath the hearth for the wood fire, which consists of fire-bricks, a layer of fireclay in which a coil of water-carrying tubes is embedded. This coil is part of a hot water or space heating circuit. The fireclay layer rests on an aluminium foil and a glass fibre mat which cover the concrete foundation.

This recovers the heat from the wood fires used for fish smoking which otherwise is wasted. Experience shows that the busy season for fish smoking coincides with the cold season when most heat is required. 7.8.77 as 738731 (8pp39).

HENN/ D12 42692Y/24 =GB 1541-589
Manual measuring instrument esp. for animal carcase fat layers - which has probe detecting and indicating change of conditions
HENNESSY J B 01.12.75-NZ-179410
*R11 +R16 (07.03.79) *NL7613-374 G01b-05/06 G01n-21/48*

A depth measuring device includes a light source and a light sensitive element engaged with a lance. The element receives reflected light from the environment surrounding the lance. A distance measurer measures the distance between a reference point and a position of change in the light reflected to the element. The change in the light received is indicated by an indicator.

Pref. the lance is a spike extending from the body of the measurer. Used for measuring fat thickness an animals. 23.11.76 as 048770 (6pp1376)

STRK D12 63419X/34 =GB 1541-720
Bird locating system - for positioning a bird prior to making an incision in the rectal zone for subsequent removal of intestines etc
STORK BRABANT BV 07.02.75-NL-001521
*(07.03.79) *BE-838-204 A22c-21*

The rear end of a bird hanging by its legs is positioned to allow cutting at the rear end using a device including two contacts for contacting opposite sides of the bird's body to prevent horizontal movement, a third contact to prevent vertical movement and to keep the bird at a predetermined vertical location, and a device for moving the bird into contact with the third contact.

Pref. two of the contacts contact the back and breast of the bird, the breast contact being lower than the back. The breast contact is pref. a curved plate for partially embracing the bird. 4.2.76 as 004470 (17pp1376)

AVIC- ★ D12 18542B/10 ★GB 2003-158
Pyrogen-free collagen prodn. - by treatment with hypochlorite, washing with ethanol soln., then with water
AVICON INC 29.08.77-US-828350
(D18 D22) (07.03.79) C07g-07

Pyrogen-free collagen is prepd. by mechanically removing foreign substances from the surfaces of collagen while it is in contact with an aqs. soln. of an alkali(ne earth)metal hypochlorite, washing the collagen in aqs. ethanol soln. and then in pyrogen-free water.

The treatment soln. pref. contains 50-250 ppm NaOCl, and has pH 7-8. Scraping is pref. carried out by drawing the corium through rotating brushes under a stream of hypochlorite soln. Excess soln. is removed, by pressing or centrifugation, and the material is immersed in a soln. contg. 30-70% EtOH, pref. 70 vols. EtOH and 30 vols water with agitation, for 15-30 mins. This step is pref. carried out 3 times. After washing in pyrogen free water, the prod. is then ready for use. 7.8.78 as 032436 (5pp955)

TOYM ★ D12 18815B/10 ★J5 4011-333
Continuous prodn. of soft, elastic protein fibres - where extruded filaments are cut into fibres while being drawn, used for pressed ham prodn.
TOYOBO KK 20.06.77-JA-073473
(27.01.79) D01f-04

The slurry dispersion of the protein with $\geq 10\%$ solid matter is pressed while being heated. After the heated slurry dispersion is fed to the spinning head, it is extruded into the filaments from the spinning orifices. At the same time, compressed air is injected to the extruded filaments from the nozzles made around the group of the spinning orifices so that the filaments are cut into fibres while being subjected to drawing. Pref. the spinning temp. of the slurry dispersion is 120-160°C and the heating time is <10 seconds.

The protein fibres are used in the prodn. of pressed ham. 20.6.77. as 073473 (4pp142)

SNOW ★ D12 18816B/10 ★J5 4011-334
Fibrous edible protein prodn. - by extruding alkaline protein soln. obtd. from e.g. soybeans into a bath contg. acid and salt and neutralising
SNOW BRAND MILK PRODUCTS 29.06.77-JA-076488
(27.01.79) D01f-04

A protein soln. prepd. by dissolving protein sepd. from natural raw material (e.g., soyabean, etc.) in aqueous alkali soln. is extruded through a nozzle into coagulating bath containing acid and salt. The resulting fibrous protein is then neutralised in aq. solution of organic acid and/or organic acid salt adjusted to pH 4.0-11.0 to obtain fibrous protein of which pH is 4.0-7.0.

The process is used for producing edible fibre which can be used as substitute for natural meat. The process permits neutralisation of the protein fibre at pH 4.5-5.0 (i.e., near the isoelectric point) to minimise protein loss during the neutralising process. 29.6.77. as 076488 (4pp173)

KARM- ★ D12 B/10 ★NO 7702-549
Arrangement for sorting fish according to size
KARMOY MEK VERKSTED 18.07.77-NO-002549
(12.02.79) A22c

UNIL D12 80553W/49 #SU -603-319
Fish filleting machine - with two pairs of parallel rotary cutters and divergent ploughshares pulling off fillets
UNILEVER NV 14.05.74-GB-021221 (11.11.75-SU-189603)
*(20.03.78) *DT2521-272 A22c-25/16*

Fish filleting machine output is improved by providing slotted side filleting cutters permitting passage of ribs and fine bones. The side cutters may be adjustable. The skin separator has steam jets. The machine is used in whole white fish preparation by filleting, e.g. of cod, haddock, pollack.

Fish is held on a holder and transporter by forward pointing shoulders head being forward towards cutters for side filleting. There are also spring loaded guides and side fillet removers, which are slotted for through passage of ribs and fine bones, and are diverging. Double cutter takes a V-shaped cut from between the ribs and fine bones. Steam jets are used to break the fine bones from the skin, thus facilitating fine bone removal.

The fish moves along the line at 0.5m/s, or 38 holders/min. The cutters are 200mm dia,. and rotate at 850r.p.m. The side fillets are of good quality and bone free. The V-sections taken by the cutters are further processed to remove bones by breaking.
Covey, W.P., Donaldson, F., Grantham, G.J. Bul. 14/15.4.78. 11.11.75. as 189603 (3pp129)

MIME= ★ D12 19635B/10 ★SU -603-361
Pig carcass cleaning machine - has independently moving sections of scrapers, for improved groin area cleaning
MINSK MEAT DAIRY 03.06.76-SU-367387
(15.04.78) A22b-05/08

Pig carcass cleaning machine has a drum with separate sections, independently moving across the carcass for improved cleaning of groin areas. The machine has conveyors, transporters, scrapers and other mechanisms, the groin area scraper comprising a shaft mounted on bearings in a frame and having sprocket, chain connecting with sprocket on a shaft. A shaft with cross member, has pin and connecting rod connecting to pin of a crank. A shaft connects to crossmember and carries the ground cleaning drum comprising sections formed by two side cheeks pivoting on a shaft and with axial freedom of movement along it, and relative to each other. Between the cheeks is a spacer and pivot carrying a sprocket with scraper.

The side cheeks have chain tensioners retained by bolts One side cheek of each scraper section has a pin on which an arm is attached. In operation the groin cleaning scrapers operate by upward movement of the scrapers with simultaneous reciprocation along the carcass.
Litovko, V.I., Petrovich, V.A., Khalotskii, G.N. et al. Bul. 15/25.4.78. 3.6.76. as 367387 (6pp129)

LERE= ★ D12 19636B/10 ★SU -603-362
Foodstuff casing filling machine - has counter-rotating ribbed, angled shaft coaxial with screw feeder
LENGD REFRIG IND 12.01.77-SU-444002
(15.04.78) A22c-11/08

Foodstuff casing filling machine has a ribbed shaft and feed screw rotating coaxially in opposition for improved efficiency and is used in e.g. the meat industry for filling skins with meat products. It comprises loading hopper, nozzle, ribbed shaft, screw drive motor and gearbox. The screw and shaft have clearance and are counter-rotating, the ribbing and screw having the same helix angle, but the rotational speeds differing.
Gorban, M.V., Gruzdev, I.E., Kornilev, I.B. et al. Bul. 15/25.4.78. 12.1.77. as 444002 (2pp129)

CHER= ★ D12 19637B/10 ★SU -603-364
Meat cutting compact machine - has limit switch and clutch controlled bowl scraper
CHERKASSK MECH ENG 11.01.77-SU-443969
(29.03.78) A22c-17

Meat cutting machine has a worm gear on the scraper drive shaft engaging a fixed sector, also limit switches for controlling lifting and lowering of the bowl scraper. This improves machine compactness.

The machine is used in the meat industry for cutting meat to make filling and comprises a bowl with crescent shaped cutters, drive motor driving a scraper through gears, shaft and clutch. The shaft has a worm meshing with a fixed sector for lifting and lowering the scrapers.
Matvienko, A.G. Bul. 15/25.4.78. 11.1.77. as 443969 (4pp129)

AZOV= ★ D12 19638B/10 ★SU -603-365
Uniform distribution of small fish on transporter trays - by flotation in high density brine
AZOV-BLACK SEA FISH 01.07.76-SU-378401
(29.03.78) A22c-25/08

Fish processing machine uses salt water of density greater than the fish, for loading on to transporter trays. This ensures uniformity of distribution on the trays.

The method is used in fish drying, smoking and frying processes and involves loading of fish from a hopper into tanks of high specific gravity salt water, mesh trays being delivered by a chute to a shelf. On lifting the trays the fish, which floats on the water surface is uniformly distributed over the tray surface.
Valyavin, I.G., Egorshin, V.V. Bul. 15/25.4.78. 1.7.76. as 378401 (2pp129)

PROT- D12 04719A/03 =US 4141-113
Press for meat paste prodn. using meat and bone mixt. - includes slide valve with self-cleaning perforated plate to remove bone splinters (BE 29.12.77)
PROTECON BV 03.06.77-GB-023706 (30.06.76-NL-007187)
*(27.02.79) *DT2729-344 +A22c-17/04*

Meat, contg. bones, is fed to a space in a press and compressed to convert the meat to a paste. Provision is made in the space for the outflow of the pasty meat, the bones being discharged through a large opening in the front face of the space, opened and closed by a slide valve.

The bones are discharged by further movement of the pressing body into the space. The paste is discharged through a number of fine openings perpendicular to the direction of movement of the pressing body. The appts. prevents splinters of bone forming in the paste and allows for rapid discharge of the paste. 28.6.77 as 810787 (8pp1379)

CARL/ ★ D12 19776B/10 ★US 4141-114
Appts. for shucking bivalve molluscs - with inner perforated rotating mollusc conveyor into which steam is passed
CARLSON H C 12.09.77-US-832144
(27.02.79) A22c-29/04

An appts. for opening molluscs includes an insulating housing within which is disposed an elongated, rotatable metal tube, Water is introduced into the tube and is heated. Molluscs are moved along the tube by a conveyor which is positioned in the tube and spaced inwardly from its inner walls. Molluscs are supplied to the conveyor from a hopper which then moves them along the tube where they are subjected to steam created in the tube by vapourisation of the water.

Pref. the conveyor is a perforated cylinder. The housing may be divided into separate chambers each contg. a heater which is separately controlled according to the temp. of that chamber.

The appts. efficiently uses the available heat, and thus a high prodn. rate is achieved. 12.9.77 as 832144 (6pp295)

KARU/ ★ D12 19779B/10 ★US 4141-142

Portable, carcass splitting saw - with drive and driven pulleys provided with radially and uniformly spaced drive pins

KARUBIAN R 16.05.77-US-797548

P63 (27.02.79) B27b-13/08

Splitting saw comprises an elongated housing one end of which generally constitutes a drive end and the opposite end a driven end for an endless saw blade. The drive end mounts an electric motor connected by gearing to a drive pulley around which the drive end of the saw blade is trained, and the driven end is provided with a takeup pulley over which the opposite end of the pulley is trained.

Both the drive and the driven pulleys are provided with radially and uniformly spaced drive pins, and the saw blade is provided with apertures that are spaced to receive the outer ends of the drive pins thereby effecting drive connections between the drive pins and the pulleys and the apertures in the saw blade. 16.5.77 as 797548 (7pp).

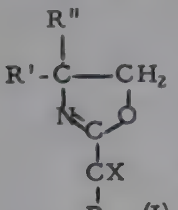
TEEP D12 54569X/29 =US 4141-749

Sausage skin opt. reinforced by fibre - obtd. by adding fatty acid gp-substd. oxazoline wax to viscose before extrusion (BE060776)

TEE PAK INC 06.01.75-US-538636

*A97 E13 (27.02.79) *DT2600-203 +C08l-01/24*

In the prodn. of a tubular artificial sausage casing, viscose is extruded through a die, coagulated and the cellulose regenerated. Improvement is the addn. of oxazoline wax to the viscose at 1-20 wt.% on the cellulose content. The wax is of formula (I).



(I)

In (I), X is H_2 or $=CH_2$. R is 10-24C fatty acid radical; R' is CH_2OH, 1-10C alkyl or a fatty ester radical; and R" is CH_2OH, 1-20C alkyl or a fatty ester radical.

Casing has excellent handle, flexibility and peelability from sausages.

6.1.75 as 538636 (6pp997).

TOWN ★ D12 19975B/10 ★US 4142-000

Injecting fluids into meat prods. using fluid manifolds - having injectors needles and stripper plate to sense thickness of meat for fluid delivery from pump

TOWNSEND ENG CO 20.04.77-US-789017

(27.02.79) A23l-01/31

Machine for injecting fluids into meat products comprises a fluid manifold movable toward and away from an underlying support for a meat product and having injecting needles for piercing the meat. A pump and the manifold are operatively connected to supply fluid to the meat product at a rate proportional to the velocity of the needles w.r.t. the product. The supply is effected in response to the sensing of the meat product by a plate which moves with the fluid manifold towards the product.

Used for injection of pickle or curing solns. for subsequent curing, e.g. for bellies and other products. The amt. of fluid delivered through the needles is varied in proportion to the varying velocity of the needles as they move into and out of the meat product. The displacement pumps are driven from the same crank which drives the fluid manifold. A stripper plate senses the meat product surface and controls displacement of the pump in accordance with the thickness of the product. The provision of a cam in the drive mechanism makes it possible to provide fluid through the needles both during penetration and withdrawal strokes. 20.4.77 as 789017 (11pp1044).

FARH D12 30141X/17 =US 4142-013

Cellulose hydrate sausage casings - having internal coating containing albumen modified with (alkoxylated) N-methylol-(meth)acrylamide, and humectant

HOECHST AG 07.10.74-DT-447757

*A97 +P42 P73 (A11) (27.02.79) *BE-834-242 B32b-23/08*

Shaped cellulose hydrate-based article has a firmly attached coating of chemically modified protein obtd. by mixing aq. alkaline protein soln. with an aq. soln. of N-methylol-(meth)acrylamide or of organic 4-functional, doubly unsatd. cpds. of formula $[R_1\text{-}CH{=}CR_2\text{-}CO\text{-}N(CH_2OH]_2\text{-}R_3$ (where R_1 and R_2 are H or 1-6C alkyl; and R_3 is $(CH_2)n$ where n is 1-8 or CHR_4 where R_4 is 1-18C alkyl) and subjecting the liq. mixt. to a dwell time. The protein is esp. casein.

In partic. the inside of sausage casings are coated to provide good adhesion between the sausage meat to the casing and good peelability of the casing from the meat. 13.1.78 as 869356 Div. ex 4097623 (+ 3.10.75 - US - 619225) (7pp945).

D13: OTHER FOODSTUFFS

UNIL ★ D13 18000B/10 ★BE -870-011

Iced confectionery esp. ice lollipops - with zone contg. small gel pearls and an interstitial ice phase

UNILEVER NV 30.08.77-GB-036203

(28.02.79) A23g

The confectionary is characterised by at least one zone comprising a major proportion of small pearls of gel and a minor proportion of an interstitial phase contg. the ice. It is prepd. by freezing a mixt. for the above comprising at least one zone as above contg. the small pearls of gel and a minor proportion of an interstitial aq. phase.

A pref. example of the above is an iced lollipop. The process enables novel textures and appearance to please the consumer. 28.8.78 as 870011 (12pp597)

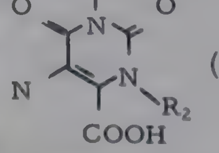
INRG ★ D13 18062B/10 ★BE -871-560

Orotic acid and urea feedstuff additive - allows greater amts. of urea to be incorporated in ruminant feed without toxic effects

INST NAT RECH AGRON 27.10.77-FR-032842

C02 (15.02.79) A23k C07d

Complement for urea or urea deriv.-based animal feeds for herbivorous animals comprises a mixt. of urea or urea-deriv. with orotic acid or its derivs. of formula (I):



(I)

In (I) each of R_1 and R_2 are H, alkyl (methyl), glucosyl or ribosyl.

Feed additive for herbivores partic. ruminants which allows greater amts. of urea or its derivs. to be used in feeds without toxic effects (anorexia or metabolism troubles due to rapid release of ammonia). Thus urea can be used to replace expensive vegetable protein, etc. in feedstuffs. Small amts. of (I) increase the speed of ammonia (produced by the rumen microflora) assimilation and avoid the normal problems of excess urea. 26.10.78 as 871560 (17pp395)

FREU- ★ D13 B/10 ★DK 7703-303

Appts. for treating straw with ammonia

JF FAB FREUDENDAHL 21.07.77-DK-003303

C03 (12.02.79) A23k

HAGG ★ D13 18102B/10 ★DS 1668-236

Multistage recovery of antioxidants from green coffee beans - includes dissolving coffee residue in hot water, extracting with organic solvent and making aq. phase strongly alkaline

HAG AG 11.01.68-DT-668236

(01.03.79) C09k-15/34

A six-stage process for recovering brown, oily substances esp. useful as antioxidisable foodstuff antioxidants, from green coffee beans is described. The process comprises (a) dissolving in hot water the residue remaining after extracting the beans in known manner with aliphatic chlorohydrocarbons, benzene, acetates or ether and removing the extractant, (b) cooling the hot aq. phase and removing pptd. caffeine, (c) rendering the aq. phase strongly alkaline and removing coffee wax, (d) extracting the alkaline phase with an aliphatic halohydrocarbon and sepg. the organic and aq. phases, (e) acidifying the alkaline phase with a mineral acid and (f) extracting the acid soln. with a water-immiscible solvent, drying the extract and removing the solvent.

The prod. is more effective (e.g. as an antioxidant for rendered pig fat) than that described in US 2282808. 11.1.68 as 668236. (4pp922)

NEST D13 04037S/02 =DS 2033-386

Sour milk product

SOC PROD NESTLE SA 21.07.69-CH-011111

*(D16) (01.03.79) *BE-752-656 A23c-15/12*

Butter-like milk prod. is obtd. which is cheaper than table butter and which can be stored six months at 0-5°C. Pasteurised cream, contg. up to 40% fat is conc. to a fat content of 50-65%. The concn. cream is heated to $\geqslant 85°C$, acidified at this temp., cooled for $\geqslant 24$ hrs. at $< 10°C$ and stored at this temp. 6.7.70 as 033386. (3pp068)

HOFF D13 34013V/18 =DS 2342-213

Antibacterial treatment of fish food - by adding a sulphonamide with a 2,4-amino-5 benzylpyrimidine builder

HOFFMANN-LA ROCHE AG 12.10.72-CH-014928

*C02 (01.03.79) *NL7313-342 A61k-31/50*

Synergistic mixts. of pyrimidine derivs. and sulphonamides are used in fish fodder to inhibit or treat infection. Potentiating agents are 2, 4-diamino-5-(3, 4, 5-trimethoxybenzyl)pyrimidine and/or 2, 4-diamino-5-(3, 4-dimethoxy-6-methylbenzyl)pyrimidine, esp. the former cpd. Sulphonamides are 5, 6-dimethoxy-4-sulphanilamidopyrimidine; 2, 4-dimethoxy-6-sulphanilamido-pyrimidine; 2-sulphanilamido-4, 6-dimethylpyrimidine; 2-sulphanilamido-5-methoxypyrimidine; 3-sulphanilamido-4, 5-dimethylisoxazole and/or 2-methoxy-3-sulphanilamidopyrazine, and esp. the isoxazole deriv. or 2, 4-dimethoxy-6-sulphanilamidopyrimidine. The ratio of potentiator to sulphonamide is 1:20 to 20:1. 21.8.73 as 342213. (5pp047)

TROU- D13 36161X/20 =DS 2451-509

Protein-protected feedstuffs for ruminants - by mixing protein-contng. materials with silicic acid and formalin

MILKIVIT-WERK TROUW 30.10.74-DT-451509

*C03 (01.03.79) *DT2451-509 A23k-01/18*

Protein fodder additive to prevent bacterial deamination of protein in the ruminant omasum comprises an inert carrier impregnated with aldehyde or substance which liberates aldehyde. The fodder is mixed with amorphous SiO_2 (1.5-15wt.%, based on protein content), and HCHO, MeCHO, $(CHO)_2$, glutaraldehyde or hexamethylenetetramine for 10-30 mins.

Pref. 30-50wt.% amorphous silica and 70-50wt.% aq. HCHO (30-40%) are mixed with the fodder in a gas-tight container. 30.10.74 as 451509. (4pp047)

MEIJ D13 92763X/50 =DS 2523-967

Sugar coating of food by spraying liquefield droplets - using hot air carrier through nozzle in rotating drum

MEIJI SEIKA KK 30.05.75-DT-523967

*(01.03.79) *DT2523-967 A23g-03/26*

A process for uniformly cladding with a mass of sugar pieces of all kinds of sweets and foodstuffs, the quality of which after the coating process remains unaltered, is simple to carry out without great expenditure of time and

The pieces, of nuts, popcorn, sugar in soln., tablets, etc. are sprayed with fluidised droplets of the mass of sugar, obtd. either by blowing hot air into an evapd. molten mass, or by melting solid particles of sugar in a heated stream of compressed air. 30.5.75 as 523967. (7pp1045)

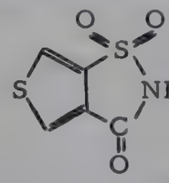
BADI D13 24791X/14 =DS 2534-689

Thiophene-saccharin cpds - prepd by cyclizing sulphamoyl-substd. thiophenecarboxylic acid derivs

BASF AG 16.09.74-OE-007450 (16.09.74-OE-007448)

*B02 C02 E13 (01.03.79) *DT2534-689 A23l-01/23 C07d-513/04*

2, 3-Dihydrothieno[3, 4-d]isothiazole-3-one-1, 1-dioxide of formula (I); the corresp. [2, 3-d] and [3, 2-d] derivs.; and their Na, K, Ca and NH_4 salts are new.


(I)

Prepn. of these derivs. comprises ring closure of corresp. carboxythiophenesulphonamide derivs. in the presence of a condens. catalyst and an inert solvent at 50-200°. Pref. starting materials are carboxy-, aminocarbonyl- or lower alkoxycarbonylthiophenesulphon-(opt. N tert. alkyl)amines. Pref. catalysts are alkali alkoxides or polyphosphoric acid.

The prods. are sweetening agents for use in nutrients, foods, dietetic or pharmaceutical prepns., or animal fodders. 2.8.75 as 534689 (+16.9.74-OE-007449) (9pp047)

MILE D13 35897X/19 =DS 2600-219

Prepn of intermittently fused fibrous protein product - by extrusion through multi-orifice spinneret

MILES LABORATORIES INC 06.01.75-US-538820

*F01 (D12) (01.03.79) *US3953-612 A23j-03*

Fibrous protein prod., similar to meat is obtd. Finely divided oilseed protein is mixed with water. The resulting mixt., contg. 25-60wt.% protein is heated to 100-180°C and extruded as a homogeneous, plastic mass through a nozzle with a number of openings of dia. 0.025-0.25mm., direct into an inert gaseous medium.

The distance between the openings is less than their dia. The openings are pref. oblong of dia. 0.076-0.178mm. and a ratio of length to dia. of 10:1 to 50:1. The protein fibres are in bundles of one cell-thick protein filaments. 5.1.76 as 600219. (4pp068)

RHON D13 55429A/31 =DS 2802-789

Purificn. of aq. anthocyanin solns. - by adsorption with metal oxide(s) coated with styrene polymer film and elution (BE 24.7.78)

RHONE-POULENC INDUSTRIES 24.01.77-FR-001890

*A97 E23 (A12 D16) (01.03.79) *DT2802-789 C09b-23 C09b-67*

Aq. solns. of anthocyan, a natural dye for food, are purified by treating with an adsorption agent. The adsorbent is TiO_2, an alumina or silicic acid of particle size 50µm to 5mm. coated with a styrene polymer. The polymer is a homo- or co-polymer of styrene, (m)ethylstyrene, or vinyltoluene, opt. crosslinked with 0.1-30wt.% of a vinyl monomer. The copolymer contains $\leqslant$ 30wt.% of a copolymerisable vinyl monomer and/or diene monomer.

The adsorbent contg. the anthocyan is sepd. and the dye recovered with an eluant, e.g. aq. alcohol. 23.1.78 as 802789. (6pp068)

LARS/ ★ D13 18322B/10 ★DT 2834-999

Sepg. polar lipid(s) from non-polar lipid(s) for use as food additives - by mixing with water a lipid mixt. extracted from cereals, and centrifuging

LARSSON K H 19.08.77-SW-009374

E11 (E13) (01.03.79) C11b-11

Polar lipides (phospho- and galacto-lipids) are sepd. from their mixts. with monopolar lipids (triglycerides) by adding at least an equal amt. of water (the pref. lipid:water weight ratio is 30:70) and effecting sepn. of an oily phase contg. polar lipids by gravitational force, in particular by centrifuging. mixts. of polar and nonpolar lipids are obtd. by extraction from wheat, rye, barley, oat or maize flour, using pref. butanol as an extractant. The sepn. of the polar lipids is facilitated by adding 0.4-4 wt.% of salt to the water.

Polar lipids are used as additives for bread, paste articles, mashed potatoes and porridge to improve the structure, consistency and storage stability. The nonpolar lipids counteract and so must be removed (below 25%). 10.8.78 as 834999 (9pp70).

DOUW ★ D13 18329B/10 ★DT 2835-519

Juices and extracts concn. - saves energy by combination of aroma recovery and evapn. (NL 27.2.79)

DOUWE EGBERTS KON 24.08.77-NL-009338

(01.03.79) A23f-01/08 A23l-02/10

In a method to concentrate fluids like fruit juices or coffee extract, a combination of boiling down in a steam heated multi-stage evaporator with the recovery of volatile flavours and aromas by stripping is used, followed by distn. using direct steam. The steam required for the recovery of the volatile aroma ingredients is entirely obtd. from the steam produced in the evaporator.

The integration of the aroma recovery and boiling down processes results in considerable savings in energy consumption. 12.8.78 as 835519 (16pp39).

GENO ★ D13 18350B/10 ★DT 2836-304

Sepn. and recovery of aroma constituents - using an oil or fat from roasted coffee for use in mfg. instant coffee

GENERAL FOODS CORP 25.08.77-CA-285489

(01.03.79) A23f-01/04 A23l-01/22

The aroma constituents of roasted coffee are removed and recovered by adding a liq. oil or fat (I) to the roasted coffee, the coffee sub-divided and the thus aromatised (I) sepd.

A higher recovery of volatile aromatics is achieved. Energy consumption is low due to mild conditions. 18.8.78 as 836304 (17pp922).

FARH ★ D13 18378B/10 ★EP -----916

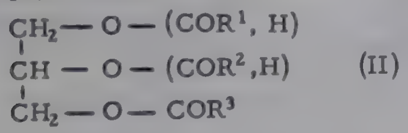
Simultaneous prepn. of fatty acid nitrile(s) and glycerol - by catalytically contacting glyceride(s), esp. natural fats and oils, with ammonia

HOECHST AG 25.03.78-DT-813204 (20.08.77-DT-737607)

E17 (D21 E16) (07.03.79) C07c-31/22 C07c-120/08 C07c-121/14

D/S: BE, CH, DT, FR, GB, LU, NL, SW.

Fatty acid nitriles of formula $R^1(R^2,R^3)$-CN, (I), (where R^1, R^2 and R^3 are 3-23 C aliphatic hydrocarbyl opt. substd. by an OH gp.) and glycerol, are prepd. by contacting mono-, di- and/or tri-glycerides of formula (II), in the liq. phase, with a gaseous NH_3 stream, used in proportions $\geqslant$ 200 l/kg.hr. of (II), opt. in the presence of an inert gas, at 220-300° C, in the presence of Pb, Zn, Cd, Sn, Ti, Zr, Cr, Sb, Mn, Fe, Ni or Co carboxylates or sulphonates as catalysts. The prod. mixt. discharged is subjected to a phase-separation, into a fatty acid nitrile phase and a glycerol/water phase.



$$\begin{array}{l} CH_2-O-(COR^1,H) \\ | \\ CH-O-(COR^2,H) \\ | \\ CH_2-O-COR^3 \end{array}$$

(II)

(I) are intermediates for prim. amines and quat. ammonium cpds., which can be used as textile auxiliaries, flotation agents and cation-active surfactants. Glycerol is used in cosmetics and food industry, in prepn. of explosives, and as solvent, textile auxiliary and additive to heat- or power transfer fluids.

Process allows quick direct conversion of natural fats or oils to (I) and glycerol. High yields are obtd., e.g. 93-96% of (I) and up to 95% glycerol. (I) contains < 2 wt.% free fatty acids and < 10 wt. % fatty acid amide by-prods.

16.8.78 as 100666 (29pp200).

ISR: GB477463; GB451594; GB654462; US2493637; FR864571; DT1914688.

FARB ★ D13 18396B/10 ★EP -----947

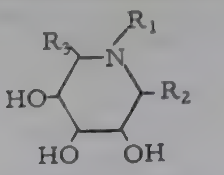
Tri:hydroxy-piperidine derivs. - useful as glucosidase inhibitors for treating diabetes etc. and as animal feed additives

BAYER AG 24.12.77-DT-758025 (27.08.77-DT-738717)

B03 C02 (07.03.79) A23l-01/30 A61k-31/70 C07d-211/46 C07d-403/06 C07d-498/04 C07h-15/12

D/S: BE, CH, DT, FR, GB, LU, NL, SW.

Piperidine derivs. of formula (I) are new:



(I)

(R_1 = H, branched, linear or cyclic, opt. unsatd., aliphatic hydrocarbyl, aryl or heterocyclyl, all opt. substd.;

R_2 = H, OH, OR', SH, SR', NH_2, NHR', NR'R", NH_2CH_2, R'$NHCH_2$, R'R"NCH_2, COOH, COOR', $HOCH_2$, R'$CONHCH_2$, R'$NHCONHCH_2$, R'CONR"CH_2, R'SO_2NHCH_2, R'SO_2NR"CH_2, R'$NHCONHCH_2$, R'$NHCSNHCH_2$, R'$OCONHCH_2$, SO_3H, CN, $CONH_2$, CONHR' or CONR'R";

R_3 can be as R_1 but is pref H, CH_3, CH_2OH, CH_2NH_2, CH_2NHR', CH_2NR'R", R'CONH.CH_2, R'CONR"CH_2, HalCH_2, R'OCH_2, R'$COOCH_2$, R'SO_2OCH_2, R'SO_2NHCH_2, R'NH.$CONHCH_2$, R'NHCSNH.CH_2, R'$OCONHCH_2$, CN, COOH, COOR', $CONH_2$, CONHR', R'SO_2NR"CH_2, CONR'R";

R' and R" are as for R_1;

when (i) R_3 = CH_2OH; R_2 = H or OH; (ii) R_3 = CH_2NH_2 and R_2 = OH; and also (iii) when R_3=H, R_2=H, OH, SO_3H, CN or CH_2NH_2, R_1 cannot be H).

(I) inhibit α-glucosidases, esp. disaccharidases, so are useful in treating pre-diabetes, gastritis, obstipation, caries, gastro-intestinal infections, meterorism, flatulence, hypertension, atherosclerosis and esp. adiposity, diabetes and hyperlipoproteinaemia. They are also useful as animal feed additives to improve the meat-fat distribution.

25.8.78 as 100750 (117pp1251)

ISR: FR2336941; 3 Journal References.

BAKP D13 35232A/20 =GB 1538-885

Lollipop producing machine - with spring loaded detents for stick in forming and in wrapping star wheel pockets

BAKER PERKINS HLDGI 03.11.76-GB-045621

*(24.01.79) *DT2749-291 A23g-03/02*

Lollipops or sweets are produced from a rope of toffee etc. by leading the rope into register with a pocket in a conveyor at a first forming station, severing the rope and compressing the cut rope into the pocket to form a sweet, moving the conveyor to a stick-insertion station at which a stick is pressed into the sweet simultaneous with further compressing of the sweet, and moving the conveyor to a delivery station whilst nipping the sticks against a stick-guiding surface.

Pref. the conveyor is a wheel provided with circumferentially spaced pockets. 19.10.77 (10pp1376)

POLA ★ D13 18493B/10 ★GB 1538-958

Non-dusting free-flowing hydrolysed protein - contg. edible oil and silica or silicate cpd.

POLAK'S FRUTAL WORKS INC 07.04.76-US-674711 (19.08.75-US-605967)

(24.01.79) C07g-07

Moisture free hydrolysed protein compsns. contain 0.5-20 wt. % edible oil and 1-10 wt. % of a silicate or silica gel, based on wt. of the hydrolysed protein. The compsns. are non-dusting, free flowing and the siliceous anticaking agent does not separate.

The edible oil is e.g. a polyoxyethylene sorbitan monoester, coconut oil or corn oil. The silicon cpd. is micronised silica, silica gel, Na or K silicate or Na silicoaluminate-treated silica. The protein is esp. hydrolysed vegetable protein. 18.8.76 as 034406 (3pp955)

IDEK D13 52614Y/30 =GB 1541-511

Gel-forming polysaccharide prepd. by Arthrobacter cultivation - contains glucose, mannose, dihydrostreptose and carboxyethyl rhamnose

IDEMITSU INDUSTRIES KK 05.04.76-JA-037224 (19.01.76-JA-004051)

*A11 B07 C03 (A96 A97 D16) (07.03.79) *DT2701-312 C12d-13/04*

A polysaccharide having a gel forming property, consists of (a) glucose, (b) mannose, (c) dihydrostreptose and (d) 3-0-(1'-carboxyethyl)-L-rhamnose units. The molar ratio of these constituents is (a):(b):(c):(d) equal to 10:10:1-3:3-8 The polysaccharide has an O-acetyl gp. content of 8-14 wt. % calculated as acetic acid.

The polysaccharide may be obtd. by cultivating Arthrobacter carbozolum. The polysaccharide has medical, agricultural, foodstuff and coating, coatulant and gellation applications. 11.1.77 as 000867 (25pp910)

MOMI ★ D13 18505B/10 ★GB 1541-773
Controlling degree of caramelisation of candy - using detector which controls speed of stirrer in caramelisation chamber
MORINAGA & CO LTD 19.07.76-JA-U85790
*R26 (07.03.79) A23g-03/32 G05b-11/**

The degree of caramelisation of liq. for candy is controlled. The boiled down liq. is fed from a cooker to a caramelising tank where it is stirred and caramelised. The caramelised liq. is fed to a cooling tank. The degree of caramelisation of the liq. in the cooling tank is sensed using a detector.

The speed of the stirring device within the caramelising tank is controlled according to the detected value of caramelisation. Pref. the speed of the pump transferring the liq. from the caramelising tank to the cooling tank is also controlled in accordance with the detected degree of a caramelisation.

The process replaces a visual estimation of the degree of caramelisation. 11.7.77 as 028959 (8pp295)

WINC- D13 63491X/34 =GB 1541-836
Drainage plates for cheese moulds - narrow slots formed by pressed out strips standing proud of surface not susceptible to clogging
WINCANTON ENG LTD 04.04.75-GB-014001
*P13 (07.03.79) *BE-840-191 +A23c-19/02*

A perforated cheese mould drainage plate is formed by a plate having a major plane, and portions punched out of the plane to form parallel strips the ends of which being integral with the major portion of the plate and the centres being spaced from the major portion to form drainage slots. The ends pref. incline at an angle less than 30° to the plane. The width of the slots does not exceed 0.6mm.

Pref. each strip defines a recessed surface of radius of curvature not less than 1mm. The plate is pref. 0.56mm in thickness.

Friction between plate and curd filler is reduced. 26.3.76 (4pp1376)

ENVI- ★ D13 18509B/10 ★GB 1541-853
Removing floating contaminant from liq. - using deflector appts. comprising two series of interconnected blades travelling along surface of holding tank
ENVIRONMENTAL ELEME 18.10.76-GB-043235
(07.03.79) C02c-01/38

A surface contaminant is removed from a liq. in an appts. which includes a tank for contg. the liq. and a deflector extending across the width of the tank. The deflector is movable along the tank and includes floats for maintaining the blades of the deflector partially immersed in the liq.

The deflector comprises a first series of connected skimming blades inclined alternately in opposite directions and a second series of connected skimming blades also inclined alternately in opposite directions. Opposing blades of the first and second series are joined at connection between the blades of each series. A suction device between the two series of blades removes deflected contaminant.

The appts. is used for the removal of light particles or scum from the surface of water being treated prior to consumption or dumping in rivers etc. 18.10.76 as 043235 (9pp295)

JAPS ★ D13 18774B/10 ★J5 4011-250
Polysaccharide-contg. powdery food prodn. - involves grinding and sieving culture medium composed mainly of bagasse to give prod. having antitumour activity
JAPAN SYNTHETIC RUBBER 10.06.77-JA-068708
B04 (D16) (27.01.79) A23l-01/28 C12k-01

Prodn. of a powdery food (I) contg. polysaccharide (II), comprises grinding and sieving a culture medium composed of bagasse (III) as principal component, after incubation of a microbial (IV) belonging to Basidiomycetes and cultivation of its mycelium, for sepn. of a compsn. contg. the mycelium as principal component.

Examples of (IV) are Lentinus edodes, Schizophylum commune, Coriolus versicolor, Flammulina velutipes, tremella fuciformis and pholiota nameko. The culture medium is prepd. by mixing (III) and 10-70 (20-40) wt. % on (III) of ricebran as nitrogen source and adding water to give a water content of 30-100 (50-75) wt. %. Cultivation is at 15-35 (20-30)°C for 10-150 days under irradiation of light. 10.6.77. as 068708 (4pp42)

NISE- ★ D13 18775B/10 ★J5 4011-251
Mixt. for coating Tatsuta-fry to simplify cooking procedure - comprising wheat flour, starch, salt, seasoning, spices and soy sauce powder
NIPPON SEIFUN KK 25.06.77-JA-075759
(27.01.79) A23l-01

A mixt. (I) for coating of Tatsuta-fry (II), is prepd. by mixing wheat flour (III), starch (IV), salt (V), seasonings (VI), spices (VII) and powdery soy sauce (VIII). The process for cooking (II) is usually complicated. By use of (I) a delicious (II) can be cooked by a simple procedure. (II) cooked with (I) is hardly damaged by oxidn. of oil.

Pref. (I) is composed of 20-60 wt.% of (III), 60-20 wt.% of (IV), 5-15 wt.% of (V), 1-10 wt.% of (VIII), 0.5-2.0 wt.% of (VI), 0.1-5 wt.% of (VII), 0-5 wt.% of sugar and 0-2 wt.% of thickening agent. When (II) is cooked by coating with (I), little moisture evaporates through the coating of (I) and the yield of (II) can be increased. Pref. (III) contains 7-9% of crude protein. As (IV), wheat starch and corn starch in fine powder form are pref. As thickening agent, processed starch, vegetable gum, xanthan gum and vegetable or animal protein are used. 25.6.77. as 075759 (3pp42)

NISS ★ D13 18776B/10 ★J5 4011-258
Dry sepn. of soybean protein - by grinding defatted soybeans and sieving to recover specified size fraction
NISSHIN FLOUR MILL KK 28.06.77-JA-076074
(27.01.79) A23l-01/20

Method for dry-sepn. of soy bean protein (I) comprise grinding defatted soy bean to 5-20μ and sieving by wind for recovery of the fraction of particle size<15μ.

In prior art, (I) is recovered by wet method and pollution problems are caused in waste water treatment. A few dry methods have been known, however they are not used practically. (I) of high protein content can now be recovered in high yield.

The raw material, soy bean, should be ground without generation of heat and for this purpose, hammer mill, impact mill, jet mill and others are pref. used. The ground powder is pref. screened to recover the fraction of 80-170 mesh, before the sieving by wind. 28.6.77. as 076074 (3pp42)

TOXO ★ D13 18777B/10 ★J5 4011-259
Softening or degradation of vegetables and fruits - without damage to other nutrients, by contact with texture degrading enzyme, e.g. cellulase, pectinase or amylase
TOYO SEIKAN KAISHA 25.06.77-JA-074943
(27.01.79) A23l-01/21 A23l-02/34

Vegetables (I) and/or fruits (II), are heated by (1) contacting a liq. or viscous fluid of (I) and/or (II), with a texture-degrading enzyme (III), while bubbling through air or oxygen or (2) contacting a liq. or viscous fluid of (I) and/or (II), with (III), after addn. of 0.05-0.2% metaphosphoric acid or polyphosphoric acid.

(I) is e.g. onion, spinach or carrot, (II) is e.g. orange, peach pineapple, tomato or apple and (III) is e.g. cellulase, pectinase or amylase. The contact of (I) and/or (II) with (III) is pref. at 40-45°C for 2-4 hrs.

The solid substance are degraded or softened without damage to other nutrients. 25.6.77. as 074943 (3pp42)

SHOW- ★ D13 18778B/10 ★J5 4011-260
Fruit ripening compsn. - comprises liq. carbon di:oxide, liq. ethanol and opt. ethylene gas
SHOWA TANSAN KK 25.06.77-JA-074946
E17 (E36) (27.01.79) A01n-05 A23b-07 A23l-01/21

An agent (I) for ripening of fruits, is composed of (1) liquefied carbon dioxide (II) and liquid ethyl alcohol (III) or (2) (II), (III) and ethylene gas (IV). (II), (III) and (IV) may be mixed in miscible state or immiscible state.

By use of (I), high ripening effect can be obtd. in a short period of time and by the addn. of (II), explosion-limit is lowered. (I) can be packed in a bomb for use. In an example, banana is treated with (I), ethylene andethanol. The increase of sugar and decrease of tannin are large in the sample treated with (I). 25.6.77. as 074946 (3pp42)

TOXO ★ D13 ✓ 18779B/10 ★J5 4011-262

Fruit juice prepn. from unpeeled fruit - by washing fruit, grinding, adding enzyme, deactivating enzyme, and removing bad-flavour caused by peel

TOYO SEIKAN KAISHA 25.06.77-JA-074937

(D16) (27.01.79) A23l-02/34

Fruit juice is prepd. by (1) boiling unpeeled oranges etc. at 90°C for 3-20 min. to wash them, (2) grinding them with a chopper or other machine, (3) adding 0.25 wt.% cellulase, amylase and/or pectinase, (4) treating the juice for deactivation of the enzymes and (5) removing bad-flavour by filtration and/or concn.

The contact of the juice with the enzymes is pref. at 40-45°C for 2-4 hrs., after adjustment of pH to 3-3.5 by the addn. of citric acid. The enzymes are pref. deactivated by heating the juice to 100°C for∼5 min.

Peel of oranges and other fruits, not used as drinks or foods, are usually discarded and cause pollution problems. By this method they can be used in drinks provided bad-flavour in them is removed. 25.6.77. as 074937 (4pp42)

TOXO ★ D13 ✓ 18780B/10 ★J5 4011-263

Citrus fruit juice obtd. from peeled fruit - by boiling, grinding, treating with cellulase, amylase and/or pectinase, deactivating the enzyme and filtering

TOYO SEIKAN KAISHA 25.06.77-JA-074938

(D16) (27.01.79) A23l-02/34

Juice of peeled citrus fruit (I) is obtd. by (1) boiling peeled (I); (2) grinding (I) using a chopper or other machine, after washing; (3) adding 0.1 wt.% of cellulase, amylase and/or pectinase; (4) treating the juice for deactivation of the enzymes and (5) filtering the juice.

The contact of the juice with enzymes is carried out pref. at 40-45°C for 1-2 hrs. under the agitation of 500-1000 rpm after adjustment of pH to 3-3.5 by the addn. of citric acid or other acids. The enzymes are deactivated by heating the juice to 100°C for 5 min.

Nutrients, such as pectin, vitamins, minerals, etc. can be utilised effectively and the pollution problem depending on the discarding of waste endocarp does not occur. 25.6.77. as 074938 (3pp42)

TOXO ★ D13 ✓ 18781B/10 ★J5 4011-264

Fruit juice prepn. from peel of citrus fruits - by boiling peel or refuse from pressing process, washing, grinding, adding enzyme, deactivating enzyme, filtering and concentrating

TOYO SEIKAN KAISHA 25.06.77-JA-074939

(D16) (27.01.79) A23l-02/34

Juice (I) produced from the peel (II) of citrus fruits or refuse (III) from the pressing process is prepd. by (i) boiling (II) or (III) at 90°C for 3-20 min., (2) washing, (3) grinding (II) or (III) with a chopper or other machines, (4) adding 0.25 wt.% cellulase, amylase and/or pectinase, (5) treating the juice for deactivation of the enzymes, (6) filtering the juice and (7) concentrating the juice.

The contact of the juice with enzymes is pref. at 40-45°C for 1-2 hrs. under agitation at 500-1000 rpm, after adjustment of pH to 3-3.5 by the addn. of citric acid. The enzymes are pref. deactivated by heating the juice to 100°C for∼5 min.

Peel of oranges and other citrus fruits, not used as drinks or foods, are usually discarded and cause pollution problems. By this method they can be used as drinks, provided the bad-flavour in them is removed, and the decomposition of nutrients, e.g. vitamins, is prevented. 25.6.77. as 074939 (4pp42)

TOXO ★ D13 ✓ 18782B/10 ★J5 4011-265

Softening fruit texture by adding enzyme - produced by Lentinus edodes

TOYO SEIKAN KAISHA 25.06.77-JA-074941

(D16) (27.01.79) A23l-01/21 A23l-02/34

Fruit-texture (I) is softened by treating the fruit with an enzyme produced by Lentinus edodes No. 119(FERM-P No. 2761).

A liquid culture is pref. used as the culture medium and submerged fermentation is pref. adopted for recovery of the enzyme. The culture medium pref. contains, starch dextrin or sugar such as sucrose as carbon source, and ammonium salt, corn steep liquor, peptone, meat extract soybean powder and/or yeast extract as nitrogen source. Pref. mineral salts are of Ca, Zn, Cu, K, Na and Mg. The culturing temp. and time are pref. n∼25°C and ∼10 hrs. The enzyme is pref. recovered by pptn. with addn. of alcohol or ammonium sulphate and adsorption on an adsorbent, such as cellulose. 0.25-0.5 Wt.% of the enzyme (based on the juice) is added and kept at 45°C at pH 3.5-4.0 under agitation at 500-1000 rpm.

Pericarp, mesocarp, endocarp and the core of fruit can be used effectively without the decomposition of nutrients contained in the fruits. 25.6.77. as 074941 (3pp42)

TOXO ★ D13 ✓ 18783B/10 ★J5 4011-266

Prodn. of fruit juice with added vitamin/E - by adding vitamin/E to juice after washing treatment and then following usual prodn. steps, giving juice with improved flavour

TOYO SEIKAN KAISHA 25.06.77-JA-074942

(27.01.79) A23l-02/26

Fruit juice (I) is prepd. by the addn. of 0.01-0.1 wt.% of vitamin E (II) to (I) after washing treatment etc., followed by the usual process for the mfr. of the juice. (II) is pref. DL-α-tocopherol.

While fruit is processed in the juice producing process, its flavour is damaged. The addn. of (II) to (I), improves the final flavour. By the addn. of (II) to (I), improves the final flavour. By the addn. of (II) to juice, the rate of decomposition of vitamin C in citrus fruit juice and of carotene and vitamin A in tomato juice can be suppressed.

In an example, 10 kg of mandarin orange was boiled at 100°C for 5 min., washed and then ground after the addn. of 0.1 wt.% (II). 50 Wt.% water and 0.25 wt.% cellulase were added to the juice and the pH the juice was adjusted to 3-3.5 by the addn. of citric acid. The juice was maintained at 40-45°C under agitation at 800 rpm. and then heated to 100°C for 5 min. An orange juice was produced by centrifuging and concentrating obtd. juice. 25.6.77. as 074942 (4pp42)

NISS ★ D13 18784B/10 ★J5 4011-27

Preventing discolouration of pigmented synthetic meat - made o vegetable protein, on heat sterilisation, by adding oxidant

NISSHIN FLOUR MILL KK 28.06.77-JA-076106

(27.01.79) A23j-03

Method for prevention of discolouration of food, by the treatment of vegetable protein (I)-raw material with oxidant (II). (I) is used as raw material for artificial ham sausage and other meat-like foods, with the addition of pigments. Recently use of AF_2 was prohibited and as a result colour of the food changes on heat sterilisation. The present method prevents such colour change.

As (I)-raw material, soy bean protein, wheat gluten and the mixt. of the (I) and meat are used. Examples of pigments used are erythrosin, acid red, sunset yellow FCF, acid violet etc. As (II), (II) which can be used as food additive, such as potassium bromate, potassium iodate and ammonium persulphate, are useful. The amount of (II) should be 50-1000 ppm, e.g. (300-700 ppm 28.6.77. as 076106 (3pp42)

MITC ★ D13 18785B/10 ★J5 4011-28

Anthocyanin pigment prodn. - by tissue culture of Derris plant

MITSUI PETROCHEM IND KK 27.06.77-JA-075512

E23 (D16) (27.01.79) A23l-01/27 C12d-13

Anthocyanin pigment (I) is prepd. by tissue culture of a plant (II) belonging to Derris and collecting (I) from the culture medium after cultivation.

Pref. (II) include Derris elliptica, D. floribunda, D. amazonica and D. urucu. Pref. culture media include white medium, Heller medium and Nurashige medium and yeast extract, tomato juice, malt extract, vitamin and other nutrients may be added to the medium. $0-10^{-5}$ mole/l e.g. ($10^{-7}-10^{-6}$ mole/l), of cytochysin is pref. added to the medium. Prod. is a natural pigment. 27.6. as 075512 (3pp42)

TOXO ★ D13 18788B/10 ★J5 4011-290
Enzymes for softening (un)peeled citrus fruit - are prepd. by fermenting Lentinus No. 119 (No. 2761 FERM-P)
TOYO SEIKAN KAISHA 25.06.77-JA-074940
(D16) (27.01.79) A23l-01/21 A23l-02/34 C07g-07/02 C12d-13/10

The culture medium for cultivation of the enzyme is pref. liq., and submerged fermentation is pref. adopted for recovery of the enzyme. The culture medium contains starch, dextrin or sugar, such as sucrose, as carbon source, and ammonium salt, corn steep liquor, pepton, meat extract, soy bean powder and/or yeast extract as nitrogen source. Salts of calcium, zinc, potassium, sodium and magnesium may be added.

The culture is at 25°C for 10 hr. The enzyme is recovered by pptn. with addn. of alcohol or ammonium sulphate and adsorption with e.g. cellulose, etc. 0.25-0.5 wt.% of the enzyme on the juice is added and maintained at 45°C and pH 3.5-4 under agitation of 500-1000 rpm. 25.6.77. as 074940 (3pp42)

HANA/ ★ D13 19004B/10 ★J5 4012-103
Gel forming process - by adding hydroxy-carboxylic acid and opt. alkali metal oxyhydrogen salt to soln. of alkali metal silicate
HANANO T 29.06.77-JA-078217
B06 C05 E34 P53 Q42 (29.01.79) A01n-07/02 B22c-01/16 C02c-03 E02d-03/14

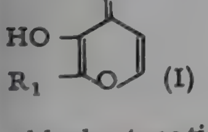
Aq. soln. of alkali metal silicate, e.g. sodium silicate etc. is geleted very rapidly at a pH of 6 to 9 by adding oxycarboxylic acid, e.g. malic acid, gluconic acid, tartaric acid and citric acid etc. or a mixt. comprising the oxycarboxylic acid and an alkali metal oxyhydrogen salt, e.g. $NaHSO_3$, NaH_2PO_4, $NaHSO_4$ and $KHSO_4$, etc.

The oxycarboxylic acid is used as food additive and pharmaceutical intermediates etc. and has low toxicity for humans; process is suitable for use in engineering work, e.g. strengthening of weak ground or stepping of water-leakage of the ground etc. Gel forming process is also applicable for the solidification of casting sand, the solidification of sludge and for granularisation of fertiliser etc.

The gel formed is translucent and exhibits excellent water-holdability without having bloom on its surface even in allowing to stand in the open air; it is suitable for use in preventing hanging-down or penetration of inorganic paint, aq. paint and aq. ink etc. as well as for use as the improving agent or as the filler for water-soluble resins, e.g. amino resins, acrylic resins, cellulose resins, PVA resins etc. The gel is further used as moisture-absorbing agent, catalyst carrier and as gas-adsorber etc. in dewatered dried state etc. 29.6.77. as 078217 (4pp34)

KIYO- ★ D13 19048B/10 ★J5 4012-377
3-Hydroxy-2-alkyl-4H-pyran-4-one(s) prepn. - by condensing 3,4-epoxy-2-alkanone(s) with alkyl formate and oxidising the prod., useful as food flavour improvers
KIYOMI KAGAKU KK 30.06.77-JA-078396
E13 (30.01.79) C07d-309/40

3-Hydroxy-2-alkyl-4H-pyran-4-one (maltols) (I) is prepd. by condensing 3,4-epoxy-2-alkanone (II) with alkyl formate over a base in ethereal solvent and oxidising the resulting product with a gas contg. oxygen. In (I) R_1= lower alkyl.


(I)

(I) is useful as food flavour improving agent and can be prepd. industrially and economically by simpler steps without adopting troublesome longer steps of known methods. (II) is available by treating 3-penten-2-one with m-chlorobenzoic peracid in methylene chloride. Base includes alkanolate and alkali hydride. Ethereal solvent includes lower alkyl ethers (diethyl ether) and cyclic ethers (TFH). 30.6.77. as 078396 (3pp104)

HORI- ★ D13 19060B/10 ★J5 4012-400
Stevioside prepn. from Stevia rebaudiana - by extracting with (hot) water or aq. alcohol, addn. of iron flocculant, then adjusting pH to ppte. impurities
HORIUCHI ITARO KK 29.06.77-JA-076633
E13 (30.01.79) A23l-01/22 C07g-03

Stevioside (I) is sepd. and purified by treating leaves and stalks of Stevia rebaudiana with water, hot water or hydrous alcohol; adding iron cpd. to the extract; adjusting pH of the extract to specifically coagulate the ppte between the iron cpd. and the foreign materials contained therein and removing the ppte.

Stevioside is a diterpene glycoside having good sweetness. The present process provides a low cost commercial purificn. which does not reduce yield .

The iron cpd. may be ferric sulphate, ferric chloride, and ferrous sulphate. pH value is adjusted to 4-11, pref. 7 with alkali (sodium hydroxide, ammonia).

Raw leaves of Stevia rebaudiana (50g) was extd. with water(1.6 L)at 85-95°C to give an extract (1.52 L), which was mixed with ferric sulphate hydrate (9.5 g). Soln. was adjusted to pH 7 with N-sodium hydroxide and stirred gradually for 10 min. Coagulated ppte was filtered off. Filtrate was treated with a mixt. of strong acidic cation exchange resin (Amberlite IR-120B RTM) (200 ml) and strong basic anion exchange resin (Amberlite IR A-410 RTM) (400 ml) and conc. in vacuum to give stevioside (6.2 g) as white powder. This was crystallised from methanol to give colourless needles. 29.6.77. as 076633 (4pp104)

MOJO D13 67395R/37 =J7 9002-630
Carbonation of beverages
MOJONNIER BROS CO 24.03.69-US-809661
*(09.02.79) *BE-747-260*

PROC D13 32809R/19 =NL-159-264
Instant coffee
PROCTER & GAMBLE CO 09.01.69-US-797322 (03.04.68-US-718569)
*(15.02.79) *FR2010-458 A23f-01/08*

Agglomerated soluble coffee particles are produced by contacting a falling stream of falling particles with a stream of wetting agent, which makes an angle of 45-135° with the direction of motion of the falling stream.

The coffee particle stream is formed from coffee flakes of 0.05-0.25 mm thickness and 0.8-1.7 g/cm^3 density, or a mixt. of 5-80 wt.% of such flakes and 20-95 wt% dense coffee powder of bulk wt. 0.3-1.0 g/cm^3 and particle size 5-500 µm. The coffee particle stream at the point of contact with the wetting agent stream has a thickness of $>$1.6 mm.

Specifically the coffee flakes are of thickness 75-178 µm , and of size $>$0.59 and $<$2 mm; the dense coffee powder is of 10-100 µm size. The wetting agent impinges at 600-3050 m/min at right angles onto the coffee particle stream in the form of a column of dia. 6-26 mm. 31.3.69. as 004994 (8pp913)

STUD D13 52761S/32 =NL-159-265
Decaffenating green coffee with moist - carbon dioxide in the supercritical state
STUDIENGES KOHLE MBH 12.02.70-OE-001298 (05.02.70-DT-005293)
*(15.02.79) *BE-762-382 +A23f-01/10*

Caffeine is extracted from unroasted coffee at high temp. using water-contg. CO_2 in a supercritical state. Specifically the extn. is effected at 40-80°C and 120-180 atmos. pressure.

Using the lower extn. temp. than some prior art methods, the coffee residue can be roasted with minimal loss of prod. quality. 3.2.71. as 001421 (5pp913)

RALS D13 41028W/25 =NL-159-266
High moisture content meat/expanded protein petfood - with the meat stabilised with org acids and anti mycotic agents after pasteurisation
RALSTON PURINA CO 18.09.74-US-504795
*C03 +P15 (15.02.79) *BE-825-092 A23k-01/10*

Domestic animal food with a moisture content of 40 wt.% is produced by (a) cutting raw meat into uniform lumps, (b) pasteurising the cut meat by heating, (c) impregnating the cut meat with a preservative mixt. of bacteriostatically active organic acid and edible antimycotic, (d) mixing the impregnated meat with lumps of hydrated, expanded protein (prepd. from protein mixt. of pH 4.6-6.2

before expansion) in amt. of 25-90 vol. % based on the end prod., and (e) forming the mixt. into the desired shape.

Typically the raw meat is cut into lumps 0.3-2.5 (pref. 1-1.6) cm in size using e.g. abattoir offal. The cut meat is pasteurised in water at 57-60°C for 10-15 min. Prod. of improved consistency is obtd. which retains the form of peices under normal handling. 22.10.74. as 013804 (4pp913)

UNIC- D13 80687S/51 =NL-159-268

Food and fodder prodn - from cheap raw materials - and alpha-amylase

UNICEF UTD NATIONS (BUHL) 05.06.70-GB-027431
*C03 (15.02.79) *DT2127-831 A23k-01/18 A23l-01/34*

Feedstuff for suckling or young mammals is produced from a mixt. contg. on the one hand the flower, flour or groats from cereals, starch contg. tubers or roots, or other starch-contg. base materials, and on the other hand leguminous fruits and/or oil seeds or cake, or a mixt. of these base materials which also contains milk powder. The mixt. is made up with water and α-amylase to an extrudable paste of 35-50 wt.% moisture content, which is heated to 65-115°C in an extruder. The extruded material undergoes enzymatic degradation for 45-90 mins. at 55-90°C in the atmos. of 100% RH and then it is dried.

Specifically water and/steam are added to the extruded prod. before or during enzymatic degradation, which is effected until a dextrin-content of $\geqslant$25% and reduced sugar-content of $\geqslant$15% of the initial starch-content are formed. After enzymatic degradation, the enzyme in the prod. is deactivated at 95-100°C for 10-20 mins., followed by sterilisation at 85-100°C for 60-80 min. 7.6.71. as 007776 (9pp913)

SEAR D13 33067F/00 =NL-159-365

Aspartic acid dipeptide derivs sweetening agents

SEARLE G D & CO 20.01.67-US-610465
*B05 E14 (15.02.79) *BE-709-655 A23l-01/23 C07c-103/52*

Synthetic sweetener mixt. comprises a solid or liq. carrier and an aspartic acid dipeptide alkyl ester (I). $HOOC.CH_2CH(NH_2)CO.NH.CH(X).CO.OR_1$ (I). In the formula, X is $-CH_2-C_6H_4-(p)OR$, $-CH_2C_6H_4-(p)hal$, $-C(OH)H-CH_3$, $-(CH_2)_nS(O)_mR_2$ or R_3; hal is F, Cl, Br or I; m is 0 or 2; n is 1 or 2; R is H or 1-7C alkyl; and R_{1-3} are 1-7C alkyl; with the proviso that when R_3 has 1 or 2C, then R_1 must have $>$2C.

The sweetener mixt. is used as a sugar substitute in various cases of sugar sickness. The synthetic material does not have an unpleasant after-taste as found with prior materials e.g. saccharin and cyclamates. The mixt. can be used widely with fruit, vegetables, juices, meat prods., milk and egg prods., salad garnishes, sorbets, jams, syrups, non-alcoholic drinks and wines etc. 19.1.68. as 000870 (8pp913)

FATS= ★ D13 19639B/10 ★SU-603-366

Butter-like margarine with high linoleic acid content - contg. cream, milk and transesterified mixture of beef fat and sunflower oil

FATS RES INST 23.07.76-SU-394382
(29.03.78) A23d-03

Margarine having consistency similar to butter contains 25-30wt.% of plastic cream, 8-10 wt.% of milk, and balance transesterified mixt. of fats consisting of beef fat and sunflower oil in a ratio of 45:55 to 50:50.

The compsn. contains 19-23 wt.% of linoleic acid, which promotes self-emulsification of the margarine without addition of any special emulsifier. The compsn. contains at least 82% of fats and not more than 16.5% of moisture.

The colour of the margarine is cream. The taste is butter-like without any foreign tone.

Vasilev, N.F., Melamud, N.L., Meleshin, V.A. et al.
Bul. 15/25.4.78. 23.7.76. as 394382(4pp70)

BEER= ★ D13 19641B/10 ★SU-603-368

Carbonated non-alcoholic drink based on sugar syrup, whey and lemon - is modified by addition of extracts of chicory and black mountain ash, and conc. apple juice

BEER NON-ALCOHOLIC 03.01.77-SU-440430
(29.03.78) A23l-02

Non-alcoholic drink, contg. sugar, citric acid, lemon infusion, whey concentrate, carbonic acid and water, is improved by addition of an extract of overground parts of chicory, extract of black mountain ash (Sorbus) and conc. apple juice, whereby the organoleptic and nutritive properties of the drink (named 'Atlant') are improved.

The drink has natural colouration. It is stable for at least 10 days.

The compsn. comprises (in wt.%) sugar 7.5-8.5, citric acid 0.14-0.15, lemon infusion 0.3-0.4, extract of overground parts of chicory 3.0-4.0, extract of black mountain ash 3.0-4.0, conc. apple juice 0.95-1.05, conc. whey 1.4-1.6, carbonic acid 0.40-0.45 and balance water.

Belenkii, S.M., Salmanova, L.I., Filonova, G.L. et al
Bul. 15/25.4.78. 3.1.77. as 440430(2pp70)

SCMZ ★ D13 19790B/10 ★US 4141-287

Appts. for forming reconstituted pimento strip for stuffing olives - includes conveyor belts supporting extruded strip on entry to setting bath

SCM CORP 15.09.77-US-833477
A88 P41 (27.02.79) A21c-09/04 B02c-11/08

Appts. includes a mixer producing a pimento base. The base is extruded through a nozzle onto a lower endless belt which has an axial recess of uniform dimensions of the same size as the desired strip. The belt is supported to provide an inclined upper run.

A setting soln. is held in a tank into which the lower end of the upper run of the belt passes. An upper endless belt is supported with its lower run in mating contact with the upper run of the lower belt to establish a closed forming trough for the pimento base. The upper belt also has its lower end immersed in the bath. 15.9.77 as 833477 (5pp295).

GRUN/ D13 36310Y/21 =US 4141-316

Mixing of granular materials with treatment liquids - by spraying airborne particules, then sepg. from gas stream using counter-current flow

GRUN G (LUCO-) 23.01.76-DT-602454
*C03 J04 +P42 (J02) (27.02.79) *BE-850-555 A23c-11 B01j-08/24 B05b-17/04 B05c-05/02*

Appts. for the treatment of powdery or granular substances comprises a vessel rotatable about its vertical axis into which the substances are introduced in a vortex flow.

The substances are then carried along by a downward moving gas stream and conducted through a spraying zone where the liq. or molten treatment agents are encountered. The downward flow then meets a counterflow the velocity of which determines the staying time and the sifting effect.

The appts. achieves more effluent and uniform treatment of the substances, and may be used for mixing milk powder or starch, coating milk powder with fat, or producing fat concentrates. 21.1.77 as 761491 (8pp1379).

ZIND/ ★ D13 19825B/10 ★US 4141-578

Toffee apple stick - of injection moulded thermoplastics with cylindrical handle and pointed angular inserted gripping section

ZINDER V 21.11.77-US-853378
A97 (27.02.79) A23p-01

A stick is of injection moulded thermoplastics with m.pt. above 250°F and comprises a cylindrical handle section followed by a gripping section and a tapered end. The gripping section is inserted into the apple and holds it securely by having a non-circular cylindrical and/or prismatic surface with four straight edges parallel to and equi-spaced from the centre axis.

The tapered end terminates in a curved edge coplanar with the axis and formed by the intersection of two curved surfaces at 30-130°. The end is pref. $<$3/8 inch long, total stick length is 5-7 inches and the handle and gripping sections, each occupy 40-60% of total length. The stick is e.g. of polyacrylonitrile, polystyrene, polyamide, polyester or polyoxymethylene. 21.11.77 as 853378 (6pp1358)

NIRO D13 20490V/11 = US 4141-783

Spray drying plant - esp for powdered milk with preheating of liquid to accel-erate evapn before spraying

NIRO ATOMIZER A/S 29.08.72-DK-004269
*P42 +Q76 (27.02.79) *NL7311-844 B01d-01/18*

A spray-drying atomiser comprises an atomiser wheel having two annular compartments each having a set of ejection apertures at the periphery of the wheel, the two compartments being in fluid communication.

The wheel is mounted on a shaft, around which two concentric ducts are defined terminating in the first compartment, one being for liq. and the other for steam. The liq. is at such a temp. that gas and vapour is released from the liq. through one set of apertures, and liq. through the other. Used e.g. for spray-drying of milk or egg-white to produce a less voluminous product than hitherto. 6.4.77 as 785147 (+21.8.73 - US - 390273) (11pp1379).

MART/ ★ D13 19880B/10 ★US 4141-791

Milk coagulating enzyme prodn. - by cultivating Cryptococcus albidus, useful in cheese making and having low proteolytic activity

MARTINI A 27.12.76-US-755389
(D16) (27.02.79) A23c-19/02 C07g-07/02

Prodn. of a milk-coagulating enzyme (I) comprises cultivating the yeast Cryptococcus albidus or its varients (esp. the aerius or diffluens variants) on a nutrient medium contg. assimilable C and N sources and inorganic salts, then extracting (I) from the culture liq. Pref. cultivation is under aerobic conditions at 15-40°C.

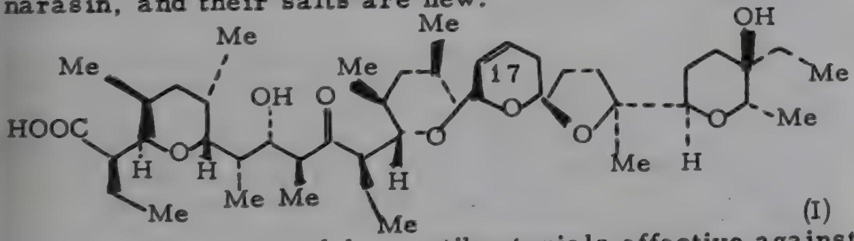
(I) is useful in industrial-scale cheese making. It has only very weak proteolytic activity. (I) is a new enzyme and is produced by other yeast species of the genera Cryptococcus, Candida, Torulopsis, Rhodotorula or Kluyvetomyces. 27.12.76 as 755389 (4pp1251).

ELIL ★ D13 19939B/10 ★US 4141-907

Antibiotics 20-deoxy-narasin and 20-deoxy-epi-17 narasin - useful as antibacterials, anticoccidials, antivirals, feed utilisation improvers, cardiotonic agents etc.

ELI LILLY & CO 20.10.77-US-844087
B03 C02 E13 (27.02.79) A61k-31/35 C07d-309/22

20-Deoxynarasin of formula (I), and 20-deoxy-epi-17-narasin, and their salts are new.



(I)

The cpds. are useful as antibacterials effective against anaerobic strains and against Mycoplasma spp.; antivirals esp. active against rhinovirus type 3, vaccinia virus, herpes virus and influenze A virus; anticoccidials active against Eimeria tenella; and for improving feed utilisation by animals esp. ruminants. Also potentially effective against swine dysentry, as cardiotonic agents, as inhibitors of ATPase and as ionophones for selective removal of a cation from a medium, esp. Ag ions from photographic solns. and toxic cations from industrial wastes, or as components of a membrane useful for selective transport of cations against a concn. gradient.

(I) and (II) are found in the antibiotic complex produced by cultivating Streptomyces aureofaciens Duggar NRRL 11181. Other factors are also formed, esp. narasin, and these are sepd. by solvent extraction, chromatography, etc. 20.10.77 as 844087 (11pp1248).

OCTR- D13 72773Y/41 = US 4141-994

Diet additive contg. acyl lactylate emulsifier - with vitamin, vitamin precursor and/or dye, pref. carotinoid to pigment flesh (NL 26.9.77)

OCTROPA INT OCTOOI (UNIL) 22.03.76-GB-011478
*C03 E19 (27.02.79) *DT2711-486 +A61k-31/12*

Anadromous fish are reared in captivity on a diet contg. as food additive comprises (a) an acyl lactylate consisting of cpds. of formula RCO.O.CH(CH_3)CO.O.CH(CH_3)COOH (where RCO is a 12-20(16-20)C acyl gp. and X is H or a metal atom) and (b) a carotenoid pigment which is canthax- anthin and/or astaxantin. The wt. ratio (a):(b) is 10-1:1-5. The additive imparts pigmentation to the flesh of the fish.

Pref. the acyl lactylate is stearoyl lactylate, esp. sodium or calcium stearoyl lactylate. Pref. the additive also contain a carrier or diluent which is an edible gum, and/or sugar (deriv.). 21.3.77 as 779785 (3pp918)

QUAK ★ D13 19973B/10 ★US 4141-996

Modified liq. vegetable protein prod. - made by fermenting, reacting with hydroxide and peroxide, then evapn., with better colour, odour and taste

QUAKER OATS CO 13.05.76-US-685733
(27.02.79) A23j-03

A liq. phase protein prod. is made by fermenting an aq. slurry, with 3-20 wt.% solids content, of carbohydrate-contg. plant protein material of >30 wt.% protein. The slurry is fermented with 0.1-5 wt.% Saccharomyces cerevisiae or S. carlsbergensis at 33-90°F for 4-96 hr. to produce CO_2.

An alkali metal hydroxide or NH_4OH is then added to form a carbonate and adjust pH to 7-10.5. The slurry is heated to react the carbonate and protein, then pH adjusted to 6-8 with edible acid or alkali. The mixt. is then mixed with 0.3-2 wt.% peroxide per lb. protein and heated to b.pt. at 15-30 in. vacuum to remove steam-volatile flavour components.

Treatment improves odour, colour and flavouring giving a bland, creamy-white prod. with similar thermoplastic and binding properties as casein and its salts. 13.5.76 as 685733 (5pp1251).

MILE D13 14203B/08 = US 4141-999

Simulated bacon product formed of fat and lean layers - with specified fat layer compsn. and opt. specified lean compsn.

MILES LABORATORIES INC 07.10.77-US-840123
*(D12) (27.02.79) *BE-871-090 +A23j-03*

Bacon-like meat analogue having expanded layers simulating the lean and fat portions of bacon is produced by cooking a compsn. mixt. contg. 10-40 wt.% vegetable protein fibre, 5-20 wt.% albumin, 5-20 wt.% starch, 30-60 wt.% water, 3-40 wt.% vegetable oil, 0.1-1.5 wt.% vegetable gum, 2-20 wt.% vegetable protein isolate, 0.05-0.5 wt.% dextrose, 0.005-0.05 wt.% food grade colouring, 5-20 wt.% flavours and seasonings contg. a dispersed gas.

Improvement comprises expanded layers simulating fat portions produced by cooking compsn. mixt. contg. 3-7 wt.% albumin, 25-40 wt.% water, 0-6 wt.% vegetable protein, 52-65 wt.% vegetable oil, 0.05-0.6 wt.% vegetable gums and 4-10 wt.% flavours and seasonings contg. dispersed gas.

Prod. has simulated fatty portion intended when fried to ripple or crinkle and have a juicy, fatty mouthfeel similar to natural bacon. 7.10.77 as 840123 (3pp931).

RUPE- ★ D13 19976B/10 ★US 4142-001

Contacting raw battered food prods. with carbon di:oxide snow - to set uncooked batter to non-flowing condition by temp. redn.

RUPERTS CERTI-FRESH 09.05.77-US-795118
(27.02.79) A21d-10/04 A23l-03/36

A coating of raw batter is applied to the outside of a food product and the latter is then placed on a layer of CO_2 snow while the batter remains uncooked. The coating rapidly sets to an essentially non-flowing condition through the temp. redn.

The food product may be precooled or prefrozen before application of the batter which is supplied in a pre-chilled condition. CO_2 snow may be sprayed onto the coated product while the latter is supported on the CO_2 snow layer.

Used for prodn. of frozen raw battered food prods., such as individual portions of fish. The prod. can be produced at low cost and eliminates the necessity for partial or complete cooking of the batter coating. Simpler and less expensive batters may be employed and the finished prod. does not suffer the effects of double cooking. 9.5.77 as 795118 (6pp1044).

GENO ★ D13 19977B/10 ★US 4142-002

Brewable mixt. of comminuted roast coffee and wheat - made from slowly roasted wheat, giving short drainage times

GENERAL FOODS CORP 17.05.78-US-906493
(27.02.79) A23f-01/02

Prodn. of a roasted and comminuted prod. contg. > 35 wt. % coffee and 35 wt. % wheat is improved when the raw wheat is roasted to an end temp. of 450-460°F over 40-90, esp. 50-90 min.

After roasting the wheat is comminuted and mixed with comminuted coffee, pref. having smaller particle size than the wheat. Esp. the wheat is roasted to a roast colour > 85, esp. 90-105, and the coffee is roasted to a colour of 40-60.

The prod. has acceptably short drainage time when used in the basket of drip coffee makers. 17.5.78 as 906493 (4pp1251).

AMHP D13 15979B/09 =US 4142-003
Edible, sprayable, lecithin vegetable oil compsn. - contains pure ethanol to reduce viscosity and give a single phase
AMERICAN HOME PROD CORP 22.08.77-US-826481
*(27.02.79) *BE-869-891 A23d-05 +A23j-07/02*

Edible compsn. comprises 3-12 wt. % of lecithin and 1-15 wt. % of 190-200° proof ethyl alcohol, the remainder being liq. vegetable oil, provided that when 190° proof alcohol is used the alcohol concn. is 1-8% in compsns. contg. the max. of 12% lecithin and 1-5% in compsns. contg. the min. of 3% lecithin. Compsn. may further contain a minor amt. of an antioxidant.

Compsn. is useful as a basting and anti-stick agent for application to foods or the pans, etc. The alcohol lowers the viscosity and provides a uniform one-phase system of high lecithin concn., suitable for dispensing from non-aerosol squeeze or spray bottles. 22.8.77 as 826481 (7pp927).

See Also

D15 SU 602751	D16 BE 870188	D16 NL 159436
D16 SU 602552	D16 SU 603348	

D14: FOODSTUFF MACHINERY

USHE/ ★ D14 18055B/10 ★BE -871-526
Machine to trim heads of carrots, etc. for canning - automatically orientates each carrot to be conveyed upright in single file
USHER T A 25.10.77-GB-044237
(15.02.79) A23n

A supply of randomly orientated carrots delivers them in single file, each carrot suspended vertically with its tail hanging between two, relatively moving, parallel bars. The file advances along the bars which transfer the carrots, maintained in the same arrangement, to hang between twin bands of a horizontal conveyor. The horizontal conveyor carries each carrot in turn under a steady roller which contacts the top of the head while the head is trimmed off by a cutter.

The parallel bars may be given a vibratory motion but are pref. a pair of cylindrical rollers rotating in opposite directions. The rollers are pref. inclined downwards towards the horizontal conveyor.

The machine mechanises a food industry task which has previously been labour intensive. 25.10.78 as 871526 (8pp448)

MIRO- ★ D14 18081B/10 ★BE -871-651
Machine for simultaneously grinding and mixing several substances - giving homogeneous mixtures or predetermined size distributions, used for mixing paints, foodstuffs, chemicals etc.
MIRODUR IT SPA 03.11.77-IT-051661
J02 P41 (15.02.79) B01f B02c

The machine consists of two or more discs turning in relation to each other, supported by an arm and arranged in such a way that their assembly may be plunged into a container holding the materials to be mixed, ground and homogenised. Each disc has on its surface facing another disc, having channels which are shaped and located in such a way that when one disc rotates the channels act as a pump.

As all the mixing and grinding operations are done in one vessel, loss of heat and materials during transfer from one vessel to another is avoided. 30.10.78 as 871651 (10pp1330)

INMO- ★ D14 B/10 ★DK 7703-291
Cold container
IND MONTAGE HVID 20.07.77-DK-003291
(12.02.79) A23b

ZYLI- D14 86660Y/49 =DS 2635-577
Citrus fruit juice expeller - with movable scraper to keep filter surface clear of pulp
ZYLISS ZYSSET AG (ACKE-) 06.08.76-DT-635577
*P28 (01.03.79) *BE-857-473 A47j-19/02*

A squeezer for citrus fruits can be used to extract the juice from a large number of fruits before it is necessary to clean the sieve. It has a conical projection for pressing the fruit, beneath which there is a horizontal sieve and below the sieve a juice collecting tray. A wiper operated by hand is provided, and this brushes the residues of flesh etc. through the openings of the sieve as it turns around the pressing cone, into a collector close to the bottom of the sieve. 6.8.76 as 635577. (13pp1045)

SCHE/ ★ D14 18231B/10 ★DT 2738-05
Freeze dryer cooling chamber - with rotary discs forming meande path, with sieve portions, ensuring shorter travel for fine particles
SCHELAUSKE P J 24.08.77-DT-738058
Q76 (01.03.79) F26b-05/06

Freeze drying appts. for instant coffee has a cooling chamber for passage of powdered material. Inside the chamber is a stack of conveying surfaces onto which the material falls so as to follow a zig-zag path. The system is designed so that larger particles travel further than the particles.

At least one of the surfaces has perforations over par of its surface so that the fine particles fall through to follow a shorter path. These surfaces can be rotating discs so that the granules are carried outwards radially or tangentially. Gas or steam can be passed around the surfaces to give a sepg. or sifting effect. 24.8.77 as 748058 (14pp349).

FERR- ★ D14 18321B/10 ★DT 2834-98
Date stoning machine - with wipers and centring sleeves befor reciprocating stoning cutter station
FERRUM AG 18.08.77-CH-010128
(01.03.79) A23n-04/08

A stoning machine consists of an endless band of stoning plates with holes for the dates. Wipers and a centring device line up the dates in the holes before they reach the stoning station. Reciprocating ring cutters remove t stones from the fruit.

This prevents any wastage of fruit and operates for prolonged periods without any maintenance. 10.8.78 as 834985 (19pp39).

NITL ★ D14 19343B/10 ★J5 4014-3
Easily assembled tubular membrane separator - for concn., refini and desalinating liquids in food and brewing applications
NITTO ELECTRIC IND KK 04.07.77-JA-080142
(D16) (02.02.79) B01d-13

Porous support tubes are juxtaposed in a casing and connected end to end through joints to form a meanderin flow line. The tubes are arranged vertically. Each joint consists of a bend and rotatable joint, which allows the connected pipes to be relatively turnable. A liquid sepg. tubular membrane is inserted into each tube. 4.7.77. as 080142 (5pp26)

ATAD- D14 26533S/16 =NL-159-269
Liquid sterilization/pasterurization
ATAD SA (ATA -) 15.12.67-FR-132589 (18.04.67-FR-103192)
*+P34 (15.02.79) *CA-868-110 A23l-03/16 +A61l-03 B01f-07/10*

Fluids are sterilised by means of a spinning disc rotating in a fixed housing. The fluid flows from an inlet at the eye of the disc between the narrow clearance between disc and housing and out at the perimeter. The frictional forces set up in the fluid generate sufficient heat to raise the temperature to that required for complete sterilisation.

As the fluid flows between two flat smooth surfaces and in the direct of the centrifugal force, there is a regular pressure gradient from inlet to outlet and minimal risk of either local dead spots where sterilisation is incomplete or localoverheating where the fluid might boil. 18.4.68. as 005457 (13pp1370)

REMI- D14 04087A/03 =US 4141-655
Homogeniser for mixing a finely divided mass into another - has ultrasonically vibrating blade energised independently of the materials
REMIA BV 07.07.76-NL-007527
*J02 (27.02.79) *BE-856-517 B01f-11*

Appts. for homogenising a mass contg. at least two substances, at least one a fluid, comprises one or more first vibratory knives extending within the mass and rotatable about a spaced parallel axis.

A braking device prevents the mass being rotated, the device extending normal to the rotational axis of the first blade(s), and comprising a second vibratory blade extending into the mass and rotatable about an axis parallel to that of the first blade(s). Alternatively, the braking device may include a rotary impellor.

The appts. may be used for homogenising margarines, salad cream, toothpaste, cosmetic creams, paint, etc. and operates with considerably lower energy loss than known appts. 5.7.77 as 812649 (9pp1379).

D15: WATER TREATMENT

SNAM ★ D15 18035B/10 ★BE-870-215
Multistage evapn. plant to desalinate sea-water, etc. - has vertical preheater for feed water to reduce power consumption
SNAMPROGETTI SPA 14.09.77-IT-027510
(05.03.79) C02b

The plant comprises a vertical cylindrical column subdivided transversely into several cylindrical sections each contg. an evapn. stage. Each stage comprises a vertical tube bundle evaporator gravity fed with liq. from an overhead receiver supplied from the stage above, or in the case of the first stage, from a supply of raw feed water. Each stage also has a feed water preheater using steam produced in that stage.

The improvement is that the vertical evaporator and the preheater are both of ricular cross-section and the preheater extends vertically from one section partition to the next, apart from an interposed, thermal expansion joint.

This provides reduced pressure drop through each stage and greatly increases output compared with horizontal, preheater type evapn. plant, with a corresp. redn. in power consumption. 5.9.78 as 870215 Add to 801425 (14pp448)

SOWA/ D15 68455R/38 =DS 1911-114
Dewatering sediment in the purification of - sewage
SOWA W (SOW /) 05.03.69-DT-911114
*(01.03.79) *DT1911-114 +C02c-03*

A sludge drying bed in which vertically arranged, water-permeable elements for draining away the water are positioned in the filtration layer, overcomes the problems of lengthways running beds with upjointed bricks and mantle of coke; the coke in partic. being attacked both by the sludge and by the frost in winter.

A circular bed up to 60m. in dia. depending upon conditions is used, and pasteboard strips up to 8-10cm. wide are formed into a roll 40-80cm. long. These are inserted into the gravel of the filter bed to a depth of about 4cm. and they show the height to which the sludge is allowed to rise. 5.3.69 as 911114. (3pp1045)

PASE D15 45868T/29 =DS 2061-722
Reciprocating sludge scraper - for sludge settlement tanks
PASSAVANTW MICHELBACHER 15.12.70-DT-061722
*(01.03.79) *DT2061-722 C02c-01/30*

A sludge scraper travelling in both directions along an extended settling tank through which the sewage flows, has its scraper suspended from a bridge. At the reversing point the scraper moves behind the collected sludge, and the journeys are carried out without any additional turbulence being caused, which would prevent sedimentation and require more energy.

The scraper shield has the form of an endless band movable on guide rollers, with openings corresponding to about half its length. The openings are always in front in the direction of motion and the sludge is collected by the full-walled section. 15.12.70 as 061722. (7pp1045)

HENK D15 49122T/31 =DS 2063-939
Water purification - using coagulating assistant alkali silicate,and quat nitrogen cpds
HENKEL KG AUF AKTIEN 28.12.70-DT-063939
*E34 J01 (01.03.79) *DT2063-939 C02b-01/20 C02c-05/02*

A coagulant for water treatment comprises an alkali silicate soln. with a molar ratio SiO_2:Me_2O >4:1 and contg. 1-15wt.% of a quat. and/or poly-quat. nitrogen cpd. (I) based on solid alkali silicate. (I) is pref. a hydroxide and the N atom is bound to an alkyl gp. e.g. $[N(CH_3)_4]OH$.

The process is carried out easily without great expenditure. Water from a paper works may be treated. 28.12.70 as 063939. (4pp068)

NEID/ ★ D15 18107B/10 ★DS 2124-202
Sewage aerating and homogenising installation - has inclined disc disintegrator rotor with sewage water supply and recirculation connections
NEIDL G 13.05.71-DT-124202
P41 (01.03.79) B02c-18/40

The sewage water is supplied into the aerating basin through a pipe with a fitted shut-off valve. The pipe connects to a suction pipe on top of which the inclined disc rotor disintegrator is installed. The base of the suction pipe rests on the bottom of the after settling tank. The disintegrator is driven by a motor mounted on top of the tank cover via a shaft extension. The disintegrator has two discharge sockets returning the water with disintegrated solids into the aerating basin.

The shaft is enclosed in a tube communicating through slots outside the tank cover with a pressurised channel, through which air is forced into the rotor space supporting in combination with the continuous water circulation the aerating process. 13.5.71 as 124202. (7pp554)

MATU D15 40275V/22 =DS 2355-893
Bactericidal membrane for water purificn - esp. disinfecting drinking water, consisting of porous water-insol substrate impregnated with adhering insol. silver salt
MATSUSHITA ELEC IND KK 14.02.73-JA-018789 (09.11.72-JA-112691)
*A91 +P73 (A14 A23 A97) (01.03.79) *DT2355-893 C02b-03/06*

A bactericide membrane for a water purifier, e.g. for household or drinking water, consists of fibrous, water-insoluble strips of smooth non-woven cloth coated with AgCl. The cloth is made of partly acetalised polyvinyl alcohol fibres or their mixts. with polyamide, polyester or polypropylene fibres.

The strips pref. are 0.01-5mm. thick and the AgCl layer is pref. 0.4-50 µm. The adhesion of the silver salt is improved thus lengthening the life of the membrane. 8.11.73 as 355893 (+9.11.72(2)-JA-112695/8) (5pp068)

FARH D15 82920Y/47 =DS 2621-698

Treating waste water, esp. from cess pits, with flocculants - then gravity filtration through textile to reduce solids and BOD

HOECHST AG 15.05.76-DT-621698

*A88 (01.03.79) *BE-854-634 C02c-01/18*

Appts. for purifying waste water comprises a supported web of fibres through which is passed the water, previously treated with flocculant, and pref. after sepg. the major amt. of pptd. material. The web is suspended as a sack-like structure and on the inner surface is formed a prim. filter layer of sepd. solids, thus building a combination filter. 15.5.76 as 621698. (3pp068)

AGRO- D15 20376Y/12 =DS 2639-836

Water treatment plant - with automatic circulation between aerator reactor and separator with floating flocculated layer NL070377)

AGROTECHNIKA NP 03.09.75-CS-005998

*(01.03.79) *DT2639-836 C02b-01/20*

The low productivity and in some systems also the high energy costs of water cleaning and purifying processes in which the matter to be removed is transferred as a suspension into a reaction zone into which the water is fed, are remedied by a new technique.

As normally, the water is set into a relatively closed line of motion, and is led, simultaneously with the suspension into a sepg. zone with a layer of flocks, where a fluid filtration of the purified water takes place. The densified suspension is transferred automatically from the upper section of the sepg. zone into the reaction zone by pressure difference in the reaction zone between the outlet from the reaction zone into the sepg. zone, and the outlet for the densified suspension from the sepg. zone into the reaction zone. 3.9.76 as 639836. (10pp1045)

PASE D15 82341A/46 =DS 2717-756

Sweeper for settling ponds - having pressure sensor which adjusts the height of sweeper above the base to prevent jamming

PASSAVANTW MICHELBACHER 21.04.77-DT-717756

*J01 (01.03.79) *DT2717-756 B01d-21/18*

Scraper mechanism for clearing away the deposits in sand traps, settling tanks, etc. on sewage farms includes a pressure sensing probe working with the drive for adjusting the height of the scraper, which puts out an impulse when a predetermined threshold value is not reached or is exceeded, which moves the scraper into the next of a series of higher or lower positions, or into its highest or lowest position.

The constantly reciprocating motion of the scraping tools is thus avoided, and they are simply moved between fixed intermediate levels based on experience, in which they remain for a period; the pressure change necessary for the motion into the next level being considerable. The reaction to the possibility of overloading in a danger zone is spontaneous, and backed-up sludge is only cleared from the top. Design is universally applicable. 21.4.77 as 717756. (8pp1045)

SULZ D15 82470A/46 =DS 2721-316

Raw sludge irradiation control - with safeguards against irregular electron beam intensity and layer thickness

GEBRUDER SULZER AG 04.05.77-CH-005556

*(01.03.79) *DT2721-316 B01j-01/10 C02c-03*

Fluid matter such as sewage sludge is irradiated by electron beams in a plant with a drum transporting the matter through the radiation zone. There is a feeder for the fluid and an applicator roller which spreads it in a thin layer on the drum. A doctor blade strips it off into a collector.

The re-infection of the matter by bacteria which have not been killed-off is prevented by a mechanism which adjusts the blade between two positions. In one, the matter passes through, whilst in the other it is recycled. The adjusting mechanism is connected to meters for the intensity of the radiation, and for the spacing of the applicator relatively to the drum. 12.5.77 as 721316. (6pp1045)

NIIM/ D15 06755A/04 =DS 2731-887

Sewage and industrial wastes treatment - in gravel filled buried basin with capillary action and fluctuating sewage level

NIIMI T 16.07.76-JA-083940

*Q42 (01.03.79) *DT2731-887 C02c-01*

In an installation for clarifying and purifying sewage, the fluid is fed first into the bottom zone of a treatment tank filled with gravel, sand and earth. It drains away over walls provided in the tank, and there is a net covering the surface of the layer of sand and gravel into which the sewage is introduced first, turned away from the inlet.

The treatment tank consists of a long box with a grid formed by bars some distance above the bottom, on which the sand-gravel-earth layer is supported. The sand-gravel layer is given a convex surface by the net. The outlet of the drainpipe is at a height which is slightly lower than the height of all the vertical walls in the box. Beneath the grid there is a pipe through which compressed air can be circulated through the grid.

The installation ensures not only better clarifying and purifying, but also the effective action of microorganisms. Even with minimal flow, the dyeing off of the microorganisms is prevented. 14.7.77 as 731887. (10pp1045)

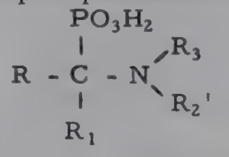
BENC ★ D15 18188B/10 ★DT 2737-259

Amino-alkane-carboxylic-di:phosphonic acid prodn. - by reacting amino-, aza-cyclo- or amino-aryl alkane-di:phosphonic acid with halogeno-alkane mono: or di:carboxylic acid

BENCKISER-KNAPSACK 18.08.77-DT-737259

E11 F06 M14 (D25 F09) (01.03.79) C07f-09/38 C11d-03/36

New N-carboxyalkane-aminoalkane-, N-carboxyalkane-aza-cycloalkane- and N-carboxyalkene-aminoarylalkene-diphosphonic acids are of formula (I).



$$R-C(PO_3H_2)(R_1)-N(R_3)(R_2')$$

(I)

In the formula, R is H, CH_3, $-(CH_2)_{10}CH_3$, C_6H_5, C_2H_4OH, CH_2COOH, or may form with R_2' a pentamethylene bridge; R_1 is PO_3H_2; R_2' is H, R_5 or may form with R a pentamethylene bridge; R_3 is $-(CH_2)_mCOOH$ where m = 2-12, $-CH_2-C(CH_3)_2COOH$ or $-C(CH_2COOH)H-COOH$.

(I) have combination of the properties of phosphonic acids and amino carboxylic acids. They can be used as complex-forming agents for di- and multivalent metals; for softening hard waters, purifying aq. effluents, for textile baths, paper prodn., tanning, stabilising dispersions and suspensions, and, esp. for corrosion preventing compsns.. 18.8.77 as 737259 (18pp70).

MERZ/ ★ D15 18189B/10 ★DT 2737-263

Portable sea water desalination plant - in compact frame with burner, fan, fin cooler and condensate collector

MERZ H 18.08.77-DT-737263

(01.03.79) C02b-01/06

Unit consists of an evaporation chamber, made of steel sheets, with a burner and ventilator at one end with a fin cooler at the other end. The sea water is partly sprayed in the evaporation chamber and partly stored in the chamber sump. An electronic control unit governs the fan and the pump for sea water and the drinking water.

This is a simple and inexpensive plant which can be easily moved even in inaccessible areas. It needs no skilled persons to operate it. 18.8.77 as 737263 (10pp39).

WIMM/ ★ D15 18225B/10 ★DT 2737-759

Sludge-thickening centrifuge - has hollow shaft-mounted drum with cylindrical filter inside drum

WIMMER O 22.08.77-DT-737759

J01 P41 (01.03.79) B04b-11

The material to be thickened is supplied into the centrifuge via hollow shaft. Due to the rotation of the drum the solid particles under the effect of the centrifugal force separate from the fluid and are deposited in a round the shaft. In the same time the solid particles con-ent decreases towards the radial channels. When the ull-up condition of the drum approaches, the amt. of olid particles separated decreases, but they are forced nstead together with the fluid towards the filter forming n auxiliary filtering layer.

The resulting pressure increase inside the drum can e picked up at the hollow shaft inlet. At a point, when no nore solid particles are removed by centrifugal force he pressure-operated control system slides shell connect-ng the two drum parts back and the accumulated solid articles are discharged. 22.8.77 as 737759 (8pp554).

IAGE- ★ D15 18238B/10 ★DT 2738-120

hermal regeneration of water treatment material - in thermal egenerating and cooling columns with heat exchanger circuits

HAGER + ELSASSER 24.08.77-DT-738120

J01 (01.03.79) B01j-01/09 C02b-01/76

Materials such as ion exchanger resins or adsorbents vhich can be thermally regenerated after they have been ised in water treatment systems, are transported by nigh-pressure water from the working column to a ther-nal regeneration column, followed by a cooling column. Heat exchangers in the circulation system for the regener-ation column heat up the circulating fluid, and for the cooling column they cool it down.

The batch regeneration results in a smaller regenerat-ion column and better thermal efficiency. Counter flow principles can be applied. The loading zone in the working column is held more constant. 24.8.77 as 738120 (35pp).

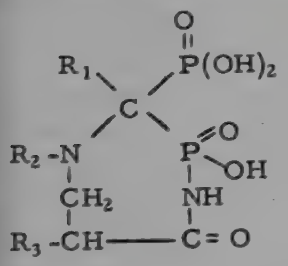
FARB ★ D15 18285B/10 ★DT 2738-720

Sequestering agent cyclic di-phosphonic acid derivs. - prepd. by reacting (N)-cyanoethyl-alkanoic acid amide cpds. with phosphorous acid and phosphorus tri:halide

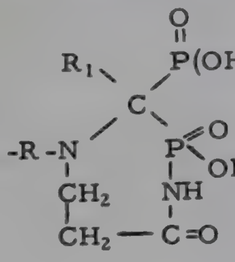
BAYER AG 27.08.77-DT-738720

B02 C01 E11 (D21 D25) (01.03.79) C02b-05/06 C07f-09/65 C09d-07/06

Diphosphonic acid derivs. of formula (I) and their alkali, ammonium and alkylammonium salts are new.



(I)



(Ia)

In the formulae, R_1 and R_2 are 1-18C alkyl opt. contg. double bonds and/or substd. by halo or oxyalkyl; 4-8C cycloalkyl in which ⩾1 C-atoms can be replaced by O-, N- or S-atoms, opt. C-substd. by halogen, ether groups, alkyl or aryl; or aryl contg. ⩾1 aromatic rings opt. carrying aliphatic side-chains and/or substd. by halo, oxyalkyl or oxyaryl; and R_2 can alsobe H or a group of formula (Ia) (in which R is 2-18C alkylene or arylene); or R_1+R_2 is alkylene with 3-11 ring-member C-atoms one or more of which may be replaced by hetero atoms such as O, N or S or substd. by 1-3C alkyl or halogen, the alkyl-ene group opt. being part of a mono- or dibenzo fused ring system; and R_3 is 1-4C alkyl.

(I) are sequestering agents which chelate polyvalent metal ions. They can be used e.g. in water processing; in the prodn. of detergents and cleaning agents; as paste liquefiers; in the prodn. of mortar and cement slurries; to retard setting of gypsum; in the prodn. of low-viscosity pigment suspensions; for stabilising hydrogen peroxide solutions; as additives in the prodn. of storage-stable emulsion paints; in the prodn. of photographic deve-loper solutions; as plant growth promoters for binding trace elements in soil; in the prodn. of toothpastes; and as medicaments against arteriosclerosis and osteoporosis. Specific cpds. (I) include that in which R_1 is CH_3, R_2 is C_4H_9 and R_3 is H. 27.8.77 as 738720 (26pp280).

ASAH ★ D15 18292B/10 ★DT 2743-683

Continuous adsorbent regeneration - in process for lowering COD of effluent from acrylonitrile prodn.

ASAHI KASEI KOGYO 25.08.77-JA-101068

A41 E16 (01.03.79) C02c-05

A waste water (I) treating process, (I) resulting from the prodn. of acrylonitrile by aminoxidation or being an oxidised liquid obtd. by wet oxidn. of such effluents, comprises treatment with active C in an adsorption and sepn. zone. The slurry of used C withdrawn from these zones is passed to a regeneration zone where it is wet oxidised in the presence of copper values and NH_4^+ at a pH ⩽ 5 and the thus regenerated active C recycled to the adsorption and sepn. zones.

The method ensures that low COD water is produced by constantly regenerating the active C. This regeneration, moreover is effected at lower cost (e.g. than thermal oxidn.), with lower material loss and results in an adsorbent having only slightly reduced adsorptive capacity. 28.9.77 as 743683 (36pp922).

HAWK ★ D15 18313B/10 ★DT 2834-393

Screen seal arrangement - with seal strip urged by foam base against sealing plate

HAWKER SIDDELEY BRA 19.08.77-GB-034883

A88 Q65 (01.03.79) C02c-01/22 C02c-05 F16j-15/16

A seal arrangement between a surface and another parallel surface which is movable relative to it, e.g. the edges of an endless-belt or drum screen used for screening solids out of sewage or industrial wastes, includes a channel with a sealing element in it. The sealing element protrudes outside the channel and is urged against a sealing plate on an endless chain by an elastic element at the bottom of the channel.

This seal retains its functional reliability over long periods and does not overload the screen drive by excessive friction, particularly when a pressure difference builds up as the filter becomes clogged. The seal may be made of PTFE and the elastic element of neoprene rubber. 5.8.78 as 834393 (15pp39).

MANN/ ★ D15 18326B/10 ★DT 2835-285

Digesting water purificn. sludge with worms - to facilitate dewatering or composting

MANNCHEN U 26.08.77-CH-010519

C04 (01.03.79) C02b-03 C02c-03 C05f-09/04

A sludge, which is difficult to dewater and consists at least partly of microorganisms, is treated with a sludge worm culture so that at least some of the microorganisms are digested by the worms. Treatment is carried out in a container and the sludge is converted to an easily-dewatered cake of material.

The sludge is prod. by waste water purification and is esp. a biologically-clarified sludge. Tubular worms, esp. of the genus Tubifex, are used, and the culture is pref. built up in layers. The culture may be aerated or supplied with O_2-contg. water and additionally worm nutrients, e.g. aerated or rotted clarified sludge, can be added.

The material is easily dewatered (to > 90, esp. < 85% water) and/or composted, or can be used directly as fertilizer. The method requires simpler equipment and esp. less energy than known dewatering processes. 11.8.78 as 835285 (26pp1251).

LINM ★ D15 18363B/10 ★EP -----861

Purifying organically contaminated waste waters contg. calcium - by introducing carbon di:oxide-contg. gas into activated sludge-contg. liq. to ppte. calcium carbonate

LINDE AG 25.08.77-DT-738309

(D17) (07.03.79) C02c-01/06 C02c-05/10

D/S: BE, FR, GB, NL.

Ca-contg. organically contaminated waste waters are purified by an activated sludge process comprising aeration with pure O_2 and/or with an O_2-contg. gas. Novelty consists of introducing a CO_2-contg. gas into the liq. present in the activated sludge system, at least periodically and to at least part of the activated sludge system. Sufficient CO_2 is dissolved in liq. to deposit part of Ca dissolved in waste water as a $CaCO_3$ ppte.

Esp. for purifying sugar refinery effluents. $CaCO_3$ pptn. reduces $Ca(OH)_2$ concn. in waste waters and lowers waste water pH to a range in which bacterial growth is improved and decompsn. efficiency is increased. Pptd. $CaCO_3$ increases activated sludge solids concn. and suppresses swelled sludge effects.

1.6.78 as 100051 (10pp200)
ISR: FR2294986; US3356609; NL-148112; US3546111;
1 Journal Reference.

BADI ★ D15 18388B/10 ★EP -----933
Oil-absorbing hydrophobic polyurethane foams - prepd. with lipophilic cpd. addn., have low density and low closed to open pore ratio
BASF AG 25.08.77-DT-738268
A25 H03 (A97) (07.03.79) C02b-09/02 C08j-09 C08l-75/04
D/S: BE, DT, FR, GB.

Hydrophobic polyurethane foams, having a density of 8-25 g/l and a cell distribution of 70-97% open and 3-30% closed cells, are claimed.

The foams are prepd. by a prepolymer- or by a 1-shot process, from organic polyisocyanates, polyhydroxy cpds, blowing agents, catalysts, opt. chain-extenders, auxiliaries and additives, with the improvement being characterised in the addition of lipophilic cpds. (I) consisting of opt. substd., saturated and/or unsaturated, aliphatic 10-25C fatty acids, their esters and amides.

Esp. in absorbing oils and/or opt. halogen contg. hydrophobic cpds. from water.

The foams can be prepd. in situ, e.g. on the open sea, and spread directly on water surface. Chemical structure, density and open : closed cell ratio increase foam absorption capacity for crude-, heating- and diesel oil, and for hydrophobic cpds., e.g. solvents, such as hexane, benzene etc. In an example, oil absorption using a foam having a bulk wt. of 12 g/l and a closed cell content of 8% was 525 wt.% after 24 hrs., compared to 125 wt.% using a foam having a bulk wt. of 40g/l and contg. 35% closed cell cells.

18.08.78 as 78100702.6 (25pp200)
ISR: CA996037; US3886067; DT1944679; US3679058; FR2250779; DT960855; US3165483.

SAUN/ ★ D15 18458B/10 ★FR 2392-937
Coagulation of used water - by first oxidising ferrous sulphate in presence of base before addn. to water
SAUNIER B 13.05.77-FR-015197
(02.02.79) C02b-01/20 C02c-05/02

Soln. of $FeSO_4$ is oxidised to $Fe_2(SO_4)_3$ in the presence of a base, then injected into (used) water to cause coagulation. The $FeSO_4$ soln. concn. is pref. 100-200 g./1., and oxidn. is effected by air, oxygen or H_2O_2. The base maintains the pH at 8.5-9.

The quantity of $FeSO_4$ introduced can be controlled by the supply of water to be treated, the quantity of oxidant by the residual concn. of oxygen in the oxidn. tank, and the quantity of base by the pH.

$FeSO_4$ is available as a by-prod. from the mfr. of TiO_2. Prior partial oxidn. problems are eliminated by the pre-oxidn. 13.5.77 as 015197. (7pp1331)

DEME/ ★ D15 18459B/10 ★FR 2392-940
Activated carbon filter to purify tap water for drinking - percolates at atmos. pressure using gravity and can be used on dining table
DEMERSON J R M 03.06.77-FR-016962
(02.02.79) C02b-07

The water is passed through a bed of activated carbon granules. The water is allowed to percolate through the bed by gravity alone and at atmos. pressure.

The unit pref. comprises two containers which fit one on top of the other. The upper container has a pocket to hold a bed of activated carbon, pref. made up as an easily renewable cartridge. The lower container is used to collect purified water and is conveniently jug shaped. The activated carbon is pref. in granule form of size 0.5-2.0 mm.

Process eliminates objectionable odours and flavours, esp. as a table filter for mains water. Used also to purify

(6pp448)

FUSE/ ★ D15 18460B/10 ★FR 2392-94
Removing clogging oils and fats removed during used wate purification - using mixt. of emulsifiers with extended HLB range
FUSEY P 03.06.77-FR-016996
A97 (02.02.79) B01f-17/42 C02c-01/26

A mixt. of non-toxic emulsifiers with a large range of HL values is introduced into the influent of a purifying station The HLB range is pref. 8-17. Part of the mixt. is pref. constituted of ethoxylated emulsifiers with 3-25, partic. 3-9, ethylene oxide units.

Ethoxylated emulsifiers can either be known emulsifiers such as ethoxylated carboxylic acids or fatty alcohols, or novel emulsifiers, viz. ethoxylated lower glycol carboxylic acid esters. Ethoxylated fatty amine derivs. can also be included; also 6-8C carboxylates of amino-(lower alcohols, partic. a carboxylate of amino-2-methyl-2-propanol. Other possible constituents of the compsn. are 5-20% lecithin and 10-30% of a low toxicity solvent.

Compsn. is used to combat the build-up of vegetable and animal oils and fats in used water purifying stations. The compsn. emulsifies such deposits (which are of variable chemical compsn.) by providing a range of HLB values suited to the compsn. range. 3.6.77 as 016996. (12pp1331)

BAHR/ D15 57879X/31 =GB 1541-51
Filter process for dehydrating sewage sludges - in three phases a increasing press
BAHR A 07.03.75-DT-510010 (14.02.75-DT-506173)
*(07.03.79) *BE-839-231 B01d-33/02*

Sludge is dewatered by conveying the sludge at a first speed on a first moving screen to partly dewater the slud and transferring the sludge to a second moving screen (slower than the first) on which the sludge is pressed.

Pref. water is only removed by gravity on the first screen. Pref. the second screen comprises moving belts and pressing is effected by a drum, pressing plates or rollers. Further dewatering is pref. carried out by pre sing on a third moving screen. The webs sepd. on each screen is pref. kept separate. 11.2.76 as 005461 (25pp)

HENR/ D15 06711A/04 =GB 1541-5
Lime water soln. for sewage treatment - is homogenised ascension between slats forming filter and fine deposition zones
HENRIKSON S A 12.07.76-SW-007957
*(07.03.79) *DT2731-271 +C01f-11/02*

Lime water soln. is mfd. by introducing a lime suspens into a compartment, causing upward flow of the suspens over lamellae positioned to form a lower sludge zone which filters the suspension, and an upper clarification zone. in which fine particles are removed, and removin the soln. at the top.

Pref. the surface load on the lower lamellae is twice that of the upper. The lime sludge sinking to the compartment bottom is pref. recycled. 11.7.77 as 028953 (5pp)

LIND/ ★ D15 18498B/10 ★GB 1541-
Waste liquids purificn. - involves adding particles and treatme with sulphur di:oxide and oxygen and metal ions
LINDMAN W E 18.07.75-US-597217
J01 (07.03.79) C02b-01/34

Minutely dispersed solid contaminants are removed fro polar liq., esp. water, by treatment in an electrically sulating environment, (a) ensuring that the liq. has at l 0.1 wt.% of particles which will accept a charge, of de sity 1.05-2g/cm^3, diameter 30-225 microns and surfac energy 100-500ergs/cm^2; (b) providing metal ions to im a charge to the particles, and introducing sulphur diox while keeping the pH at 2-2.5; (c) introducing oxygen to expose the particles to oxidising conditions; (d) keeping liq. flowing to prevent coalescence of the particles; (e) changing the pH to 8-11 to reverse the charge on the pa ticles; (f) electrically grounding the suspension, allowi the particles to coalesce, (g) separating the solid and phases.

The process can be used on a variety of effluents, p aqs. e.g. sewage, cooling water contg. toxic additives The process is continuous, and can be adjusted to re a wide range of contaminant, including microbes. 19. 7. 76 as 029981 (17pp955)

RESE D15 18112A/10 =GB 1541-784

Bacteriological treatment of organic waste effluents - by air lift, circulating fluid through revolving bacteria growth discs

RESEARCH CORP 24.08.76-JA-U13063

*(07.03.79) *DT2738-181 C02c-01/02*

Waste-contg. liquor is treated using appts. including a device for introducing the liquor into a vessel; a bacterial growth area submerged by the liquor, an open passageway adjacent the growth area, the growth area including horizontal spaced growth surfaces mounted on a vertical rotatable shaft; and a pump for providing a flow of O_2 contg. gas through the passageway. The passageway has an inlet and an outlet in the vessel to provide a circular path, and the vessel having an outlet for treated liquor. 22. 8. 77 as 035137 (8pp1376)

BRTO D15 34411Y/19 =GB 1541-837

Oxygenation of polluted water - using injectors in or on the surface of the water to give pressurised stream(s) of oxygenated water forming a vertical curtain

BOC INT LTD 07.04.75-GB-014195

*A97 (07.03.79) *ZA7602-075 +C02c-01/02*

Oxygenated water is provided in polluted water by introducing pressurised streams of oxygenated into the polluted water through injectors at or near the polluted water surface to form a vertical curtain of oxygenated water to form a body of oxygenated water in the polluted water.

Pref. the streams are water taken from the polluted water into which O_2 contg. gas is introduced. The streams pref. contain both dissolved and undissolved O_2. The injectors are pref. separate elements connected by flexible members.

Materials having a high BOD and a fast reaction rate are treated quickly. 14. 4. 76 (4pp1376)

RITP D15 20010Y/12 =GB 1541-851

Ion exchange resins on fibrous supports for electric regeneration - for enhanced conductivity, esp. when exhausted

SYBRON CORP 13.11.75-US-631841

*A91 J01 (J03) (07.03.79) *BE-848-286 B01d-15/06 B01j-01/09*

Electrically-regeneratable ion exchange appts. comprises an anode, a cathode and ≥1 elongate ion exchange member having one end extending towards the anode and another end extending towards the cathode, whereby ions pass along the ion exchange member(s) towards the anode or cathode. Each ion exchange member has a continuous ion exchange phase which is more conductive in the exhausted form than in the regenerated form.

The ion exchange phase comprises e.g. crosslinked polyethyleneimine or crosslinked polycarylic acid. Appts. is useful e.g. for demineralisation of aq. solns. It exhibits improved efficiency. 4. 10. 76 as 041109 (12pp927)

ALFA ★ D15 18516B/10 ★GB 2003-043

Liquid aerating stirrer e.g. for manure or sewage - having vertical hollow shaft with helical vane having tangential gas discharge chamber at vane base (OE 15.7.78)

ALFA LAVAL STALLTEC 26.08.77-OE-006215

J02 P11 (07.03.79) A01c-03/02 B01f-03/04 B01f-07/24 C02c-01/06

Stirrer, comprises a rotatable hollow vertical shaft carrying ≥1 helical vane defining at its lower edge a chamber communicating with the shaft interior through a channel forming a gas inlet to the chamber.

The chamber has an outlet formed by the lower vane edges and discharging gas tangentially of the shaft and vane. The chamber is pref. V-shaped in radial cross-section and tapers radially outwardly to its apex. When viewed axially the outlet opening radial edges cross each other, the lower being angularly forward of the upper. The stirrer increases the amt. of air which can be drawn into the liq. 22. 8. 78 as 034202 (4pp1358)

WORL- ★ D15 18520B/10 ★GB 2003-054

Reducing impurity concn. of solution by reverse osmosis - by developing working pressure using centrifugal force

WORLD DEV LABS 29.08.77-US-828903

J01 (07.03.79) B01d-13 C02b-01/82

A soln. is supplied to a reverse osmosis membrane mounted in a cannister which is rotated in an off-axis posn. by a turntable. Centrifugal force produces the working pressure to divide the soln. into a reduced concn. phase which penetrates the membrane and a conc. phase which does not.

Pref. the reduced concn. phase is discharged from the cannister and is collected by an enclosing shroud whereas the concentrated phase is returned to the axis of the turntable and removed. In an embodiment a number of identical cannisters are mounted on a common turntable which is rotated at high speed.

The appts. desalinates sea water. The centrifugal force produces the operating pressure thus avoiding the need for high pressure pumps. 29. 8. 78 as 034797 (15pp295)

BLUE- ★ D15 18536B/10 ★GB 2003-129

Removal of heavy metals from water - by pptn. using gamma di:calcium silicate

BLUE CIRCLE IND LTD 17.08.78-GB-033690 (25.08.77-GB-035692)

(07.03.79) C02b-01/18

Heavy metals are removed from an aqs. system by addn. of gamma dicalcium silicate (I) to insolubilise the heavy metal present.

(I) is not too reactive, and does not agglomerate, and has a high capacity. The sediments are easily filtered. 17. 8. 78 as 033690 (4pp955)

UBEI ★ D15 18570B/10 ★J5 4010-557

Finely dispersing coagulated sludge slurry in liquid - by adding waste oil etc. to form high viscosity emulsion then adding e.g. polyoxyethylene alkylphenyl ether

UBE INDUSTRIES KK 27.06.77-JA-076420

A97 (26.01.79) C02c-03

Coagulated sludge slurry resulted from concentrating by settling a surplus sludge in activated sludge process with coagulant in thickener etc., is dispersed and suspended in liquid as fine granules by (i) adding oil, e.g. C-heavy oil and waste oil etc. followed by agitation to form high viscous emulsion, and (ii) adding an additive, e.g. polyoxyethylenealkylphenylether etc. in amt. of 3 wt.% followed by agitation to convert the high viscous emulsion into lower viscous emulsion by emulsion destruction.

The sludge dispersion obtd. is easily sprayed from nozzles into a simple spraying-type combustion furnace without any clogging. The sludge dispersion is easily transferred by means of a conventional pump without use of screw feeder etc. and without filtration and dewatering etc. 27.6.77. as 076420 (4pp34)

LIOY ★ D15 18571B/10 ★J5 4010-558

Treating waste water contg. grease from hides, etc. - using calcium oxide or hydroxide to separate solvent, surfactant, etc.

LION FAT & OIL KK 27.06.77-JA-076416

E33 (D18) (26.01.79) C02c-01/40

Treatment of waste water is claimed resulting from removal of natural grease etc. from hide, skin, fur and pelt etc. with aq. defatting agent prepd. by dispersing an organic solvent, e.g. lower boiling paraffins and petroleum solvent etc. in water with nonionic surfactant, e.g. belonging to ethyleneoxide-type. Waste water is purified economically and effectively to remove the organic solvent, surfactant and grease etc. by adding CaO, $Ca(OH)_2$ or $Ca(OH)_2$ slurry in amt. such that the $Ca(OH)_2$ concn. becomes 1,000-5,000 ppm, and subsequently allowing the mixt. to stand at 60-120°C, so that the solvent, surfactant, the grease or its saponificated prod. are effectively settled with flocs of $Ca(OH)_2$. 27.6.77. as 076416 (4pp34)

DAIK- ★ D15 18572B/10 ★J5 4010-559

Electrolytically treating waste water to remove phosphorus component - using iron as the anode and aluminium (alloy) as the cathode

DAIKI GUM KOGYO KK 24.06.77-JA-075088

E36 J03 (26.01.79) C02c-05/12

P component is removed by electrolysis from waste water using Fe as the anode and Al (alloy) as the cathode. PO_4^{3}-ions contained in the waste water are pptd. as $Fe_3(PO_4)_2$ and $FePO_4$ on reacting with Fe^{2+} and Fe^{3+} (which is resulted by oxidation of Fe^{2+}) dissoluted from the anode. The Fe ions present after the electrolysis (including those previously contained in the waste water) are reacted with aluminate ions dissoluted from the cathode to form flocs.

Process is effected of very low running costs without making the waste water red coloured due to surplus Fe ions or causing adhesion of scales to the surface of the anode.

Continuous operation is possible with nominal pH variation. 24.6.77. as 075088 (3pp34)

KOKC ★ D15 18573B/10 ★J5 4010-560

Removing e.g. snails and flies, from waste water - by adding cpds. releasing calcium or iron ions and/or inorganic coagulant

KOKOKU CHEM IND KK 24.06.77-JA-075114

E37 (26.01.79) C02c-01/02

Fresh water-type large size life e.g. snail, fly, etc. generated abnormally in treatment of organic waste liquor, e.g. domestic waste water and food-processing waste water etc. with microorganisms in treating appts. and in attachments thereof, are exterminated at low cost without reducing waste water treatability, having effective microorganisms or creating secondary pollution.

Process comprises adding to the waste liquor a Ca ion- or Fe ion-releasing cpd. (I) and/or an inorganic coagulant (II), e.g. Al sulphate, Fe chloride, lime, ferrous sulphide etc. (I) and/or (II) are partially flocculated after use, but they still remain in the water.

These cpds. exhibit acidity in the water and are therefore easily flocculated by neutralising with NaOH etc. if necessary together with polymer coagulant and removed from the water. 24.6.77. as 075114 (3pp34)

MOEN- ★ D15 18574B/10 ★J5 4010-561

Purifying condensed water contg. organic cpds. - e.g. from protein feed prodn., by adding sea water and propagating microorganisms in it

MO ENGINEERING KK 25.06.77-JA-075920

(26.01.79) C02c-01/02

A lower boiling org. cpds.-contg. condensed water, e.g. recovered in the prodn. of protein feed by heating e.g. meat, blood, entrails, etc., so as to be solidified and coagulated, or in spray drying of milk or wet combustion of pulp mill effluent, is purified, without being blended with other effluents, by adding sea water such that the salts concn. becomes >50 mg/l., and propagating microorganisms so that they are decomposed.

The elements necessary for growth of the microorganisms, e.g. K, Na, Ca, Mg, S, Cl, Fe, Mn, Co, Cu, Zn, Mo, Al, etc., are easily and simply supplied by adding sea water. 25.6.77. as 075920 (2pp34)

HITF ★ D15 18662B/10 ★J5 4011-067

Treatment of muddy water sludge - by adding sodium silicate, acidic substance and calcium oxide

HITACHI SHIPBLD ENGG KK 28.06.77-JA-077315

E37 (26.01.79) B01j-01 C04b-31/02

Method of treating muddy water comprises mixing sodium silicate, acidic substance and calcium oxide with soft mud, sludge, etc., and thus obtaining coagulated matter. Acidic substance is e.g. H_2SO_4. Calcium oxide is e.g. CaO or cyclone dust in desulphurisation of exhaust gas.

Soft mud, sludge, etc. present in sea bottom, river, lake, etc. can be coagulated to form coagulated matter useful for reclamation. The resulting coagulated matter is stable and does not again become mud. 28.6.77. as 077315 (2pp50)

MITQ ★ D15 18663B/10 ★J5 4011-068

Freezing and remelting sludge to improve dewatering - using a device which has a valve structure to prevent treated and untreated sludge from mixing

MITSUBISHI ELECTRIC CORP 28.06.77-JA-077414

(26.01.79) B01d-43 B01j-01 C02c-03

Sludge is treated in such manner that it is once frozen and remolten to improve the dewatering facility. The device comprises pipes vertically arranged in a frame, upper and lower chambers disposed around the pipes in the frame. A raw sludge is fed into a lower space of each pipe with pressure; cooled by a coolant, flowing in the lower chamber; molten by a heating medium fed into the lower chamber, until only the surface layer is molten; pushed up into an upper space of each pipe; and molten entirely by a heating medium fed into the upper chamber. The novelty is that a valve structure is disposed at an upper opening of each pipe so as to be opened by the pushed up sludge and opened due to melting of the sludge.

The raw sludge is prevented from mixing with the treated sludge. 28.6.77. as 077414 (4pp26)

NITT ★ D15 18675B/10 ★J5 4011-083

Coagulating agent - of improved dehydrating and coagulating activity

NITTO CHEM IND KK (MITR) 28.06.77-JA-076097

A91 J01 (26.01.79) B01d-21/ C08f-02/10 C08f-20/54*

Coagulating agent is obtd. by aq. soln.-polymerisation of acrylamide or water-soluble monomers consisting mainly of acrylamide, effecting polymerisation in the presence of 0.5-15 wt.% (based on the amt. of the monomer) of alkylene oxide addn. cpd. of a cpd. having active H or water-soluble cpd. of mol.wt. 400-20,000 obtd. by substituting terminal hydroxyl hydrogens of the addn. cpd. using radicals of other hydroxyl cpds. or carboxylic acid radical in the polymerisation system of monomer concn. >15 wt.%, if necessary, partially hydrolysing it, drying, and pulverising it.

Resulting acrylamide system polymer polymerised in the presence of polyethylene glycol, etc. can be completely dissolved within 1 hr., in contrast with 2-4 hrs. taken for dissolving previous acrylamide system polymer of comparably high mol.wt., and exhibits excellent dehydratability in esp. vacuum filter process. 28.6.77. as 076097 (7pp50)

MITQ ★ D15 18926B/10 ★J5 4011-876

Device for freezing and remelting sludge - in a heat exchanger with heat carrier media which are prevented from mixing

MITSUBISHI ELECTRIC CORP 29.06.77-JA-078007

(29.01.79) B01d-43 B01j-01 C02c-03

The sludge is once frozen and then remolten in a heat exchanger provided with heat carrier media for absorbing the heat from the exchanger and for radiating the heat to the exchanger, and a circuit for switching and circulating both media. The object is to avoid mixing one medium with another upon switching them, thus eliminating the heat loss due to mixing. A flow line is provided for extracting either carrier medium from the heat exchanger before switching both carrier media.

A remelting tank is put on a freezer tank and both tanks are connected to sludge reservoirs through flow lines with valves. The heat exchanger surrounds both tanks. The carrier media are brines. 29.6.77. as 078007 (5pp26)

NIRA ★ D15 18929B/10 ★J5 4011-879

Device for continuous ion exchange in waste water - has sepn. plates at top and bottom of ion exchange to form resin packing chamber

UNITIKA KK 30.06.77-JA-078644

(29.01.79) B01j-01/06 C02c-05/08

Device for continuous ion exchange in a waste water on a large scale, comprises an ion exchange column having an inlet at the lower end and outlet at the upper end and contg. a moving bed of ion exchange resin. The resin is efficiently packed and discharged.

Sepn. panels are disposed in an upper and lower end space of the column to form a resin packing chamber in a middle space of the column. A solid-liquid distributor for packing the resin is disposed in an upper section of the chamber and an auxiliary liquid distributor for draining the resin is disposed in a lower section of the chamber, near its lower end. Both distributors extend horizontally. 30.6.77. as 078644 (2pp26)

EBAI ★ D15 18931B/10 ★J5 4011-882

Desalinating sea water, brine or waste water - by purificn., reverse osmosis and recirculating after softening

EBARA INFILCO KK 29.06.77-JA-077587

(29.01.79) B01d-13 C02b-01/82

Method for desalting sea water (I). brine (II) or waste water (III) comprises (1) purification of (I), (II) or (III) by processes such as sedimentation, flotation, adsorption etc., (2) treatment of purified (I), (II) or (III) by reverse-osmosis and (3) recirculation of the concentrate to (1) or (2) after softening.

Pref. for softening of the concentrate ion exchange resin -treatment is used. Ion exchange resin is mixed with the concentrate or the concentrate is passed through a bed packed with ion exchange resin. Reverse osmosis is carried out in several stages at 15-60 Kg/cm² and with addition of acid for prevention of scale-formation. After softening, the concentrate is pref. concentrated by evaporation for recovery of MgCl, NaCl, acid and/or base. 29.6.77. as 077587 (6pp42)

KODA/ ★ D15 18970B/10 ★J5 4011-955

Chitosan derivs. useful for prepn. of absorbents - are highly water-absorbent, biodegradable and salt-resistant

KODAMA T 29.06.77-JA-078216

A11 (29.01.79) C08l-89

Chitosan derivs. consist of (1) chitosan and alkylated chitosan hydroxyalkyletherified to a substitution degree of 0.2-0.9 or (2) chitosan and alkylated chitosan hydroxyalkyletherified to a substitution degree of 0.7-2.0 and crosslinked with a crosslinking agent in amt. of 0.0001-2 pts. wt. per 1 pt. wt. of the hydroxyalkyletherified prod. The chitosan derivs. have high water-absorbing property, biodegradability and salt resistance and are produced easily by use of rich unused resources.

Specifically, absorbents are obtd. by mixing ≥5 wt.% of the chitosan derivs. with 10-95 wt.% of wood pulp, cotton, regenerated cellulose, etc. The chitosan derivs. are produced by deacetylating chitin, allowing the chitosan obtd. to react with hydroxyalkyletherifying agent (e.g. ethylene oxide, propylene oxide, butylene oxide) in the presence of alkali or acid catalysts and thereby hydroxyalkyletherifying the free hydroxy gp. of the chitosan to a substitution degree of 0.2-0.9 or hydroxyalkyletherifying chitosan to a substitution degree of 0.7-2.0 and allowing 1 pt. wt. of the hydroxyalkyletherified chitosan to react with 0.0001-2 pts. wt. of crosslinking agent (e.g. glyoxal, formaldehyde) and opt. alkylating the free amino gp. of chitosan. 29.6.77. as 078216 (4pp136)

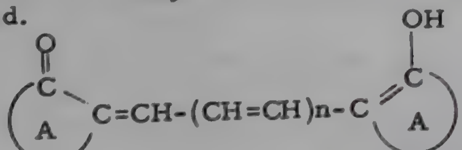
YGOS ★ D15 19007B/10 ★J5 4012-143

Treating washing liq. contg. blue colouring agents - using chlorine-type bleach and/or bacteria

YAMAMOTO KAGAKU GOS KK (SAKI) 28.06.77-JA-077464

E23 (29.01.79) C02c-01

Treatment of a vlue-coloured washing water used in washing of seating e.g. stools in vehicles, aircrafts and ships etc., contg. ≥1 colouring agent of formula (I) is claimed.



(I)

Ring A is a 1-phenyl-3-substd.-5-pyrazolone ring, the phenyl contg. as substits. ≥1 of sulphonic acid and carboxylic acid residue which are in form of salt with alkali metal, alkaline earth metal, ammonium or lower alkyl ammonium ion, the acid residue being if necessary connected with the phenyl radical via lower alkylene radical; the 3-substd. radical is ≥1 of lower alkyl, carboxyl and lower alkoxycarbonyl; position 4 is substituted with methine radical, the H atom of which may be replaced with lower alkyland n is 0-2. The washing water is easily and completely decolourised by treating it with a chlorine-type decolouring agent, e.g. hypochlorite etc. and/or bacteria. 28.6.77. as 077464 (11pp)

MITQ ★ D15 19008B/10 ★J5 4012-147

Purifying effluent contg. nitrous ions and sulphur oxide(s) - the amt. of ammonia added depending on the washing effluent flow rate

MITSUBISHI ELECTRIC CORP 29.06.77-JA-078008

E36 J01 (29.01.79) C02c-05/04

Effluent contg. NO_2^-, SO_3^{2-} and $S_2O_3^{2-}$ is purified by introducing a certain amt. of the effluent into an oxidising vessel at pre-determined intervals, so that $S_2O_3^{2-}$ and SO_3^{2-} are oxidised to SO_4^{2-} with ozone at pH > 7; controlling the amt. of ozone to be added such that the variation in the NO_2^- concn. is less than the pre-determined value before and after the oxidn. of SO_3^{2-} and $S_2O_3^{2-}$ to SO_4^{2-}, by detecting the NO_2^- concn. of the effluent by UV-adsorption; adding NH_3 or ammonium salt to the effluent in step (1) in an equimolar amt. with the concn. of NO_2^{2-} detected in step (2), and adjusting to pH > 7 to form ammonium nitrite; and introducing the effluent into a decomposing vessel at the same intervals as that determined in step (1) and heating at <60° C to decompose NO_2^{2-} to N_2.

The effluent is obtd. by oxidising nitrogen oxides in the exhaust gas to NO_2 with ozone and washing the NO_2-contg. exhaust gas with aq. alkali sulphite and sulphate-contg. soln. to fix the NO_2 as NO_2^- in the soln.

The NO_x content is controlled and the amt. of NH_3 to be added depends on the variation in washing effluent flow rate. 29.6.77. as 078008 (6pp34)

NIYA- ★ D15 19009B/10 ★J5 4012-149

Treating hexavalent chromium-contg. alkaline waste water - resulting from the descaling of (stainless) steel, with addn. of ferrous cpd.

NIPPON YAKIN KOGYO 29.06.77-JA-078982

E31 M12 (29.01.79) C02c-05/02

Treatment of Cr^{6+}-contg. alkali waste water(having pH of 7-14) resulting from the immersion of steel or stainless steel in fused alkali metal salt to remove the scales and washing the (stainless) steel thus treated with water to remove the alkali metal salt from the surface, is claimed

Waste water is subjected to automated economical reducing treatment (Cr^{6+} - Cr^{3+}) by calculating the final oxidn.-redn. potentials in accordance with the pH values of the waste water, adding Fe^{2+}-contg. cpd. until the final oxidn-redn. potential to reduce Cr^{6+} to Cr^{3+}, and subsequently neutralising with an acid, e.g. waste acid resulted from an acid-washing bath in the fused alkali metal salt process.

Cr^{6+} is easily reduced to Cr^{3+} with Fe^{2+} in alkali soln. and pptd. as $Cr(OH)_3$, in this case the oxidn. redn. potential is in accordance with the unreduced Cr^{6+}, thereby it becomes possible to carry-out automated control.

The Fe^{2+}-contg. cpd. is added until the final oxidn-redn. potential calculated from the expression: $Y=30.64X^2-826.36X+5442.82$ (where Y represents the final oxidation reduction potential and X represents the pH value) and the automated control is effected within a specified area. 29.6.77. as 078982 (4pp34)

HITA ★ D15 19162B/10 ★J5 4013-464

Bubble-removing device for e.g. aerobic incubating liq. - operates mechanically without effecting the microbes in the tank

HITACHI KK 01.07.77-JA-077864

(31.01.79) B01d-19/02

Bubble removing blades are radially mounted on a rotary shaft, and each blade is made of a triangular, flat or curved plate having upper and lower sides at ≤90° to the axis of the rotary shaft.

A pair of circular cones, discs are disposed around the shaft so as to surround the blades in contact with or near them while leaving a clearance, and have a hole larger than the dia. of the shaft. 1.7.77. as 077864 (4pp26)

CHIY ★ D15 19163B/10 ★J5 4013-466

Treating soil or sludge contg. heavy metals - by mixing with iron and/or calcium sulphate and/or chloride, and dissolving out heavy metal cpds. with water

CHIYODA CHEM ENG CO 04.07.77-JA-079010

(31.01.79) A01n-07 B01j-01

The method comprises (a) digging up soil from the surface layer of polluted ground; (b) mixing the dug-up soil with Fe- and/or Ca sulphate and/or chloride to convert heavy metals into water soluble cpd. form; and (c) dissolving out the resulting water soluble metals with water.

In an example, 10g of soil contg. 17 ppm Cd, 48 ppm Cu, 1,340 ppm Zn, and 2,100 ppm Fe was mixed with 10 ml of an aq. soln. of 1% $CaSO_4$. The resulting wet mixture was aged for one month. The aged mixt. was washed with water to dissolve out the heavy metals.

4.7.77. as 079010 (3pp51)

JAOR ★ D15 19164B/10 ★J5 4013-467

Treating calcined ash by/produced in waste water treatment - to convert hexavalent chromium to trivalent chromium

JAPAN ORGANO KK 04.07.77-JA-079025

E31 (31.01.79) B01j-01

The method comprises calcining a sludge by-produced in treatment of waste water contg. hexavalent chromium to produce a calcined ash contg. hexavalent chromium. The calcined ash is mixed with a filter cake by-produced in filtration of the sludge to convert the hexavalent Cr (VI) to harmless Cr (II). The resulting mixture is used in reclaiming soil.

Pref. 100 parts of the calcined ash is mixed with 100-1,500 parts of the filter cake. 4.7.77. as 079025 (3pp51)

JAOR ★ D15 19167B/10 ★J5 4013-471

Removing regeneration agents from ion-exchange resin beds - by washing off with warm water

JAPAN ORGANO KK 04.07.77-JA-079026

(31.01.79) B01j-01/09

In introducing a regenerating agent into a mixed bed type desalting appts. packed with a cation exchange resin and an anion exchange resin to regenerate the resins, and washing a mixed bed of the regenerated resins with water, the improvement comprises washing the regenerated resins with warm water at 20-60°C.

The regeneration agent, e.g. acid or alkali is completely removed from a regenerated ion exchange resin bed. 4.7.77. as 079026 (4pp51)

HITA ★ D15 19180B/10 ★J5 4013-494

Calcium fluoride and phosphate-contg. sludge treatment - by granulating and baking in a kiln

HITACHI KK 01.07.77-JA-077908

L03 M11 (31.01.79) C02c-03

Sludge contg. CaF_2 and Ca phosphate e.g., discharged from the treatment of the waste water of plating factory, semiconductor element factory, etc., is treated by granulating the sludge into granules having a grain size of >3 mm and a moisture content of 40-80 wt.% and baking in a kiln.

This method gives a harmless, good quality clinker having an equal grain size and a high strength, contg. less soluble fluoride and/or phosphate. The treatment equipment includes a granulator, a moisture controller, a kiln such as rotating kiln where the granulated sludge is baked at 20°C lower than the m.pt. of sludge by a combustion gas, exhaust gas treatment equipment, and stack. 1.7.77. as 077908 (5pp117)

CHIY ★ D15 19254B/10 ★J5 4013-659

Polluted soil purification in closed system - by washing with aq. soln. contg. alkali, acid or chelating agent under agitation and dewatering

CHIYODA CHEM ENG CO 01.07.77-JA-077745

(01.02.79) B01d-23 C02b-01/20 C02c-01 C02c-03

A polluted soil or Hedoro (sludge accumulated at the bottom of sea or lake etc.) is effectively purified in closed system without generation of secondary pollution to remove harmful components by washing it with water or aq. soln. contg. an alkali, e.g. NaOH, Na_2CO_3, $NaHCO_3$, $Ca(OH)_2$ and $CaCO_3$, etc., an inorganic acid, e.g. H_2SO_4 HCl and HNO_3, etc., an organic acid, e.g. acetic acid, formic acid etc., salts thereof, or a chelating agent, e.g. EDTA, citric acid polyphosphates etc., under agitation, followed by dewatering, and carrying-out the washing treatment $\geqslant 2$ times with the same washing liquor.

This washing treatment is carried-out in a vessel provided at the bottom with porous plates, net or cloth, and the washing liquor passed is reused under circulation. Opt. an oxygen-contg. gas, e.g. air etc. may be supplied to the washing liquor during the washing to accelerate the reaction between the soil, etc. and the treating agent. 1.7.77. as 077745 (5pp34)

SHOW ★ D15 19255B/10 ★J5 4013-662

Treating effluent from wet nitrogen oxide removing process - in evapn.-concn. process

SHOWA DENKO KK 01.07.77-JA-077943

C04 E37 (01.02.79) C02c-05

An effluent contg. a large amt. of sulphates, e.g. $Ca(NO_3)_2$, $Mg(NO_3)_2$ and $Fe(NO_3)_2$ etc., resulted in removing NO_x by oxidn. with O_3 from exhausted smoke under wet state, is passed through evapn. concentrating tower(s) such that the water content, except the water required for water of crystallisation for the crystals formed on cooling of the effluent in the final evapn. concentrating tower, becomes less than 10%. The conc. liquor in a fluidised state is removed, and the liquor is allowed to cool for crystallisation and recovery.

The evapn. concn. is effected to some degree by contacting it with exhausted gas discharged from a boiler in the evapn. concentrating tower. The recovered prods., e.g. $Ca(NO_3)_2.4H_2O$ $Mg(NO_3)_2.6H_2O$, $Fe(NO_3)_3.9H_2O$ $CaSO_4.2H_2O$ and $MgSO_4.7H_2O$ etc. are suitably used as fertiliser etc. The process is very economical with effective heat utilisation and results in no pollution as a closed system is used. 1.7.77. as 077943 (7pp34)

FUIT ★ D15 19335B/10 ★J5 4014-366

Recovery system for high purity water - used for washing semiconductor wafers for integrated circuits, incorporates two/stage washing process and water recycle

FUJITSU LTD 05.07.77-JA-079482

(02.02.79) C02c-05

Fresh water is purified to a super-purity water in a polishing appts. The super-purity water is storaged partly in the first washing tank where the material for semiconductor is washed after being treated with various chemicals. The water used in the first washing tank is discharged and the super-purity water not storaged in the first washing tank is recovered. The recovered water polishing line contains the second washing tank, a recovery tank where the super-purity water used in the second washing tank is recovered, and a recovered water polishing appts. where the super-purity water in the recovery tank is subjected to polishing to send to the second washing tank for storage.

The method, featuring a two-stage washing process; i.e. the super-purity water used in the first washing tank is discharged and the water used in the second washing tank is recycled for reuse after polishing obviates the need to monitor the quality of water by using a sensor, and miniaturises and simplifies the polishing appts, thus ensuring a simplified, exact, and inexpensive recovery of super-purity water. 5.7.77. as 079482 (3pp)

SUMO ★ D15 19337B/10 ★J5 4014-368

Deodorising animal excreta, sewage (sludge), activated sludge, etc. - by treating with agent obtd. by treating moisture rich organic waste with calcia or magnesia, and mixing prod. with adsorbent

SUMITOMO CHEMICAL KK 04.07.77-JA-080122

C04 P34 (D22) (02.02.79) A61l-09 B01d-15 B01j-01 C02c-03

Moisture-rich organic waste is first treated with 0.1-0.5 equivalent of CaO and/or MgO on the basis of its moisture content to obtain a dried powder, and the dried powder thus obtd. is mixed with a 5-100 wt.% adsorbent, e.g., diatomaceous earth, bentonite, activated carbon, etc. to produce a deodorant which is used by spreading, mixing, etc. in a quantity sufficient to cover the offensive odorous substances.

Deodorant effectly adsorbs and remove N- or S-contg. gases and suppresses the formation reactions of malodorous substances by microorganisms, e.g., the decompositing reactions of protein, thus greatly contributing to the prevention of environmental pollution. The deodorant, after being used, can be diverted to fertiliser or soil stabiliser. 4.7.77. as 080122 (4pp117)

MITQ ★ D15 19340B/10 ★J5 4014-371

Dewatering appts. - where warm water is used to heat a tank and then water is passed through nozzle to create suction on tank contents

MITSUBISHI ELECTRIC CORP 04.07.77-JA-080187

Q76 (02.02.79) B01d-01 F26b-09/06 F26b-23/10

Device is claimed for concn. of the sea water and drying marine products. The object is to provide a dewatering device having a simple structure and allowing a warm waste water from a power plant to be used for dewatering.

A heater for preheating the object to be dewatered is disposed in a tank for containing the object and is connected to a pipe for feeding an operational heating fluid. A nozzle is connected to the feed pipe to jet the fluid into an ejector. Around the nozzle a pressure reduction space is formed in the ejector, and the nozzle is connected to the tank through a suction pipe. A heater surrounds a part of the feed pipe, running from the tank to the ejector, to cool the fluid, the warm waste water. 4.7.77. as 080187 (3pp26)

KUBI ★ D15 19341B/10 ★J5 4014-372

Ion exchange device for water - allows a breakthrough resin to be drained, regenerated and fed into a moving bed without disturbing it

KUBOTA KK 05.07.77-JA-081857

(02.02.79) B01j-01/06

A water feed pipe is connected to an upper port of the tank. To its bottom, an ejector is connected to suck the break-through resin dropping from the drum and send it to an ion exchange resin regenerating column. A resin feed column is connected between the regenerating column and drum to feed the regenerated resin to the drum. At a lower side wall of the tank, a pipe is connected to take out treated water.

The process does not disturb the bed. 5.7.77. as 081857 (2pp26)

KANF ★ D15 19344B/10 ★J5 4014-376

Tubular material for ultrafiltration - by coating di:chloro-di:phenyl-sulphone bisphenol condensn. resin on inside of polyester tube

KANEGAFUCHI CHEM KK 05.07.77-JA-080560

A88 J01 (02.02.79) B01d-13

To raise the mechanical strength of a polysulphone ultrafiltration membrane and also to overcome difficulty of manufacturing tubular ultrafiltration membrane, dichlorodiphenylsulphone-bisphenol cocondensation resin was coated over the inside of a tubular base material made of polyester unwoven fabric so that part of the sponge layer of the ultrafiltation membrane is embedded in the unwoven fabric.

Membrane has a defect-free, strong tubular semipermeable membrane on its internal active layer, as well as excellent overall mechanical toughness, heat resistance, chemical resistance, etc. 5.7.77. as 080560 (4pp117)

FUKU/ ★ D15 19347B/10 ★J5 4014-382

Reductive decolouriser for treating e.g. dyes - contg. stannous aldonate, saccharate or oxalate, and water, starch soln., gum or resin

FUKUI K 05.07.77-JA-080715

A97 E12 F06 (F09) (02.02.79) C11d-07/54 D06p-05/13 D21c-09/10

A reductive decolouriser comprises stannous aldonate, stannous saccharate, or stannous oxalate as its main component, either solely or in combination, together with water, an aq. soln. of starch, British gum, tragacanth gum, or water-soluble synthetic resins or an emulsion of acrylic resins, vinyl acetate, etc.

The decolouriser is used in the treatment of dyeing solution, pigmentation solution, fibre clothes, or coloured waste water, exhibiting a great decolourisation capability without causing damage to equipments, clothes and fibrous materials, and human body. The decolouriser also exhibits greater activity by heating, addn. of acid, or the action of an acid-producing catalyst, and is suited to the discharging and reserve printing operation for fabrics, etc. as well as suitable for bleaching of papers, natural fibres, clothes, etc. 5.7.77. as 080715 (4pp117)

BABA- ★ D15 19351B/10 ★J5 4014-388

Coal chelating agent for hexavalent chromium redn. and adsorption - prepd. by treating low carbon coal with hydrochloric acid under non-oxidative conditions

BABA RES INST KK 05.07.77-JA-079469

E31 J01 M25 (02.02.79) C02c-05/02 C07g-17 C09k-03

agent is prepd. by treating low-carbon coal with a hydrochloric acid soln. under a non-oxidation condition, followed by washing with an aq. medium, to remove at least Fe, Al, and Mn present in the coal. The low-carbon coal thus treated is used for the treatment of hexavalent Cr-contg. waste-water conditioned to pH 2-3, or for the treatment of the hexavalent Cr-contg. waste-water in conjunction with a coal series heavy metals arrester, or ion-exchanger, which is prepd. by contacting the coal treated with an acid under a non-oxidation condition followed by a treatment with a hexavalent Cr contg. acid soln. with sparingly water-soluble Mg salt so that $\geqslant 1$ equiv. of Mg per 1 kg of dry coal is bound with the coal.

The chelating agent is capable of arresting hexavalent Cr and heavy metals such as Zn, Ni, Cu, Fe, Cd, etc. from plating waste-water etc. 5.7.77. as 079469 (9pp117)

NITL ★ D15 19355B/10 ★J5 4014-392

Sepn. of thin oil film from the surface of water - by moving porous PTFE over water surface

NITTO ELECTRIC IND KK 04.07.77-JA-080141

A97 H03 J01 (A14) (02.02.79) B01d-15 C02c-05/02

Variously shaped porous PTFE of a porosity $>55\%$ and a bore size of 0.01 to 1000 μ is floated so as to adsorb the oil film spreading on the surface of water while moving according to the flow of water.

The PTFE has good chemical and solvent resistance, and also can withstand the temp. of -100 to 260°C. Thus it can be reused repeatedly by cleaning and washing with solvents or steam, and is easy to transport and maintain. 4.7.77. as 080141 (3pp117)

SUMO ★ D15 19358B/10 ★J5 4014-396

Sepn. of hexavalent chromium - from soln. contg. halide ions, using anionic exchange resins

SUMITOMO CHEMICAL KK (KOEI) 05.07.77-JA-080677

E31 (02.02.79) C01g-37 C02c-05/02

In sepg. hexavalent Cr from an aq. soon. contg. at least halogen ions, e.g., fluorine, using an ion-exchange resin the aq. soln. is contacted with an anionic ion exchange resin, e.g., a weakly basic anionic ion exchange resin. The resin is then treated for desorption, and the desorption liquor is further treated with the anionic ion exchange resin. The anionic ion exchange resin is finally washed with water and then treated with an alkaline soln. to recover hexavalent Cr contg. no halogen.

Prod. is most suitable for use in leather tanning, pigmentation, and dyeing, partic. in the former. 5.7.77. as 080677 (4pp)

ASAE ★ D15 19388B/10 ★J7 9002-617

Separating suspended particles from e.g. waste water - by adding hydrogen peroxide to generate bubbles which cause the particles to float

ASAHI ELECTROCHEM IND KK 08.07.70-JA-059031

E36 P41 (09.02.79) B03d-01

Method comprises adding H_2O_2 to an aq. suspension of pH 4-11 to cause suspended particles to float due to bubbles generated by decomposition of H_2O_2. The floating particles are then removed.

Used for treating industrial waste water, river water, salt water for electrolysis; etc. Provides a higher sepn. rate than conventional air-bubble method. 8.7.70 as 059031 B03d-1/00 (9.2.79) ASAHI ELECTROCHEM IND. KK (3pp83)

MITO ★ D15 19391B/10 ★J7 9002-620

Multistage flash evaporator for treating brine - comprises succession of isolated evapn.-condensn. chambers each including deflector plate and shield plate

MITSUBISHI HEAVY IND KK 07.02.68-JA-007641

J01 (09.02.79) B01d-03/06

The evaporator comprises a succession of evapn-condensn chambers isolated from one another by spaced partition walls. Each chamber includes an inlet port located at one end near the bottom of the chamber for the brine from the previous stage. An upwardly flared flash conduit upstands from the inlet port and a curved deflector plate is disposed above the top end of the flash conduit. A condenser for cooling and liquefying the vapour, and a shield plate are disposed adjacent the opening defined beneath the partition wall and forming the brine inlet port to the next stage.

The deflector plate causes splash of the brine from the flash tube to fall into the bottom collector. The shield plate prevents water vapour from entraining in the brine flowing to the next stage. 7.2.68 as 007641 B01d-3/06 (9.2.79) MITSUBISHI HEAVY IND. KK (3pp47)

MITO ★ D15 19392B/10 ★J7 9002-621

Multistage flash evaporator for treating brine - comprises succession of isolated evapn.-condensn. chambers sepd. by partition walls of high thermal conductivity

MITSUBISHI HEAVY IND KK 08.05.68-JA-030731

J01 (09.02.79) B01d-03/06

The evaporator comprises a succession of evapn-condensn units isolated from one another by spaced partition walls. Each unit includes an inlet port located at one end near the bottom of the chamber for the hot brine from the previous stage, an upwardly flared flash tube upwardly from the inlet port, and a condenser defined adjacent the flash chamber for cooling and liquefying the evaporated water. The partition walls are made of high thermal-conductivity matl so as to cause some heat exchange to take place between the vapour entering the condenser and the brine introduced to the next stage and flashing from the top of the flared tube. 8.5.68 as 030731 B01d-3/06 (9.2.79) MITSUBISHI HEAVY IND. KK (3pp47)

MITO ★ D15 19393B/10 ★J7 9002-622

Brine heater for multistage flash evaporator - comprises an auxiliary flash chamber, positioned adjacent to the last stage evaporator and operated by heat exchange

MITSUBISHI HEAVY IND KK 13.05.68-JA-032010

J01 (09.02.79) B01d-03/06 C02b-01/06

A multistage flash evaporator comprises a succession of evaporation-condensation units isolated from one another by spaced partition walls. Each unit includes an inlet port located at one end for the hot brine from the previous stage, an upwardly flared flash tube upstanding from the inlet port, and a condenser defined above the flash chamber for cooling and liquefying the vapourised water by heat exchange with the newly supplied brine.

The brine, prior to entering the condenser coil of the last stage, is preheated in the auxiliary flash chamber disposed adjacent the last stage evaporation chamber by heat exchange with the vaporised water received in the condenser which is isolated from the auxiliary flash chamber by a high thermal conductivity partition wall. 13.5.68 as 032010 B01d-3/06; C02b-1/06 (9.2.79) MITSUBISHI HEAVY IND. KK (3pp47)

MITO ★ D15 19394B/10 ★J7 9002-623

Multistage evaporator for treating brine - comprises succession of isolated evapn.-condensn. chambers, cooking tubes extending throughout condensn. chambers

MITSUBISHI HEAVY IND KK 22.05.68-JA-034479

J01 (09.02.79) B01d-03/06

The evaporator comprises a succession of evapn-condensn units isolated from one another by spaced partition walls. Each unit includes an inlet port located at one end for the hot brine from the previous stage, an upwardly flared flash tube upstanding from the inlet port, and a condenser defined above the flash chamber and including a number of cooling conduits, through which the newly supplied brine is passed and heated by heat exchange with the vapour.

The cooling tubes extend through all the stage condensers and comprise shorter tubes joined to one in end abutment within openings of tube plates formed as a continuation of some of the partition walls which are made of high thermal-conductivity material. 22.5.68 as 034479 B01d-3/06 (9.2.79) MITSUBISHI HEAVY IND. KK (3pp47)

ISHI ★ D15 19408B/10 ★J7 9002-787

Treating polluted water contg. salt - by reverse osmosis or ion-exchange treatment, and freezing to give ice and salt-contg. slurry

ISHIKAWAJIMA-HARIMA HEAV 09.01.74-JA-005833

(13.02.79) C02b-01 C02c-05

A polluted water contg. less than a few thousand ppm of salts is treated with reverse osmosis membrane, ion-exchange membrane or ion-exchange resin to obtain a conc. salt-contg. water.

The conc. saline water is introduced into a freezing-melting appts. to separate it into a salt-contg. slurry and ice which is then melted; and the melted water is discharged to the outside or recycled for further treatment. The salt-contg. slurry is discharged as solid or conc. slurry. 9.1.74 as 005833 C01b-1/00; C02c-5/00 (13.2.79) ISHIKAWAJIMA-HARIMA HEAV. (4pp34) (J50200842)

HASH/ D15 67427X/36 = J7 9002-786

Water purifying agent prepn - by moulding then rapidly heating powdered zeolite, foaming agent and binder

HASHIMOTO S 31.08.73-JA-098044

*A97 G04 +P14 (13.02.79) *J50048-746 +A01k-64/02 B01d-15 B01d-39/06 C02b-01/16 C02c-01/40 C02c-05/08*

Powdered zeolite, org. foaming agents, and binders which are effective in the presence of water are mixed and moulded, the moulded prod. is rapidly heated inside and out simultaneously to make foaming instantaneous, and the foamed prod. is dried to give a porous water-purifying matl. Opt. the foamed prod. is activated and sintered by heating. The prod. absorbs NH_4^+ selectively, and hence it is suitable to obtain high quality water for fish hatcheries, fish ponds, hydroponics, and transportation of live fish and flowers.

In an example, 100g powdered zeolite (200 mesh) was mixed with 40 ml. of 1% CM cellulose and 7g of foaming agent ('Serumaiku A'). The mixt. was pelletised, foamed by heating, and sintered at 700° for 1 hour. The pellets 1.5g were placed in a cup which was filled with tap water, and fresh-cut flowers were placed therein. The flowers in the treated water kept their freshness after 1 week, whereas the flowers in untreated tap water wilted. 31.8.73 as 098044 C02b-1/16; B01d-15/00; C02c-1/50; 5/08; A01k-64/02; B01d-39/06 (13.2.79) HASHIMOTO, S. (4pp) (J50048746)

YANM ★ D15 19409B/10 ★J7 9002-789

Cyanide content redn. of effluent - by downwardly spraying the effluent into a cyclone, and blowing a large amt. of air into effluent

YANMAR DIESEL ENGINE 22.07.71-JA-054779

(13.02.79) C02c-05 C25d-21/20

The process comprises downwardly spraying the effluent into a cyclone from nozzles in the upper section; blowing a large amt. of air against the effluent from an inlet around an air-discharge pipe through which air-absorbed with cyanide is discharged; continuing the aeration until the cyanide content is lowered; and transferring the water to a storage tank for reuse. 22.7.71 as 054779 C02c-5/00; C25d-21/20 (13.2.79) YANMAR DEISEL ENG. (5pp34) (J48021352)

EBAI ★ D15 19410B/10 ★J7 9002-790

Waste water treatment using aluminium sulphate as flocculant - and adjusting pH to increase settling velocity

EBARA INFILCO KK 17.05.74-JA-055092

E33 (13.02.79) B01d-21/ C02b C02c-05/02*

In waste water treatment using $Al_2(SO_4)_3$ as flocculant, the pH after hydroxide floc formation was adjusted to 2-5 to increase settling velocity.

Thus, sewage (pH 8.3, turbidity 120°) was stirred with 200 mg/l. $Al_2(SO_4)_3$ for 3 mins. to form $Al(OH)_3$ floc, treated with H_2SO_4 to pH 4 and stirred for 15 min. The settling velocity and supernatant turbidity were 200mm/min. and 2.5°, respectively, compared with 40 and 5, respectively, for water whose pH was adjusted to 4 at the $Al_2(SO_4)_3$ addn. 17.5.74 as 055092 C02c-5/02; B01d-21/01 (13.2.79) EBARA-INFILCO CO. LTD. (4pp) (J50147158)

MITU ★ D15 19411B/10 ★J7 9002-791

Decolourising and reducing COD of waste water - by treating with piperidine ring-contg. poly:amine-sulphone type cationic polymer coagulant and bentonite

MITSUBISHI CHEM IND KK (NREN) 14.06.74-JA-067778

A91 (A26) (13.02.79) B01d-21/ C02c-05/02*

Coloured waste water is decolourised and COD content reduced by treating it with a piperidine ring-contg. polyaminesulphone-type cationic polymer coagulant to remove colouring components by coagulation, and subsequently (or simultaneously) treating with bentonite. 14.6.74 as

067778 C02c-5/02; B01d-21/01 (13.2.79) MITSUBISHI HEAVY IND. KK (3pp34) (J50159152)

PROM- D15 21006V/12 =NL-159-289
Decantation tank sludge scraper - retracted for reverse stroke by mech cam action actuated by scraper traction force
PROMETALL UZNACH 09.03.73-CH-003547 (06.09.72-CH-013102)
*+Q42 (15.02.79) *BE-804-548 B01d-21/12*

The solids on the floor of settlement tanks such as are used in effluent treatment plants are removed by means of a mobile cleaning device mounted on rails above the basin. The carriage is capable of being driven in either direction and carries a cleaning device by means of a hinged arm.

When the carriage moves in one direction the cleaning tool is in the low position. When the motion is reversed, the cleaning tool is raised. The arms are so arranged that the motion of the carriage itself inverts the cleaning arm mechanically at the end of the travel thus eliminating the need for electrical proximity switches and the problem of maintenance of the electrical equipment. 6.9.73. as 012315 (+28.11.72, 18.1.73-CH-017329, 000725) (11pp1370)

MGEI D15 94400X/51 =NL-159-454
Bar screen cleaning plant - has central rack with cylindrical pins and roller guide for forced rake point path
MASCH H GEIGER 06.10.67-DT-658096
*Q42 (15.02.79) *DS1658-096 +E02b-08/02*

A grating cleaning mechanism consists of a cleaning tool carriage mounted on a beam. At each end of the beam there is a toothed wheel which engages in a continuous rack such that the beam moves upwards on the inside of the rack and downwards on the outside. Thus, on the upwards stroke, the cleaning tool carried by the carriage is in contact with the grating to be cleaned and, on the downward stroke, the cleaning tool is disengaged.

The mechanism is used for cleaning grating barriers in canals and the cleaning tool consists of a hook which lifts solid deposits away from the grating to provide a clear passage for the flow of water. 4.10.68. as 014270 (5pp1370)

ASHE= D15 82046Y/46 =SU-602-750
Freeze-desalting concentrator
AS USSR HEAT PHYS (AUTH=) 23.02.76-SU-320651
*J01 +Q24 Q75 (16.03.78) *J52119-470 +B63j-01 F25c-01/12*

The freezing distillation plant can be used for liq. food concentration, and fresh water production. The plant contains distillation block which has coaxial heat exchanger for original soln. cooling, coolant evaporator and screw conveyor ice generator. A separator with a scraper for ice removal is placed above the ice generator. The plant is also provided with circulation pump, cooling compressor and lines for supply of original soln. recirculation brine and brine drainage.

To increase the fresh water quality, the distillation block upper part is provided with a channel for supply of compressed air to the separator. An arrangement for supply of original soln. and recirculation brine mixture to the ice generator is placed between the ice generator and separator blades. The brine drainage pipe is situated in the generator lower part.

The arrangement for the supply of original soln. and recirculation brine mixture is made as two coaxial cylinders. The outer cylinder is provided with pipes for mixture supply to the arrangement cavity. The inner cylinder is provided with evenly situated openings for mixture flow to the ice generator.
Parkhitko, V.M., Smirnov, L.F. Bul. 14/15.4.78. 23.2.76. as 320651 (4pp110)

AUHE= D15 86975Y/49 =SU-602-751
Freeze crystalliser for brine desalination or concn. of drinks - is easily transportable and economical in energy usage
AS UKR HEAT PHYS (AUTH=) 23.02.76-SU-320652
*+Q24 Q75 (D13 D16) (15.03.78) *FR2341-344 +B63j-01 F25c-01/12*

The freezing distillation plant can be used to produce fresh to concentrate liq. foods, e.g. wine beer and juices. The plant contains a distilling block which includes coaxial coolant evaporator and ice generator with a screw conveyor attached on a shaft. A separator with a scraper for ice removal is placed above the ice generator. The plant also contains a heat exchanger for initial soln. cooling, circulation pump, cooling compressor and lines for original soln., recirculation brine and brine drainage.

To increase the plant output, the distilling block is provided with a tubular manifold with a knife and atomisers for supply of a mixture of original soln. and recirculation brine onto the evaporator outer surface. The evaporator lower part is provided with perforated tray. The ice generator shaft is hollow and has a radial openings for mixture supply onto the evaporator inner surface. The screw conveyor lower coil is provided with a blade for ice collection and its diameter corresponds to the tray diameter.
Smirnov, L.F., Parkhitenko, V.M., Zverkhovskii, V.I. et al. Bul. 14/15.4.78. 23.2.76. as 320652 (4pp110)

HYDR= ★ D15 19656B/10 ★SU-603-404
Filter for purifying bilge water - contains inclined filtering baffle plates on central post and V/shaped tube mounted under vertical partition
HYDRAULIC ENG RES 02.08.76-SU-392519
J01 (17.04.78) B01d-17/02 B01d-25

Stability of operation and improved degree of purification in the filter used for water contg. petroleum products, e.g. bilge water, are ensured by automatic regeneration of the filtering baffle plates. The filter is equipped with a central post on one side of which are mounted filtering baffle plates inclined at an angle to the horizontal plane, as well as with V-shaped tube feeding purified water into the casing of the filter and mounted under the vertical partition.
Bakhilin, B.F., and Sobkalov, P.F. Bul. 15/25.4.78. 2.8.76. as 392251 (3pp135)

BALA/ ★ D15 19669B/10 ★SU-603-419
Efficient ion-exchange filter - has coaxial filter elements in drain caps to prevent blockage
BALABANOV I G 11.10.76-SU-410337
J01 (04.04.78) B01d-01/06 C02b-01/40

ion exchange filter efficiency and reliability are improved by preventing blocking of the drain caps. The latter have filter elements mounted coaxially with the cap, which is a slotted tube with a plate pack permitting fluid flow.

The filter may be used for desalination and deoxygenation of water used in the cooling of electrical machines used in chemical water preparation systems. The design permits reverse flushing to clean the drain filter and dismantling for cleaning is also made easier.
Balabanov, I.G., Nikoforov, S.A. Bul. 15/25.4.78. 11.10.76. as 410337 (2pp129)

SASA- D15 59447Y/34 =US 4141-410
Multiple effect evaporator for desalinating seawater - cools energising steam feeding exchangers, preventing incrustation and facilitating gas venting
SASAKURA ENG CO 20.04.76-JA-U49638
*J01 +Q78 (27.02.79) *BE-853-753 +F28b-09/08 F28f-25/10*

Evapn. process comprises introducing steam at high temp. into separate bundles of horizontal heat transfer tubes, and feed liq. is sprayed over the tubes.

The number of tubes in each bundle is smaller than that in the next lower bundle, steam flowing successively through the bundles from the lowest upwards. A plate collects condensate which is delivered to a head chamber by a pipe, superheated steam also being introduced to the head chamber. The plate is positioned between bundles.

The evaporator utilises steam more efficiently and thus requires only a small gas extractor. 18.4.77 as 788113 (6pp1379).

ATDE- ★ D15 19885B/10 ★US 4141-798
Solar still defined by parallel dikes sepd. by ditch - with pair of overlying, spaced-apart sheets connected at edges to form troughs
A & T DEV CORP 30.01.78-US-873721
Q74 (27.02.79) B01d-03 C02b-01/06 F24j-03/02

Solar still comprises a pair of parallel dikes sepd. by a ditch. A sheet of water-impervious, opaque material overlies the ditch and the dikes and is connected at its longitudinal edges to an overlying, water vapour-impervious, translucent material. A plurality of vertical supports maintain the sheets in spaced-apart relation.

Spacers are positioned along the top of each dike between the two sheets to maintain a spaced relationship between the sheets and permit purified water entry in trough provided along the outside of each dike.

Used partic. in greenhouse structures employed in desert agriculture. The still is constructed from inexpensive materials which can be easily transported to the site of the still. Use may be made of available solar energy to produce purified water in regions where only impure water is available. 30.1.78 as 873721 (7pp1044).

UNIC ★ D15 19898B/10 ★US 4141-822

Activated sludge sewage treatment - with subsequent anaerobic stripping of phosphorus from the settled sludge

UNION CARBIDE CORP 30.06.77-US-811595 (21.06.74-US-481793)

(27.02.79) C02c-01/17

Sewage treatment comprises aerating a mixt. of phosphate (P)-contg. sewage and activated sludge so that BOD is reduced and microorganisms take up P. The P-enriched sludge, contg. P in its solid phase, is sepd. from the P-free effluent and passed to a stripping zone where it settles into sludge and supernatant liquor (L).

The sludge is (partly) maintained under anaerobic conditions so that P is released into its liq. phase, and is contacted with an aq. medium (A) of lower soluble P content to transfer soluble P to (A) so as to enrich (L) in P. Some or all of the anaerobic sludge is then recycled to aeration as the actived sludge.

Highly efficient removal of P is obtd. 30.6.77 as 811595 (+4.6.75 - US - 581951) (11pp1251).

BRTO ★ D15 19899B/10 ★US 4141-823

Waste water treatment to reduce BOD - using horizontal flow through microorganism supporting structures with addn. of oxygen

BRITISH OXYGEN LTD 05.08.75-GB-032637

(27.02.79) C02c-01/04

Treatment involves passing the waste horizontally through an elongate tank. The tank includes ⩾1 stationary, transverse bacterial colony support structure extending across its width.

Aerobic microorganisms are supported on the structure below the surface of the waste and an oxygenating gas is dissolved in the waste at positions upstream of the support structure. Pref. a series of the support structures are provided and the oxygenating gas is supplied in the spaces between adjacent structures.

Treatment can be continuous and the appts. can be installed in an existing treatment plant. 3.8.76 as 711354 (7pp295).

MIDC- ★ D15 19900B/10 ★US 4141-824

Water purificn. using upflow through sand bed - with underlying circulating water zone centrifugally removing larger solid particles

MIDCON PIPELINE EQ 25.10.77-US-845341

(27.02.79) B01d-29/36 C02c-01/04

Water to be purified is introduced tangentially into a zone immediately beneath the bottom of a sand bed of circular horizontal cross-section. This uniformly distributes the water beneath the sand bed and throws relatively large solids to the sides of the zone. A body of water is maintained in this zone in a swirling motion and the larger solids settle through this.

The water is passed upwardly through the sand bed at ~6 inches per min. The water exiting from the top of the sand bed is passed upwardly through a settling chamber above the sand to remove any suspended sand particles from it. Purified water is withdrawn from the top of the appts.

The method is used for water purificn. and clarification Close down of the appts. for backwashing is minimised. 25.10.77 as 845341 (10pp295).

STWE ★ D15 19901B/10 ★US 4141-825

Desalination and purification of water - using electrodialysis unit, moderate pressure reverse osmosis unit and high pressure reverse osmosis unit

STONE & WEBSTER ENG CORP 31.10.77-US-846779

(27.02.79) B01d-13

In the purificn. and desalination of water contg. 500-36000ppm. salt, the appts. used includes three separate units comprising an electrodialysis unit, a moderate pressure reverse osmosis unit and a high pressure reverse osmosis unit. Reject from the electrodialysis unit is delivered to the moderate pressure reverse osmosis unit and reject from this unit is delivered to the high pressure reverse osmosis unit.

Prod. water from each of the units is blended to produce a prod. stream. The prod. water from the first two units contains <500ppm. salt while the prod. from the final stage contains 300-800ppm. When the prod. of the third unit is >500ppm. it is pref. recycled to the dialysis unit for further desalination. 31.10.77 as 846779 (9pp295).

AMCY ★ D15 19903B/10 ★US 4141-827

Clarification of coal washing waste water - by addn. of a quaternised Mannich base of low mol. wt. polyacrylamide

AMERICAN CYANAMID CO 02.05.77-US-792745 (26.10.76-US-735577)

*A91 J01 (A14) (27.02.79) B01d-21/**

Suspended solids in coal washing waste water are settled after mixing with a water-soluble polymer comprising repeating unit of formula $\{[CH_2-CH(CONHCH_2N^+Me_2RA^-)]_x[CH_2-CH(CONH_2)]_y\}_n$, (where A^- is an anion, R is 1-3C alkyl or 2-3C hydroxyalkyl; x is a mole fraction of ⩾50%, y is a mole fraction of ⩽50%, and n is 100-1600) such that the polymer has an intrinsic viscosity of 0.1-0.45 (pref. 0.3-0.45) dl/g. in 3M NaCl at 30°C.

The polymer has a relatively low mol. wt. for a flocculant, so that it is more easily prepd. and economically shipped than conventional polymeric flocculants and provides greater clarification of the waste water. 2.5.77 as 792745 (6pp558).

OSAG D15 14400A/08 =US 4141-828

Oxidn. of ammonia present in waste water - by heating in liquid phase using precious metal, iron, cobalt, nickel, copper or tungsten (cpd). catalyst (NL 14.2.78)

OSAKA GAS KK 10.08.76-JA-095507

*(27.02.79) *DT2735-892 C02c-05/04 +C02b-01/34*

Ammonia-contg. waste water is treated by subjecting at pH ⩾9 to wet oxidation with an oxygen-contg. gas in the presence of a catalyst, maintaining water at 100-370°C and at pressure permitting waste water to remain in liq. phase.

Catalyst is supported by a carrier comprises ⩾1 of iron, cobalt, nickel, ruthenium, rhodium, palladium, iridium, platinum, copper, gold, tungsten and their water-insoluble cpds. Pref. pH is 10-12.5. Catalyst comprises ruthenium chloride and platinum chloride or ruthenium sulphide and rhodium sulphide as active component.

Process is greatly simplified reducing costs by use of a one-step reaction substituting a multistage process. 10.8.77 as 823496 (6pp931).

FARB D15 19659A/11 =US 4141-829

Treating waste water contg. organic matter by oxidn. - to carbon di:oxide and water at high temp. and pressure

BAYER AG 09.09.76-DT-640603

*(27.02.79) *BE-858-542 C02c-05/04*

Organic substances dissolved or dispersed in aq. system are oxidised with a gas contg. molecular O_2 at elevated temp. and pressure to CO_2 and water, with subsequent phase sepn. into gaseous phase contg. inert gas, CO_2 and steam and liq. phase contg. water.

Pressure is adjusted at given temp. so that ratio of total pressure (Pt) to partial pressure of steam in reaction soln. (Pw) is 1.05-1.5 and so that by evapn. of water from aq. system, more steam than exothermicity of the oxidn. reaction goes into aq. phase which is fed to a heat exchanger, in which amt. of heat needed to maintain oxidn. temp. is transferred to water and oxygenated gas which flows on other side of heat exchanger and subsequently fed to the reactor.

Used esp. to feed inorganic constituents, after the oxidative degradation of the organic substances to a reuse or recovery process. 2.9.77 as 830295 (6pp934).

UNIC ★ D15 19904B/10 ★US 4141-831

Appts. for removing solids from sedimentation tank - with scraper blade liftable at ends of tank to prevent solids accumulation

UNION CARBIDE CORP 25.10.77-US-844986

(27.02.79) C02c-01/08

In a sedimentation appts. a solids collection trough extends along the bottom length of the settling tank. A reciprocating bridge travels along the length of the tank and this supports a scraper blade, one end of which is adjacent the trough, the other end being adjacent a side wall.

The blade at its end adjacent the wall is supported by two telescoping tubes, the upper being connected to the bridge and the lower to the blade. At its other end a flexible cord interconnects the bridge and blade for drawing the blade in trailing relationship to the bridge as the bridge moves along the length of the tank. Near the end of the tank the suspended length of the cord may be shortened so that the scraper blade is lifted adjacent the end walls of the tank. The blade is again lowered as the bridge begins its travel in the opposite direction.

The appts. is used in a sedimentation appts., e.g. in an activated sludge sewage treatment process. The vertical movement of the blade at the ends of the tank prevents accumulation of solids in these regions. 25.10.77 as 844986 (17pp295).

UNIC ★ D15 19905B/10 ★US 4141-832

Removal of solids from sedimentation zone using scraper blade - drawn along path suspended by cables for transverse alignment with walls to eliminate solids accumulation

UNION CARBIDE CORP 25.10.77-US-845298

(27.02.79) C02c-01/08

Appts. for collection and removal of settled solids from the bottom part of a sedimentation zone comprises a scraper blade attached to a bridge and drawn reciprocatingly and repetitively in a longitudinal path along the zone. The blade is disposed at an acute angle w.r.t. the bridge during the movement. The blade is suspended by a pair of cables, the suspended lengths of which can be shortened at the approach of the bridge to the end walls of the sedimentation zone and increased upon reciprocal movement of the bridge away from an end wall.

Used for treating liquids in which a liquid-solid is sepd. in a sedimentation zone. The modified appts. is mechanically simple and inexpensive to fabricate and eliminates solids accumulation adjacent the end walls of the sedimentation zone. 25.10.77 as 845298 (14pp1044).

NALC ★ D15 19915B/10 ★US 4141-854

Breaking emulsions from organic solvent extn. of uranium - by adding an acrylamide copolymer contg. an amino-ethyl methacrylate

NALCO CHEMICAL CO 14.12.77-US-860542 (31.05.77-US-801894)

A97 K05 M25 (A14) (27.02.79) B01d-17/04 G21f-09/04

Water-in-oil emulsions, obtd. from organic solvent extn. of uranium from aq. leach liquors, are resolved by treatment at from room temp. to the emulsion b. pt. with $\geq$20 ppm. of a water-sol. acrylamide copolymer contg. 5-50 wt.% lower alkyl-substd. tert. aminoethyl methacrylate or its quat. ammonium salt.

The organic phase obtd. from the extremely tight emulsion can be recovered and recycled to the uranium recovery process, giving a more economic system with reduced pollution. 14.12.77 as 860542 (3pp558).

SEKI D15 69194A/39 =US 4141-888

Reduced keratinous material adsorbent for cationic substances - e.g. mercury ions is prepd. by reducing keratin in presence of urea or thiourea

SEKISUI KAGAKU KOGY 07.03.77-JA-024999

*J01 (27.02.79) *DT2809-559 +C08h-01/06*

A heavy metal ion capturing agent comprises a reduced keratinous substance (I) with a high adsorptive power for cationic substances. (I) is produced (a) by reducing a substance contg. keratin at pH 8-11 to cleave the disulphide linkages of the keratin; (b) dissolving 1-10 pts. wt. reduced keratin in 100 pts. wt. of an aq. medium contg. (thio)-urea in a concn. of $<$5 moles/l.; and (c) acidifying the resulting soln. to pH 4-6 to ppte. (I) in the form of powders, granules or flakes with a surface area of 0.1-200m^2/g. The prodn. process is carried out in an inert gas.

Pref. the keratinous substance is wool or feather, and the reduction is at pH 10-11 using thiol derivs., phosphorus contg. cpds., (hydrogen)sulphites, (hydro)sulphides. 6.3.78 as 883997 (8pp918).

OSHI/ ★ D15 19954B/10 ★US 4141-939

Bubble generator using supersonic wave action - comprises resonant cavity defined by externally tapering body with air passages therethrough

OSHIMA H 10.06.77-US-805430

J02 P42 (27.02.79) B05b-01/10

Aerator for generating bubbles from a gas/liq. mixt. and employing supersonic wave action comprises a resonant body defining therewithin a cylindrical resonant cavity which communicates at its inlet end with a liq. nozzle. The exterior of body is tapered towards the inlet end and defines with an enclosure an annular air inlet chamber. The inlet chamber communicates with the cavity through pores so that the air is introduced thereinto to generate the supersonic wave together with bubble formation.

The aerator can be used to sterilise sludge, and for warming and washing the human body. Low liq. wastage is provided together with a low pressure differential therethrough. 10.6.77 as 805430 (4pp1050).

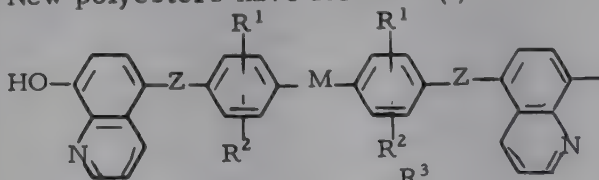
FARB D15 58976W/36 =US 4142-035

Polycondensates as metal-absorbents, coatings, stabilisers and cats - contg. hydroxy-quinoline end - gps. and metal contg. polymers

BAYER AG 15.02.74-DT-407309

*A23 J01 (A91) (27.02.79) *DT2407-309 C08g-63/18*

New polyesters have formula (I).



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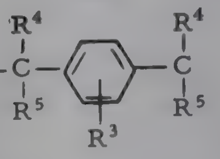

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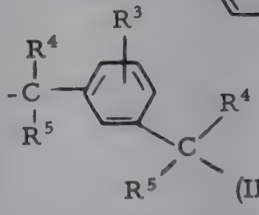


(III)

R^1 and R^2 are H, halo, Ph or 1-4C alkyl, Z is CH_2, CHMe, 3-5C iso-alkylidene, 5-15C cycloalkylene or cycloalkylidene or a gp. (II) or (III) where R^4, R^5 and R^3 are 1-5C alkyl. M is $O-(CO-R-CO-O-R'-O)_p-CO-R-CO-O-$ where R and R' are 2-12C alkylene opt. interrupted by O or cyclohexylene, 5-15C cycloalkylene, 8-12C arylenedialkylene, 6-12C arylene or 13-15C alkylidene diphenylene. p is 2-50.

The polymers are used as transition metal ion chelating agents in effluent treatment and in prodn. of thermosetting and thermoplastic resins where impurities of such ions interfere with the reaction. They are also used to prepare polymers contg. metals which have improved heat and chemical resistance. 17.8.77 as 825505 (+12.2.75 - US - 549282) (15pp945).

See Also

D22 CA 1048733 D22 US 4141830

D16 : FERMENTATION INDUSTRY

ICIL ★ D16 18028B/10 ★BE -870-188
Microbiological prodn. of single cell protein - using genetically modified ammonia fixing microorganisms
IMPERIAL CHEM INDS LTD 08.09.77-GB-037559
(D13) (05.03.79) C12d C12k

Prodn. of single-cell protein comprises aerobic culture of microorganisms contg. genetic material specifying the fixation of NH_3 by the glutamate dehydrogenase (GDH) route. Novel methanol-utilising aerobic microorganisms are genetically modified by DNA or plasmids, plasmid hybrids phages or plasmid hybrids to give specific NH_3 fixation by the GDH route.

The modified microorganisms cause conversion of MeOH by the single-stage GDH route rather than the usual two-stage glutamate synthetase (GS) route. This leads to less conversion of MeOH into CO_2 and a less exothermic reaction, so that less cooling is required to maintain the system at the pref. temp. of 34-45°C. 4. 9. 78 as 870188 (17pp941)

ROTO- ★ D16 18082B/10 ★BE -871-661
Machine to chop vegetable waste for compost - uses elliptical blades rotating in cylindrical drum as stationary chopper or lawn mower type arrangement
ROTOCROP INT LTD 31.10.77-GB-045276
P41 (15.02.79) B02c C05f

The machine comprises a rotary cutting shaft fitted with elliptical blades. The blades are set at an angle to the shaft so that the peripheral cutting edges of the blades describe a cylindrical path as the shaft rotates. A fixed blade set along the cylindrical path provides a shearing edge to cooperate with the rotating blades.

The cutting shaft assembly is pref. housed in a coaxial, cylindrical drum having inlet and outlet longitudinal slots, pref. diametrically opposed. The edge of the inlet slot conveniently serves as the fixed blade. The foregoing assembly can be mounted on a free-standing framework or on a wheeled carriage, esp. as a lawn mower in which the drive to the cutting shaft is transmitted from the ground traction drive, either manual or motorised. 30. 10. 78 as 871661 (17pp448)

NATR ★ D16 18088B/10 ★BE -871-717
Enzymatic analysis using nitro-styrene derivs. - e.g. determination of N-acetyl-beta-d glucosaminidase to detect renal troubles is simple and gives visual signal
NATIONAL RES DEV CORP 01.11.77-GB-045390
B04 J04 R16 (15.02.79) G01n

Reagent for analysis of an enzyme contains a substance capable of reacting with the enzyme and form a cpd. of formula $X-A-Y-NO_2$ (I) (where A = an aromatic ring; X= an auxochrome radical and Y = an unsatd. radical which is capable of transmitting the electronic resonance between the aromatic ring and the nitro radical) which is capable of producing an easily discernable visual signal.

Used in detection and determination of enzymes e. g. catabolic enzymes such as carboxylate esterases, lipases, alkaline and acid phosphatases, sulphatases, and phosphodiesterases; glycosidases e. g. N-acetyl-β-D-glucosaminidase (detection of this enzyme gives an indication of renal troubles or advance warning of rejection of a kidney graft). The invention may also be used to determine absence of enzymes e. g. to reveal genetic problems. 31. 10. 78 as 871717 (37pp395)

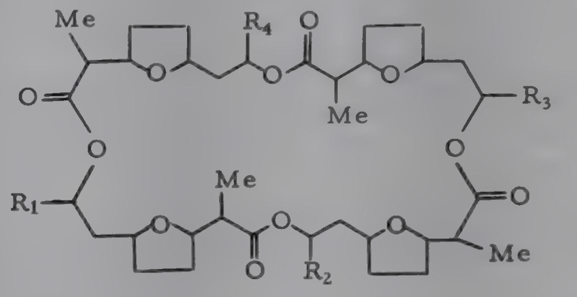
GRIF/ ★ D16 18101B/10 ★DS 1592-657
Compost turning and aerating machine - has pick/up and contra-rotating lifting drums armed with tines
GRIFFIN G D 13.12.65-AU-067793
(01.03.79) C05f-09/02

A compost turning and aerating machine for use in edible mushroom growing consists of a bow frame on wheels open on both ends, which contains a revolving pickup drum with tines. Two fast revolving shafts with intermeshing tines throw the compost with its additives up and to the rear where guide flaps determine the width of the new compost heap.

This is a robust machine of low height and simple design which is easy to build. 10.12.66 as 592657. (8pp39)

CHUS D16 20006S/11 =DS 2044-02
Miticidal macrotetrolide antibiotic
CHUGAI SEIYAKU KK (CHUG) 24.02.70-JA-015360 (06.09.6
JA-070320)
*C02 (01.03.79) *NL7013-102 A01n-09/28 A01n-15*

Macrotetrolides of formula (I) are used as acaricides an insecticides. In (I), R_1-R_4 are each Me and/or Et.



(I)

Prepn. of (I) (R_1-R_4 = Et), comprises propagation of Streptomyces 3466 (FERM-P 233, ATCC 21428), in a su able nutrient and recovery from the culture medium by t usual methods. 4. 9. 70 as 044023. (23pp047)

TAKE D16 23136S/13 =DS 2046-5
Citric acid extraction procedure
TAKEDA CHEMICAL IND KK 25.09.69-JA-076400
*E17 (01.03.79) *BE-756-656 +C07c-59/16*

An aq. soln. of salts of citric acid and (+)-isocitric acid is treated to separate citric acid. An inorganic calcium cpd., e.g. Ca hydroxide or carbonate is added to the sol in an amt. of 0.4-0.8 equivs., based on the citric acid. The tricalcium citrate pptd. is recovered.

After sepg. off the tricalcium citrate the isocitric aci may be recovered by addn. of excess Ca cpd. The acid soln. may be obtd. by fermentation of Candida species. 22. 9. 70 as 046576. (4pp068)

FRNG D16 35107U/25 =DS 2254-8
Continuous ultra-filtration plant - for liqs contg mic organisms, macro-molecules or finely divided material
FRINGS H FA 26.11.71-US-202376
*J01 (01.03.79) *DT2254-860 B01d-31*

Liquids contg. microorganisms, macromolecules or oth small, solid particles e.g. liq. from acetic fermentatio is processed by ultrafiltration. The liq. is passed in laminar current parallel to a membrane with a smooth surface and an average pore dia. of 1×10^{-2} - 1×10^{-4}. A hydrostatic pressure of $<$ 3 m. WS is maintained.

The velocity of the liq. is regulated so that the hydrodynamic pressure is greater than the prod. of the hydrostatic pressure, the coefft. of the particles on the filter surface and the ratio of their max. to min. cross sectio area. The process is efficient and has a low energy requirement. 9.11.72 as 254860. (7pp068)

BEHW D16 05768X/04 =DS 2431-7
Crystalline C-reactive protein production - by dialysing prot solutions against salt solution at pH 5-7
BEHRINGWERKE AG 02.07.74-DT-431720
*B04 C03 (01.03.79) *DT2431-720 C07g-07*

Process for sepn. of crystalline C-reactive protein,(CR comprises dialysis of its aq. solns. (protein content 0. 5 15%, $>$ 90% being CRP), against aq. NaCl, (0.05-0.5 m /dm^3), at pH 5-7 and temp. 0-40°. The pref. condition are CRP content 2-5%; 0.1-0.2 mole/dm^3 NaCl; and pH 5. 5-6. 0.

The prod. is used as aq. solns. or suspensions for t immunological determn. of CRP antibodies. 2. 7. 74 a 431720. (3pp047)

BOEH D16 90869X/49 =DS 2559-462
Active dry yeast for baking brewing - is made by vacuum drying yeast in zones of diminshing temps.
BOEHRINGER C H SOHN 07.04.75-DT-559462 (07.04.75-DT-515029)
*(01.03.79) *DT2559-462 C12c-11/32*

Active dried yeast prepn. capable of fermentation is prepd. Fresh, moist yeast with a solids content of ≥25% is subected to vacuum drying at a pressure below 50 mmHg. in a number of stages. The outer temp. falls in a number of stages, first to 40-80°C, then to 35-65°C and finally to 30-55°C.

Yeasts such as Saccharomyces cerevisiae and S. carlsbergenisis are obtd. as a dried prod. of >80% activity for use in the baking or brewing industry. 7.4.75 as 559462, Div. ex 2515029. (5pp068)

EAST D16 41723Y/24 =DS 2656-063
Cholesterol oxidase and cholesterol esterase, prodn. - by culturing microorganisms in presence of enzyme inducers and yeast extract
EASTMAN KODAK CO 15.11.76-US-741908 (11.12.75-US-639690)
*A97 B04 R16 (01.03.79) *BE-849-301 C12d-13/10*

Process for prepn. of cholesteroloxidase comprises propagation of a microorganism which produces this enzyme in the presence of cholesterol or its derivs., (1-10 g./dm^3); a non-toxic, non-ionic surfactant (1-5 g./dm^3), in nutrient contg. yeast hydrolysate (≥10, pref. 10-30 g./dm^3); and extn. of the enzyme from the culture medium.

The pref. microorganisms are NRRL 5635, 5636, 5767 and 5768; and ATCC 4277, 14349 and 17895. The pref. surfactant contains 20 or more hydrophilic poly(ethylene oxide) or polyglycidyl units and also a 9 (or more) C lipophilic gp. such as 10 (or more) C fatty acid gps.; in partic. adducts of sorbitan (1 mole) with ethylene oxide (20 moles), subsequently esterified with palmitic acid.

The enzyme is used for diagnostic tests. 10.12.76 as 656063. (12pp047)

NODA D16 81420Y/46 =DS 2659-878
Creatine amidino hydrolase prodn. - by cultivation of Flavobacterium U:188 or Corynebacterium U:41
NODA INST SCI RES 01.04.76-DT-659878 (05.04.75-JA-040793)
*B04 (01.03.79) *DT2659-878 C07g-07/02*

Prepn. of creatinamidinohydrolase comprises propagation of Flavobacterium U-188 (ATCC 31200, FERM-P 2922) or Corynebacterium U-41, (ATCC 31201, FERM-P 2923), in the presence of creatinine, creatin or their mixts., (0.01-5 wt./vol.%), and the usual nutrients (esp. K phosphates $MgSO_4$, $FeCl_3$, $MnSO_4$, sugar and vitamins), at pH 7-9 and temps. 25-37° for 10-48 hrs. under aerobic conditions; and isolation of the new enzyme from the culture medium using established techniques.

The prod. is useful for creatin determinations. 1.4.76 as 659878. C.i.p. 2614114. (8pp047)

TERE- ★ D16 18133B/10 ★DT 2736-684
Rheumatoid factor immuno-agglutination detection - using particles coupled with protein A and sensitised with antibody Fc-fragment
TECH RES AFFILIATES 16.08.77-DT-736684
B04 R16 (01.03.79) G01n-33/16

In a new process for detecting a specified antigen possibly present in a biological specimen of animal origin, (a) the specimen is mixed with a suspension of a particle which is coupled with protein A and which is sensitised with an antibody specific for the antigen in such a way that the Fe fragment of the antibody is bound to the protein A coupled with the particle; and (b), in the presence of the specified antigen, an agglutination occurs. Suspensions of particles coupled with protein A and sensitised with antibodies as indicated above are new and claimed.

Used for detection and quantitative determination (e.g. by serial dilution techniques) of biologically significant macromolecules, esp. rheumatoid factors, e.g. in the diagnosis of disease. The determination can readily be carried out by relatively unqualified personnel. 16.8.77 as 736684 (29pp280).

BUCM ★ D16 18245B/10 ★DT 2738-172
Large horizontal container drive - by friction wheel pairs rotated by central wheel
BUCHERGUYER MASCH 24.08.77-DT-738172
Q63 (01.03.79) C12b-01 F16d-13/04

A drive system for large horizontal containers, e.g. fermentation and/or juice extn. tanks, is based on drive wheels which are in friction contact with the periphery of the container. The drive wheels are pref. supported on springs and are themselves revolved by a central wheel in a stationary bearing.

Large containers require such a slow speed that conventional reduction gears become very expensive. The new drive is a simple and inexpensive solution for containers of large diameter. 24.8.77 as 738172 (12pp39).

SPOF ★ D16 18306B/10 ★DT 2833-071
Microbial cell aggregate with penicillin acylase activity - consists of cells chemically bonded to carrier cells, useful for 6-amino-penicillanic acid prodn.
SPOFA SPOFENE FARM NP 11.08.77-CS-005321
B04 (01.03.79) C07b-29/02 C07d-499/42 C12k-03

Microbial cell aggregates with high penicillin acylose content consist of enzyme contg. microorganism cells chemically bonded, to each other or to cells of different organisms, by a bi- or polyvalent aldehyde, esp. glutaraldehyde.

The carrier cells can be native and/or physically, chemically or biologically modified cells, or their insoluble fragments of various morphology. These cells or fragment are pref. in the form of fibres, spheres, ellipsoids etc. of dimension 1-1000 um, or in forms prepd. by spontaneous or artificial autolysis or by other cell-destruction processes.

Used for converting penicillins, esp. benzylpenicillin, to 6-APA. The aggregates are stable and can be used in enzyme reactors for a long time. They have good sedimentation and mechanical properties and allow easy sepn. of the prod. The carriers, e.g. waste cells from brewing or antibiotics mfr. are much cheaper than those previously proposed. 27.7.78 as 833071 (50pp1251).

KATS/ ★ D16 18337B/10 ★DT 2835-878
Oligosaccharide prepd. from Enterobacteriaceae - reinforces glucosteroid mediated enzyme induction, useful for treating leukaemia systemic collagenosis and infectious diseases
KATSUNUMA N 16.08.77-JA-098110
B04 (01.03.79) A61k-35/74 C12d-13

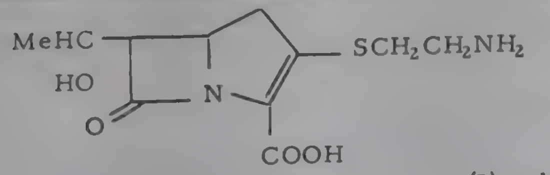
A new oligosaccharide (I) contains N-acetylneuraminic acid, pentose, hexose and a prim. amine (I) is prepd. by cultivating members of the family Enterobacteriaceae, esp. E. coli, Erwinia aroideae and carotovora; Serratia marcescens; Proteus mirabilis, vulgaris or morganii or Aerobacter aerogenes.

The bacteria are cultivated conventionally, then the cells destroyed, their contents extrd. and the extract deproteinised then adsorbed onto active charcoal. The charcoal is then eluted, pref. with 3:7 0.2N aq. KOH-acetone, or 10-30% aq. ethanol. The eluate can be further purified by gel filtration of 'Sephadex G', 'Sephadex LH-20' or 'Polystyrene gel G3005' (RTM), or by chromatography on DEAE-cellulose or 'Dowex' (RTM) cation exchange resin.

(I) reinforces the glucocorticoid-mediated induction of enzymes, esp. tyrosine-and leucine-transaminase, so is useful for treating lymphatic leukaemia, systemic collagenosis or infection diseases. 16.8.78 as 835878 (18pp).

MERI ★ D16 18387B/10 ★EP -----931
Thienamycin prepn. from an N-acyl or N-di:acyl deriv. - by treatment with penicillin amidohydrolase
MERCK & CO INC 19.08.77-US-825883
B02 (07.03.79) C07b-29/02 C07d-487/04
D/S: BE, CH, DT, FR, GB, NL, SW.

Prepn. of thienamycin of formula (I) comprises contacting a corresp. N-acyl or N-diacyl cpd. with a penicillin amidohydrolase.



(I)

Method provides a new route to (I), which is a broad-spectrum antibacterial described in U.S. 3950357, useful when the acyl or diacyl derivs. have been formed in the isolation of (I) from fermentation media (see EP 0000932).

18.8.78 as 100699 (12pp1248).

ISR: DT2652678; US3260653; NL7800958.

CANC- ★ D16 18392B/10 ★EP -----938

Macromolecular complexes of biological origin - useful as selective anticancer agents, immunosuppressives, antiparasitics etc.

INST OF CANCER RES 22.08.77-GB-035173

B04 (07.03.79) A61k-37/02 A61k-39 C07g-07

D/S: CH, DT, FR, GB, SW.

Macromolecular complex (I) comprises a first and a second macromolecular moiety joined by a link derived from a linking agent having ⩾2 reactive gps. One of these reactive gps. is an activated acyl gp., and isocyanate, an isothiocyanate, an iminoether, an iminothioether or an activated halogen atom attached to an aromatic ring and being capable of reacting with one of the macromolecules from which the moieties are derived. Reaction is under conditions where the remaining reactive gp.(s), which is, or are, each an aziridine ring, an aryl azido gp. or a halogen in an α-position relative to a CO or 2 C removed from a heteroatom carrying a lone pair of electrons, is, or are, unreactive.

(I) are prepd. stepwise, so that when macromolecules of biological origin are used, activity is not lost or destroyed. Esp. useful with peptides, proteins esp. antigens, antibodies, enzymes, lipoproteins, serum albumins, toxins and toxoids, which may be linked to antibodies, i.e. immunoglobulins to give site sensitive prods., which may be used at lower doses.

(I) may be used in mammals for various purposes, esp. as anticancer agents of improved selectivity, as improved immunosuppressive agents and as antiparasitic agents e.g. with T.cruzi linked to diphtheria toxin. (I) may also be used as reagents in enzyme-linked immunosorbent assay reactions, with an antibody to the substance being detected labelled by linking to an enzyme suitable for catalysing a readily monitored reaction.

21.8.78 as 100717 (37pp1248)

ISR: FR2334954; 1 Journal Reference.

PFIZ ★ D16 18411B/10 ★EP -----991

Antibacterial antibiotic 47444 - obtd. by cultivation of Nocardia argentinensis ATCC 31306 in nutrient medium

PFIZER INC 18.08.77-US-825563

B04 (07.03.79) A61k-35/66 C07g-11 C12d-09/14

D/S: BE, DT, FR, GB, LU, NL.

(A) Antibiotic or mixt. of antibiotics is new when obtd. by cultivation of Nocardia argentinensis Huang nov. sp. ATCC 31306 in a nutrient medium.

(B) Antibiotic 47444 is such a new antibiotic. It is soluble in MeOH, EtOH, $CHCl_3$, CH_2Cl_2, Me_2CO, MeiBuCO and Et acetate; it is insoluble in heptane and water; it has an U.V. absorption maximum in MeOH at 265 nm with $E^{1\%}_{1cm}$ 320. Its molecular formula is $C_{28}H_{37}NO_8$; it has $[\alpha]_D$ + 49° (C, 1% in MeOH); and it has a characteristic i.r. spectrum.

Antibiotic 47444 is an antibacterial, esp. effective against S. aureus. Dose: 0.5-1 g. daily. Mixts. contg. 47444 may be used similarly.

16.8.78. as 300252 (24pp1248).

I.S.R:- No relevant documents have been disclosed.

ANVR ★ D16 18465B/10 ★FR 2393-004

Alkaloid extracted from Alangium vitiense - used for treatment of malignant lymphoid proliferation

AGENCE NAT VALORISATION 18.05.77-FR-015384

B04 (02.02.79) A61k-35/78 C07g-05

A new alkaloid, extracted from Alangium vitiense has the following properties: m.pt. 200°C (Kofler), empirical formula $C_{28}H_{35}N_3O_3$, α^{20}_D = -40° (pyridine, c = 1%), UV spectrum, MeOHmax. 278-280 log ξ (4.10) 0.1 HCl max. 275 log ξ (4.07), 0.1 NaOH 280-85 log ξ (4.0%) 305(3.93), 320-323(3.65), ^{13}C NMR in DMSO δ (ppm) = 10.91; 22.48; 22.87; 28.98; 35.87; 36.52; 37.56; 38.47-39.38-40.29 (DMSO) 41.26; 48.48; 51.99; 55.95; 61.01; 62.19; 101.64; 106.12; 109.57; 109.96; 110.87; 115.16; 126.73; 127.70; 128.81; 129.85; 138.42; 144.73; 145.70; 149.99.

In its prepn., Bark of Alangium Vitiense is finely chopped, treated in a basic medium, then with a water-immiscible solvent. The organic phase is extracted with acid and the aq. extract basified. This is then extracted into a solvent, total alkaloids recovered and the new alkaloid purified by chromatography.

The alkaloid may be administered i.v. at a dosage of 50 mg./m² per day for 5 days, this treatment being repeated at 3-week intervals. 18.5.77 as 015384. (9pp520)

TOKD D16 83998X/45 = GB 1538-932

Pseudomonas aeruginosa bacterial cell protein vaccine compsn. - active against P aeruginosa-infectious disease of mink and pyocyanic cow mammitis

UNIVERSITY TOKYO 12.03.75-JA-029104

*B04 C03 (24.01.79) *J51106-714 +A61k-35/74*

Therapeutic method of treating mink infection and bovine mastitis caused by Pseudomonas aeruginosa comprises administering prepn. contg. mainly protein and small amt of lipid and sugar in dose 0.3-50 μg/kg to cattle and 5-500 μg/kg to mink. Pref. prepn. is injected into nipples durin the dry season, or any part of the whole body, including the udder, intramuscularly. Pref. pref. additionally contains antibiotics such as Panimycin, Colistin, Gentamycin Polymixin, Carbenicillin, Sulbenicillin and Ceptialothin.

Esp. useful for treatment of hosts which are physiologically immature in immune response or in cases where host is being treated by administration of medicines which deteriorate their immune mechanisms. 11.2.76 as 00532 (6pp931)

TOKD D16 83999X/45 = GB 1538-93

Pseudomonas aeruginosa bacterial cell protein vaccine compsn. active against infectious diseases of mink

UNIVERSITY TOKYO 12.03.75-JA-029105

*B04 C03 (24.01.79) *J51106-715 A61k-39/02 +A61k-35/74*

Mink infection caused by Pseudomonas aeruginosa is prevented by immunising mink with a dose of 50-4000μg/kg (w.r.t. OEP content) of prophylactic prepn. of vaccine contg. as effective component protein and a small amt. of lipid and sugar derived from P. aeuroginosa. Pref. prepn. is injected into any part of whole body twice at an interval of 2-3 weeks in admixture with potassium alum or Freund's Incomplete Adjuvant.

Esp. useful where hosts are physiologically immature in immune response or in cases when hosts are being trea-ted by administration of medicines which deteriorate the immune protective mechanisms. 11.2.76 as 005321 (4pp)

BRIM D16 03938Y/03 = GB 1541-47

Antibiotic figaroic acid complex - prepd. by cultivation o Streptosphorangium ATCC 31129 has antibacterial, antitumou antiprotozoal and antifungal activity

BRISTOL MYERS CO 27.06.75-US-590994

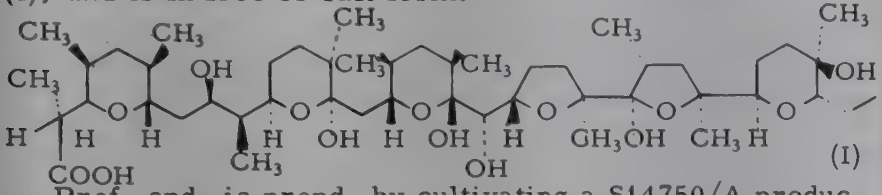
*B04 C03 (D22) (07.03.79) *BE-843-517 C12d-09/16*

Figaroic acid complexes (I) are produced by cultivating a figaroic acid producing strain or Streptosporangium sp. an aq. nutrient medium contg. assimilable N and C sources under submerged aerobic conditions until a substanti amt. of (I) is formed.

Pref. the strain is ATCC 31129. Pref. (I) is recovere from the culture medium. (I) is an antibiotic with an anti racycline structure. 28.6.76 as 026833 (12pp974)

SANO D16 72183X/39 =GB 1541-485
Antibiotic S14750/A and salts prepd. from streptomyces hygroscopicus - active against fungi and Gram positive bacterial for use in veterinary medicine
SANDOZ LTD 11.03.75-CH-003056
*B04 C03 (07.03.79) *BE-839-355 A61k-31/35 C07d-309/06 C07d-407/14 +C07d-307/12*

Compound S14750/A is new. It is believed to be of formula (I), and is in free or salt form.



(I)

Pref. cpd. is prepd. by cultivating a S14750/A producing strain of Actinomyces sp. Streptomyces hygroscopicus (Jansen 1931) Waksman and Henrici, 1948, in contact with a nutrient medium. The strain is esp. NRRL 8077.

Cpds. are antibacterials, antifungals, anticoccidials, and feed additives for ruminants to improve feed utilisation 9. 3. 76 as 009314 (12pp974)

KITA D16 63373Y/36 =GB 1541-512
Coccidiostatic and antibacterial antibiotic asukamycin - produced by e.g. Streptomyces nodosus
KITASATO RES INST (KYOW) 03.08.76-JA-092427 (27.02.76-JA-020119)
*B04 (07.03.79) *DT2708-493 C12d-09/16 +C07d-303/46*

New antibiotic cpd. AM-1042 (asukamycin) has the following properties. Cpd. contains C, H, N and O; shows absorption in the UV spectrum at about 315 nm and about 265nm (shoulder) in 90 vol. % methanol soln; has a specific rotation $[a]^{20}_{D}$ of +175 to +184° in chloroform at a concn. of 0.5g/100 mls.

AM-1042 shows activity against Gram +ve bacteria and Eimeria. Prepn. may be by cultivating Streptomyces nodosus subsp. asukaensis. 25. 2. 77 as 008149 (+3. 8. 76-JA-092426) (15pp910)

UTIR- D16 66822X/36 =GB 1541-594
Stable odour-free organic fertilizer - by homogenizing, drying and removing foreign bodies from household refuse
R UTI R SRL 16.04.75-IT-049144
*C04 +P41 (07.03.79) *BE-840-735 C05f-09*

A fertiliser is produced from city solid wastes in which the starting material, comprising an organic prod. which is a fraction from city solid waste comprising organic prods. and mould, is first homogenised, then classified to separate non-organic foreign bodies, and is dried.

After drying, organic material is pref. freed from remaining non-organic relatively heavy bodies, and then subjected to redn. and/or pulverisation, then sterilised in an autoclave under pressure.

Prod. can be directly pelletised and sacked or mixed with different chemical prods. then pelletised and sacked. Degree of moisture of pord. is $<20\%$ total and it can be stored for a very long time without deterioration. 7. 4. 76 as 014132 (2pp931)

IRRM ★ D16 18510B/10 ★GB 2003-029
Fowl cholera vaccine against Pasteurella multocida - comprises an avirulent strain esp. M-3-G (aTCC no. 31416)
ISRAEL INST FOR RES DEV 24.08.77-IL-052815
B04 C03 (07.03.79) A61k-39/02

A live vaccine (I) against Pasteurella multicoda, for application of poultry by injection per os or as aerosol, contains an attenuated non-virulent genetically stable strains of Pasteurella multocida.

(I) may be used as vaccine against Foul Cholera. The attenuated strain are completely avirulent to turkeys and chicken; they are genetically stable and do not revert to original virulence; do not cause death when applied to birds harbouring Mycoplasma spp. The immunity lasts longer than prior art vaccines and is effective against homologous as well as heterologous strains. 23. 8. 78 as 034352 (6pp)

KANF ★ D16 18537B/10 ★GB 2003-135
Purification of macromomycin antitumour antibiotic - by adsorption, acid, alkali, heat or UV light treatment
KANEGAFUCHI CHEM KK (ZAID) 25.08.77-JA-102322
A97 B04 (07.03.79) C12d-09/16

Prodn. of an anti-tumour antibiotic, macromomycin comprises subjecting a macromomycin contg. soln. (I) to a purification treatment by adsorption with an adsorbent resin, acid treatment, alkali treatment, heat treatment or ultraviolet high treatment. A pure macromomycin of homogenous quality may then be recovered.

Used for the prodn. of macromomycin of low toxicity and uniform quality. It is possible to separate macromomycin from auromomycin impossible by prior art techniques. 3. 8. 78 as 032160 (5pp954)

ASAH ★ D16 18677B/10 ★J5 4011-088
Sepn. of organic cpd. adsorbed on protein - by contacting aq. protein soln. with porous copolymer obtd. from e.g. di:vinyl and styrene, to adsorb organic cpd.
ASAHI CHEMICAL IND KK 29.06.77-JA-076487
A97 J01 (26.01.79) A61k-35/16 B01d-53/02

The method comprises contacting aq. soln. contg. protein on which organic cpd. is adsorbed with porous copolymer of 300-9000 Å in average pore dia. obtd. by copolymerising monomer mixt. consisting of 2-100 wt. % of crosslinking polymeric monomer (e. g. divinylbenzene) and <98 wt. % monovinyl monomer (e. g. styrene or alkylstyrene), and thus separating the adsorbed organic cpd. by adsorption.

Organic cpd. adsorbed on protein can be rapidly and efficiently sepd. by adsorption in aq. soon. without causing insolubilisation of protein, change in electrophoretic pattern of acrylamide, lowering of enzymatic activity, etc. 29.6.77. as 076487 (8pp50)

ASAH ★ D16 18762B/10 ★J5 4011-233
Detoxicant for treating renal and hepatic diseases - comprises aminoacid fermented fungi as effective component
ASAHI CHEMICAL IND KK 28.06.77-JA-076060
B04 (27.01.79) A61k-35/74

Detoxicant for oral administration comprises aminoacid fermented fungi or break-down substance of the fungi body or freeze-dried fungi body as effective component. As aminoacid fermentation fungi there may be used e.g. Corynebacterium glutamicum (ATCC 21065) or Microbacterium ammoniafirm (ATCC 15354). The detoxicant may be administered as a powder, tablet, syrup, etc. 28.6.77. as 076060 (4pp)

TORA ★ D16 18786B/10 ★J5 4011-288
Fibre fixing microbial mycelium - is prepd. by absorbing mycelium by contacting with an anionic exchange fibre
TORAY INDS INC 29.06.77-JA-076461
A91 F01 (27.01.79) C07g-07/02 C12c-11 C12k-01 C12k-03 D01f-01

A fibre (I) fixing microbial mycerium (II), on basic anion exchange fibre (III) is produced by adsorbing (II) in contact of (III) contg. $>1.0\%$ of water with a soln. suspending (II).

As (III), water-insol. fibre, on which anion exchange radiclas are linking by covalent bond, is pref. used. Examples of (III) are (a) vinyl alcohol fibre treated by sulphoaldehyde or acetalation with halogen aldehyde, and then introduction of anion exchange radical, (b) condensn. prod. between phenol and formaldehyde, having anion exchange radical, etc. Pref. (III) is composed of poly(monovinyl aromatic cpd) (IV) and reinforcing polymer (V). As (IV), styrene, α-methyl styrene, vinyl toluene, etc. are used, and as (V), polyester, polyamide and poly-α-olefin, are used.

(I) has high content of (II) and can be produced inexpensively. The enzyme-activity of (I) is high and (I) is easily regenerated. The handling of (I) is easy. 29.6.77. as 076461 (7pp42)

TORA ★ D16 18787B/10 ★J5 4011-289
Culturing cells by fixing onto semipermeable membrane - and passing culture medium over its reverse side
TORAY INDS INC 28.06.77-JA-076941
A97 (27.01.79) C12b-01 C12k-09

Process for culture of cells which comprises fixing cells over semipermeable membrane of radius of curvature >1mm comprising hydrophobic water-contg. material having 20-90% of water content, flowing culture liquor over opposite side of at least of cells-fixed surface of the mambrance to carry out culture of cells.

Process enables propagation of cells in high density or the propagation of cells that may not propagate in usual manner effectively. Culture medium may be fed either continuously or intermittently. 28.6.77. as 076941 (5pp69)

TEIJ ★ D16 18789B/10 ★J5 4011-291
High purity urokinase prodn. - by treating soln. with di:ethylaminoethyl cellulose under specified electrical conductivity conditions then with carrier to bind urokinase
TEIJIN KK 24.06.77-JA-075418
B04 (27.01.79) C07g-07/02

Prodn. of high purity of urokinase comprises treating urokinase-contg. aq. soln. of pH 6.5-9 and electric conductivity of 3-10 m℧ with diethylaminoethyl cellulose, collecting unadsorbed fractions, lowering electric conductivity to 4-8 m℧ with water, contacting the mixt. with insoluble carrier that bond chemically with heparin or its alkali metal salt to fix the urokinase upon the insoluble carrier, and then eluating the urokinase with aq. soln. salt of electric conductivity of 18-50 m℧.

Carrier pref. comprises substrate of high mol. wt. polysaccharides.

Urokinase, plasminogen-activating enzyme may be separated out and taking out conveniently and in high purity. Urokinase is fibrin dissolving enzyme present in human urine, blood and organs and prepn. of urokinase is known as remedy for thrombus. 24.6.77. as 075418 (6pp69)

TANA ★ D16 18790B/10 ★J5 4011-292
Fixed enzyme-activating substance - contained in gel grid of modified polysaccharide
TANABE PHARMACEUTICAL KK 24.06.77-JA-075877
A96 B04 (27.01.79) C07g-07/02

Fixed enzyme-activating substance where enzyme-activating substance is included in gel grid of polysaccharides contg. > 10 W/W% of sulphuric acid gp. in molecular structure and the polysaccharide gel contains ammonium ion, metal ion of mol. wt. >24, cpd. has >2 basic functional gps. in molecular structure or organic solvent miscible with water. 24.6.77. as 075877 (20pp69)

TOYJ ★ D16 18791B/10 ★J5 4011-295
Protease recovery from peptide-forming reaction - by adding a water-immiscible organic solvent, and sepg. the protease from the aq. layer
TOYO SODA KK (SAGA) 23.05.77-JA-058829
(27.01.79) C07g-07/02

The method comprises (1) practising the peptide-forming reaction between (I) the amino acid or the peptide, of which the amino gp. is protected and (II) the amino acid or the peptide, of which the carboxyl gp. is protected, in aq. medium in the presence of protease, (2) pptg. the reaction prod. or the adduct of the reaction prod. and the cpd. (a) or (b), (3) opt. sepg. the ppte. from the liq., (4) adding the organic solvent which is not miscible with water, (5) sepg. the whole mixt. into two layers, (6) sepg. them and (7) recovering the protease from the aq. layer.

The amino acid is protected with (benzyl)oxycarbonyl benzoyl or aromatic sulphonyl or sulphinyl, and the carboxyl gp. is protected with lower alkoxy or benzhydryoxy. Almost all kinds of enzymes which can be used for synthetising peptide can be recovered, pref. mettaloprotease such as prolisin, thermolisin, collagenase, etc. Pref. (I) as aspartic acid or glutamic acid; and (II) is monoaminomonocarboxylic acid which does not have other functional gps. such as phenylalanine. The organic solvent is ethylacetate or lower chlorohydrocarbon used in an amt. of 10-100 pts. wt. per pt. wt. of ppte. and 2-20 pts. wt. per pt. wt. of aq. medium 23.5.77. as 058829 (15pp5)

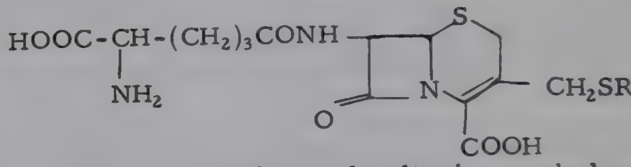
KYOW ★ D16 18792B/10 ★J5 4011-296
Fermentative prepn. of uricase for uric acid determn. - by culturing Enterobacter bacteria in nutritive medium
KYOWA FERMENTATION KK 25.06.77-JA-075694
B04 J04 (27.01.79) C12d-13/10

Method comprises culturing the bacteria, which belong to Enterobacter and can produce uricase, in nutritive medium and collecting the uricase produced by the bacteria. Obtd. uricase has optimum pH ca. 9.5, optimum temp. at 40°C and IEP at pH ca. 4.6. Uric acid is added to the culture medium before the end of the logarithmic phase to increase the amt. of uricase produced in an amt. of >0.5 g/dl. The culture is practiced by shaking culture or submerged culture at 20-40 (25-30)°C at pH 5.0-9.5 (7.0-9.0).

Uricase is used for determination of uric acid. 25.6.77. as 075694 (6pp5)

YAMA ★ D16 18793B/10 ★J5 4011-298
3-Heterocyclic thiomethyl cephalosporin prodn. - by inoculating and culturing cephalosporin antibiotics-producing fungi, adding heterocyclic thiol and opt. removing cpd. from culture mix.
YAMANOUCHI PHARM KK 24.06.77-JA-075313
B02 C02 (27.01.79) C12d-09/06 C12d-13

Prodn. of 3-heterocyclic thiomethylcephalosporins of formula (I) (where R is heterocyclic cpd. residue)



(I)

comprises inosculating and culturing cephalosporins antibiotics-producing fungi in culture medium contg. nutrients, adding heterocyclic thiol of formula RSH or its salts, or a cpd. that may change into the heterocyclic thiol during culture, to yield selectively a 3-heterocyclic thiomethylcephalosporin cpd. with 3-side chain structure-corresp. to the heterocyclic thiol, and opt. subjecting the substance to D-amino acid oxidn. enzyme treatment and removing the cpd. from the culture mixt. by a known process.

Cephalosporins antibiotics-producing fungi is e.g. Emericellopsis mirabilis (IFO 9040) Emericellopsis synnematicola (IFO 8519), etc.

(I) are useful as antibiotics and in the synthesis of semisynthetic antibiotics. 24.6.77. as 075313 (17pp69)

AGEN ★ D16 18927B/10 ★J5 4011-877
Device for contacting e.g. oxygen with a liq. - is used for fermentation in biological incubation
AGENCY OF IND SCI TECH 30.06.77-JA-078366
(29.01.79) B01j-01 C12b-01/10

Device contacts a gas with a liquid and is used for fermentation with biological incubation. Gas such as O_2 is rapidly dissolved into the liquid, without requiring an energy, except for a pump.

A nozzle assembly is disposed in an upper space of an inner pipe disposed in a reactor tank consisting of a double vertical pipe. Through a pump and piping to the nozzle assembly, the liquid is jetted down through the nozzle assembly to involve the gas fed from the outside, thus solving the gas. The liquid is drained from the lower end of the pipe to an outer pipe, in which the pipe is inserted, and then ascended in the pipe, while the gas residual in the liquid is further molten. 30.6.77. as 078366 (3pp26)

BIOT- D16 79285S/50 =J7 9002-788
Microbiological decomposition of petroleum - esp sea contamination
BIOTEKNIKA INT INC (BIO -) 03.06.70-US-043226
*H04 Q42 (13.02.79) *DT2127-577 C02b-09/02 C12k-01 +C02c-05/10*

Novel mutant strains of non-pathogenic, hydrocarbon-converting microorganisms were derived from Candida parapsilosis, Candida tropicalis, Candida utilitis, Aureobasidium pullulans, Myrothecium verrucaria, Cladosporium cladosporioides, Saccharomyces cerevisial, Aspergillus sp., Rhodoforula sp., Candida lipolytica, Micrococcus colpogenes, Nocardia corallina, Nocardia globerula N-39, Nocardia globerula N-45, Nocandia opaca, Nocardia rubra and Nocardia paraffinae (registered under Nos. ATCC 20246-20255, 21502 and 21504-21509 respectively).

They are pref. mixed with a cellulosic material, a nitrogen source and a phosphorus source. They effectively decompose petroleum patches on sea or beaches, and can also be used for tank cleaning. The products have nutrient value useful for sea life. 3.6.71 as 038972 (+3.6.70-US-043226) C02b-9/02; C02c-5/10; C121c-1/00; E02b-15/04 (13.2.79) BIOTEKNIKA INT. INC. (11pp)(J47000692)

PFIZ D16 72489W/44 =NL-159-436

Antibacterial antibiotics from Actinoplanes auranticolor ATCC 31011 - for growth promotion of non-ruminants and control of dysentery in pigs

PFIZER INC 17.01.75-US-541800 (16.04.74-US-461298)
*B04 C03 (D13) (15.02.79) *BE-827-935 A23k-01/17 A61k-35/74 C12d-09/14*

Mixed antibiotic prepn., having synergistic activity and contg. antibiotic 35.763, is produced by culturing the microorganism Actinoplanes auranticolor ATCC 31011 which forms, in addn. to 30.763 the antibiotics 36.926, 37.277 and 37.932, and also small amts. of other antibiotics. The mixt. is sepd. from the culture and opt. ≥1 of the cpds. 36.926, 37.277 and 37.932 isolated.

Specifically the antibiotic mixt. prepn. comprises 36.926 and/or 35.763 mixed with 37.277 and/or 37.932; or antibiotics 36.926, 37.277 or 37.932 or their mixt. are added to animal feed or water. 15.4.75. as 004453 (13pp913)

BIOL= ★ D16 19471B/10 ★SU-602-540

Culture fluid microorganisms concentration monitor - has pump connected to optical measurement cell and to fermenter

BIOL INSTR DES BUR (ASMI=) 06.02.74-SU-381138 (06.02.74-SU-995414)
R16 (17.03.78) C12b-01/08 G01n-33

The unit determining the concentration of microorganisms in the culture fluid improves accuracy of the optical measurements. The suction end of the pump is connected to the measuring cell, while the delivery is connected to the fermenter. The pipe discharging the foamed fluid is fitted in the top of the gas separating vessel, and is connected to an additional pump evacuating the foamed fluid from the vessel for transfer to the fermenter.

The pumps feed the culture medium from the lower part of the fermenter into the gas separating vessel. The culture medium spills out through the drain pipe into the evacuated space of the gas separating vessel with gas bubbles and foam returned to the fermenter by a pump. The microbiological medium free of gas and foam forms a settling column outside the overflow leading to the optical measurement cell.

Sidorov, E.A., Markov, V.A., and Litvinenko, L.A. Bul. 14/15.4.78. 6.2.74. as 995414(3pp89)

OILC= ★ D16 19472B/10 ★SU-602-541

Microorganisms culture automatic control - sets flow rate of coolant to match intake of air

OIL CHEM AUTOM RES 22.03.76-SU-336857
(14.03.78) C12b-01/08

Improved efficiency in the automatic control of microorganisms growth is due to adjustment of coolant flow rate as a function of air input. The ratio of air fed for aeration and of the coolant flow rate characterises the temp. dependence of the nutrient in the unit.

The physiological development of microorganisms is reflected in intensified breathing which causes increased heat evolution and a higher concentration of CO_2. The latter is detected by the gas analyser and leads to a larger output signal of the controller enduring the rise of air flow rate into the unit. The signal from the air flow transducer is transmitted to the ratio controller whose output drives [illegible] of the coolant. The pressure in the unit is stabilised with a controller acting on the servo ensuring the exhaust of the spent gases.

Khanukaev, Ya.A., Lubentsov, V.F. Bul. 14/15.4.78. 22.3.76. as 336857(2pp89)

VOTE= ★ D16 19473B/10 ★SU-602-542

Mfr. of dried yeast for alcoholic fermentation of molasses - includes final aerobic growing of sepd. biomass in specified nutrient to increase storability

VORON TECHN INST 28.12.72-SU-863176
(17.03.78) C12c-11/18

Dried yeast, useful in the mfr. of alcohol from sugar-beet molasses, is obtd. by culturing yeast cells anaerobically in medium contg. above molasses with subsequent biomass sepn. evapn. and pressing. High quality stable dried yeast is obtd. if the yeast culture, before pressing, in aerated for 6-7hrs. in molasses contg. medium at 31-32°C at a relative growth (per hr.) increase of 1.14 ± 0.05 and gradually increasing pH from 4.7-4.8 to 5.8-6.0. The inorganic salt content of the nutrient is adjusted to give final prod. contg. N 1.4-1.5% and P_2O_5 0.8-0.9%. The prod. can be stored for 6 months.

Derkanosov, N.I. Bul. 14/15.4.78. 28.12.72. as 863176 (2pp938)

HETO ★ D16 19474B/10 ★SU-602-543

Aminoacid and lower peptide mixt. prepn. - includes purificn. of yeast autolysate with anion and cation exchangers, for dietary use

HETEROORG CPDS AS USSR 17.01.75-SU-099762
B04 C03 (17.03.78) A23j-01/18 C12d-13/06

Mixt. of amino acids and lower peptides, useful in food mfr. agriculture and medicine is prepd. by autolysis of yeast at elevated temp. in the presence of plasmolyser and steriliser and subsequent prod. sepn. To obtain balanced aminoacid mixt. of high nutritive value for dietary use, the yeast autolysis is conducted over 15-20hrs. period, and the resulting autolysate is purified by passing first through an anion exchanger (OH^- - form) and then through a cation exchanger (H^+ - form).

Belikov, V.M., Gordienko, S.V., Latov, V.K. et al. Bul. 14/15.4.78. 17.1.75. as 099762 (5pp938)

ALMI= ★ D16 19475B/10 ★SU-602-544

Microbiological glucoamylase prodn. - by two/stage culturing of Endomycopsis strain yeast using aliphatic alcohol and starch soln.

AS LATV MICROBIOL 08.08.74-SU-049886
(17.03.78) C12d-13/10

Microbial glucoamylase enzyme is prepd. by culturing Endomycopsis strain yeast cells in culture medium contg. aliphatic alcohol as C source with subsequent biomass sepn. and enzyme extn. The activity of the final prod. is increased if the starting nutrient contains 1.5-5% of the alcohol and uses aeration in a continuous process. The nutrient is circulated at 0.3-1.4 hr^{-1} rate and the process includes final addn. of starch soln. to induce enzyme biosynthesis and to reduce the process period by 30-40%

Beker, M.E., Dreimane, M.A., Apsite, A.F. et al. Bul. 14/15.4.78. 8.8.74. as 049886(3pp938)

MOSU ★ D16 19476B/10 ★SU-602-545

Aspergillus ochraceus HP 19 strain - used as producer of high activity extracellular fungal coagulase

MOSCOW LOMONOSOV UNIV 02.09.75-SU-172986
(16.03.78) C12d-13/10

The high activity extra cellular coagulase is biosynthesised by Aspergillus ochraceus HP-1g fungal strain during subsurface incubation in a culture medium of a simple compsn.

The producer strain is described as new. Its optimal growth is at 26-28°C using casein hydrolysate as N source and glucose as C source with addn. of usual mineral salts. Peptone can be used also.

The max. activity of coagulase is obtd. after 48-72 hrs. culturing (480 units/ml). The enzyme is pptd. from the culture medium, after sepg. the biomass, using acetone, ethanol or ammonium sulphate.

Egorov, N.S., Ushakova, V.I., Klechkovskaya, V.V. Bul. 14/15.4.78. 2.9.75. as 172986(3pp938)

MAGA= ★ D16 19477B/10 ★SU -602-546
Reprocessing alcohol fermentation waste from wine prodn. - including alcohol and tartaric acid removal
MAGARACH 23.07.75-SU-159683
(17.03.78) C12g-01/02

The reprocessing of alcoholic fermentation residue from wine prodn. includes removal of residual alcohol by distillation after diluting with neutralised recirculated aq. waste. After removal of yeast and other impurities by filtration, the filtrate is acidified sepd. and then neutralised with lime, and the pptd. calcium tartrate is recovered The resulting aq. waste is recirculated for the dilution of the starting material. The method reduces waste water pollution and improves recovery of alcohol and tartaric acid from alcoholic fermentation waste.

Nechaeva, P.F., Troitskii, A.S., Razuvaev, N.I. et al. Bul. 14/15.4.78. 23.7.75. as 159683(2pp938)

DAGE= ★ D16 19479B/10 ★SU -602-549
Neisseria meningitidis selective culturing medium - contg. additional peptone, agar-agar, thiamine and includes tris-buffer and magnesium sulphate
DAGESTAN NUTRIENT 11.11.73-SU-969242
B04 (17.03.78) C12k-01/06

The nutrient medium for culturing Neisseria meningitidis microbial strain sepd. from the pathological material has high selectivity and can be prepd. in a dry form cheaply using a simple procedure.

The nutrient compsn. comprises (in wt.%): peptone 24.0-24.3; potassium chloride 0.2-0.218; sodium chloride 14.0-14.6; ammonium chloride 3.0-3.04; glutamic acid 3.0-3.16; cystine 0.02-0.029; thiamine 0.011-0.012; tris-buffer 4.2-4.62; glucose 12.0-12.1; magnesium sulphate 1.4-1.46; agar-agar 23.4-36.5; distilled water the rest. The nutrient has pH 7.4.

Gadzhieva, G.R. Bul. 14/15.4.78. 11.11.73. as 969242 (2pp938)

PROT= ★ D16 19480B/10 ★SU -602-550
Microorganisms continuous disintegrator - has top and bottom flanged housings with disc seats controlling working slot
PROTEIN BIOSYNTH 30.12.74-SU-092098
(17.03.78) C12k-01/10

Simplified disintegrator of microorganisms and reliable long-term operation are ensured by using flanged top and bottom housings mounted to shift vertically. The two housings have disc seats, the lower one featuring a projection forming a working slot with the outside surface of the top seat. The top housing has a channel for the inlet of the suspension into the working slot, and a shock absorber is fitted between the lower housing and the seat. After setting the limit pressure in the valve, the metering pump is switched on for continuous feeding of the cell suspension into the mixer and receiver. The rise of level in the mixer causes the float of the level sensor to open the admission of gas for bubbling through the suspension. After the gas saturation, the material is transferred to the distintegrator where pressure and decompression are adjusted by screws. Increase of pressure deflects the lower seat on the shock absorber leaving a working gap between the seats. The decompression breaks up the cells before the suspension reaches the accumulating vessel for discharging.

Rakitin, V. Yu., Fedorov, I.K., Grigoryan, A.N. Bul 14/15.4.78. 30.12.74. as 092098 (2pp89)

PROT= ★ D16 19481B/10 ★SU -602-551
Microorganisms disintegrator unit - comprises additional ring projection on lower housing disc seat
PROTEIN BIOSYNTH 03.12.75-SU-195053
(17.03.78) C12k-01/10

Simplified control of the disintegration of microorganisms is ensured by providing an additional projection on the seat in the lower housing. The working gap is bound by the main and additional ring projections and by the surface of the disc seat in the top housing. The latter seat has several recesses communicating with the channel feeding the suspension. The recesses distribute the suspension in the working gap, while the processed suspension is drained off by the channel in the seat of the lower housing.

The cell suspension saturated with gas is fed to the disintegrator, where it first reaches the seat of the top housing to flow into the working gap through the radial channels. The disintegration of the microorganisms is due to decompression, and the treated suspension passes the channel of the bottom housing and flows towards the collector.

Rakitin, V.Yu., Fedorov, I.K. and Grigoryan, A.N. Bul. 14/15.4.78. 3.12.75. as 195053 (3pp89)

GELF/ ★ D16 19482B/10 ★SU -602-552
Vegetable raw material hydrolysate neutralisation - with pyrolysed mixt. of calcium carbonate and hydrolysed lignin, used in alcohcl and feed-grade yeast mfr.
GELFAND E D 01.08.76-SU-389123
C03 (D13) (15.03.78) C13k-01/04

The reagent for the neutralisation of vegetable raw material hydrolysate is useful in the alcoholic fermentation and yeast biomass prodn. for use in animal feed. The reagenit is prepd. by mixing 15-50 pts. wt. calcium carbonate with 50-85 pts. wt. hydrolysed lignin, and subjecting the mixt. to pyrolysis at 600-1000°C for 30-80 mins. The use of this reagent gives neutralised hydrolysate with low calcium sulphate and organic impurities content, and it accelerates the process.

Gelfand, E.D., Bogdanovich, N.I., Kamennyi, V.I. Bul. 14/15.4.78. 1.8.76. as 389123 (2pp938)

ABHE= ★ D16 19594B/10 ★SU -602-756
Thermally sensitive material dryer - has drying chamber placed above inert heat carrier filled chamber to intensify drying process
AS BELO HEAT MASS 30.07.74-SU-047201
J07 Q76 (21.03.78) F26b-05/16 F26b-17/10

The dryer can be used for material such as micro-biological pastes and solns. and can be employed in medical, chemical and food inds. It contains a drying chamber and a chamber filled with fluidised inert dispersing heat carrier layer. The chambers are connected to one another by a capilliary porous wicks.

To intensify the drying process, the drying chamber is situated above the inert heat carrier filled chamber. The two chambers are separated by a gas removal box with a perforated lower wall. The wick is made as a system of branched rods, mounted in the chamber drying zone to replaceable solid body.

Likov, M.V., Antonishin, N.V., Mikhailik, V.D et al. Bul. 14/15.4.78. 30.7.74. as 047201 (4pp110)

CRIM= ★ D16 19606B/10 ★SU -602-813
Grape juice sampler - uses hydraulically operated curved tubes removing and crushing pulp from hopper, and having run/off for juice
CRIMEA GLAVPRODINTO 08.12.75-SU-198451
R16 (27.03.78) G01n-01/20

Sampler for use in viticulture takes a sample of pulp from a hopper and if operated further squeezes it and provides a quantity of clean juice, removed by vacuum pump. The sampler has no rotating parts or packings, and this prevents contamination.

The sampler consists of a hydraulically-suspended harness, integral with a pivot, on which two levers, driven downwards by hydraulic cylinders, swing to push down into the hopper of pulp, the quater-circle curved cylinder, with chamfered entry, and similar curved tube, carrying an end plug and a short stem with crusher having conical holes. The tube rides over rigidly mounted inner tube.

Abramov, I.D., Bul. 14/15.4.78. 8.12.75. as 198451 (3pp140)

BIOC= ★ D16 19618B/10 ★SU -602-85
Champagne quality control analysis - by gas chromatographi qualitative analysis of organic solvent extracted and dried ester(s and alcohol derivs.
BIOCHEM INST 17.12.75-SU-300610
R16 (31.03.78) G01n-33/14

Champagne quality control involves gas chromatographic qualitative analysis of the ether-pentane extracted and

dried product, for increased accuracy. The control analysis is carried out to determine quality of champagne by content of ethyl linoleate from 0.5-2.0mg/l. cis- and trans- isomers of farnesol in qty. 0.1-1.8mg/l, total iso-butanol and iso-pentanol 180-200mg/l. ethyl acetate 15-25mg/l, total high boiling esters 10-20mg/l. total highly volatile esters 100-115mg/l and di-acetyl 0.2-0.8mg/l.
Rodopulo, A.K., Egorov, I.A., Kormakova, T.A. et al
Bul. 14/15.4.78. 17.11.75. as 300610(2pp129)

ZHGE/ ★ D16 19620B/10 ★SU-602-861
Protein biosynthesis in embryonic tissue cytoplasm determn. - includes enzymatic hydrolysis of tissue, solvent extn., acylation, staining, fixing and micro photometry
ZHGENTI TS YA 19.02.76-SU-326174
R16 (31.03.78) G01n-33/16

The biosynthesis of protein in the cytoplasm of embryonic tissue is determined, quantitative assessment of residual ribonucleic acids in hydrolysed, extd. and stained sections of tissue cell substructures.

In order to obtain data on the number of relaying ribosomes, the sections are treated with trypsin after rybonuclease hydrolysis and an appraisal of the functional activity of the ribosomes is conducted through the residual amt. of RNA and of protein.
Zhgenti, Ts. Ya. Bul. 14/15.4.78. 19.2.76. as 326174 (2pp835)

FARH D16 11415X/07 =SU-603-347
Moenomycin fermentation prodn. - in the presence of polyoxyethylene surface-active agents
HOECHST AG 23.07.74-DT-435260
*A97 B04 (17.03.78) *DT2435-260 C12d-09/14*

In the prodn. of moenomycin (I) by microbiological fermentation of (I)-forming streptomycetes (pref. Streptomyces ghanaensis ATCC 14672, bambergiensis ATCC 13879. S ederensis ATCC 15304 or S. geysiriensis ATCC 15303) in the presence of fats, a surfactant of the formula: $R-O\left(CH_2-CH_2-O\right)_nH$ (II) (where R is a satd. or mono-unsatd. 8-18C hydrocarbon residue opt. carrying an OH group; and n is 18-30) is added to the fermentation medium (II) pref. has mol. wt. 1000-1500 cloud point 73-79, hydroxyl no. 39-78, and HLB value 16-18. Addition of (II) to the medium promotes the formation of (I). The fermentation is carried out under aerobic conditions in an aq. medium contg. inorganic salts, a conventional carbon source, an animal, vegetable or synthetic fat, a usual nitrogen source, and (II). Fermentation is continued until (I) antibiotic activity is maximal, then (I) is isolated. The total fat content of the medium is generally 0.1-16 (pref. 2-5) wt.%.
Dietrich, J., Mratsek, M., Sukach, D. et al. Bul. 14/15.4.78. 14.7.75. as 153965(2pp)

SHEL D16 13096X/08 =SU-603-348
Prodn of edible protein biomass - by simultaneous culture of hydrocarbon-utilizing and urea-positive microorganisms
SHELL INT RES MIJ BV 12.08.74-GB-035435
*C03 H04 (D13 H08) (17.03.78) *BE-832-105 +C12k-01*

In a process for preparing microorganisms, an edible biomass is produced by culturing one or more hydrocarbon utilising microorganisms under aerobic conditions in a liq. medium contg. urea and essential mineral salts in the presence of a hydrocarbon and in the presence of one or more non-hydrocarbon-utilising urease-positive microorganisms which are capable of metabolising the organic substances formed by the growing hydrocarbon-utilising microorganisms.

The biomass isolated by harvesting the cultured cells can be dried and used as a protein foodstuff or food supplement for humans and animals.
Barnes, L.J., Harwood, J.H., Harrison, D.E.F. et al.
Bul. 14/15.4.78. 6.8.75. as 162190 (3pp)

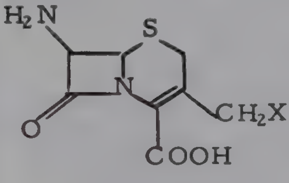
FISH= ★ D16 19640B/10 ★SU-603-367
Agaroid prepn. from Black sea phyllophora algae - using two/stage extn. at controlled pH to increase yield and quality
AZOV-BLACK SEA FISH (SEAF) 30.12.76-SU-436727
(29.03.78) A23l-01/04

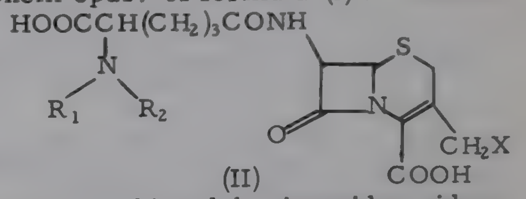
Prepn. of gelatinous agaroid from Black Sea Phyllophora nervosa red-algae is based on two-stage extn. at controlled pH to give increased yield and quality. The first extn uses 0.4-0.8% agaroid soln. at pH 7.2-7.8 and 95-100°C for 1-1.5 hrs. Acid is then added to give second extn. at pH 7.0-7.3 and 85-90°C for 0.5-1 hr.

The basic air-dry algae is treated at 80-85°C with 2-3% alkali soln. for 2 hrs. before extraction stages. During the first extn. the agaroid in soln. quickly swells into the algae but the presence of polysaccharides and the pH control prevent inclusion of pigment and protein cpds. into the extract. In the second stage, the high mol. polysaccharide fraction diffuses into soln. Their presence increases gelatinous props by 30-40% and yield by over 20% compared to one-stage method.
Boidyk, N.M., Zambriborsh, R.F., Mukulich, D.V. et al
Bul. 15/25.4.78. 30.12.76. as 436727(2pp114)

MEIJ D16 86955Y/49 =US 4141-790
(7)-Amino-cephem derivs. prodn. - as intermediates for cephalosporin antibiotics, by microbiological (N)-deacylation
MEIJI SEIKA KAISHA 24.05.76-JA-059198
*B02 (27.02.79) *DT2723-463 C12d-09/04*

Prepn. of 7-amino-cephem cpds. of formula (I) is claimed.


(I)


(II)

In (I) X is OH, acetoxy or a thiosulphuric acid residue.

Method comprises causing the culture of a cephalosporin C acylase-producing strain of a microorganism, esp. a mould, fungus or the secondary prepn. therefrom, to act on cpds. (II) in the presence of an aq. medium.

In (II), R_1 is H, lower alkanoyl, arylalkanoyl, alkoxycarbonyl, lower haloalkoxycarbonyl or (un)substd. aroyl, N-arylcarbamoyl or (un)substd. aryl, R_2 is H, or together with $\geq NR_1$ is phthalimido. Metal salts or salts with organic based of (II) may be used. 12.5.77 as 796194 (8pp).

UNVO ★ D16 19916B/10 ★US 4141-857
Support matrix prepn. for immobilising enzymes - comprises reacting inorganic support with poly:amine then with bi:functional monomer
UOP INC 17.10.77-US-842993 (18.02.75-US-550898)
A97 B04 (27.02.79) B01j-31/06

The matrix is made by treating an inorganic porous support (I) of pore dia. 100-55000 Å and surface area 1-500m^2/g. with a soln. of a water-sol. polyamine (II). Unabsorbed (II) is removed then the support treated with a soln. contg. molar excess glutaraldehyde (III) or toluenediisocyanate (IV), so that it reacts with (II). Unreacted (III) or (IV) is then removed and the treated matrix recovered.

(I) is γ-alumina, SiO_2, ZrO_2, SiO_2-MgO, SiO_2-ZrO_2-Al_2O_3 or SiO_2-Al_2O_3. (II) is $NH_2(CH_2CH_2NH)_nH$ ($n = 1-5$), hexamethylenediamine or polyethylenediamine. Treatment is esp. at 5-60°C and 3-50 moles (III) or (IV) are used per mole (II).

Enzymes are covalently bonded and the compsns. are mechanically stronger and more stable than known conjugates. The matrix is prepd. simply from relatively expensive reagents. 17.10.77 as 842993 (+ 30.4.76 - US - 681987) (14pp1251).

OCTR- D16 88782X/48 =US 4141-970
Treating pregnant mammals with bacterial endotoxins - to impart passive immunity to progeny towards esp. gastrointestinal infections
OCTROPA INT OCTROOI (UNIL) 07.05.75-GB-019161
*B04 C03 (27.02.79) *BE-841-614 A61k-39/02*

A pregnant mammal whose young acquire via the colostrum and gastrointestinal (g.i.) wall, at least part of their possible immunity to g.i. disorders caused by infection with pathogenic bacteria, is treated by administering both orally and parenterally to the mammal effective amt. of endotoxins of >1 pathogenic bacteria strains, free from the living pathogenic organisms.

The oral administration is carried out repeatedly during the gestation period. The parenteral administration is carried out at least once towards the end of the gestation period. High antibody activity is ensured during the period of colostrum.

The resistance of the new born mammalian young to gastro-intestinal infections is increased. 16.12.77 as 861303 (+ 7.5.76; 7.4.77 - US - 684368, 785550) (6pp910)

AJIN D16 69160W/42 =US 4141-972
Purine nucleoside-5-phosphate-2 or 3 -mono or di-phosphates - antitumour agents prepd from donor and acceptor nucleotides by incubation with a pyrophosphoryl transferase
SANRAKU-OCEAN KK 16.12.74-JA-143546 (29.03.74-JA-034625)
*B02 (27.02.79) *DT2510-327 A61k-31/70 C07h-19/20*

A purine nuceloside -5'-(mono, di or tri)phosphate 3'(2')-diphosphate and the corresp. purine nucleoside 5'-(di or tri)phosphate 3'(2')-monophosphate and their salts are provided and are chosen from pApp, ppApp; pppApp; pGpp; pIpp; ppIpp; pppIpp; p(CH_2)ppApp; pppGp; ppIp; pppIp; p(CH_2)ppAp and p(CH_2)ppGp.

A is adenosine; G is guanosine; I is ionosine; and p and p(CH_2)p stand for phosphate residue and methylene phosphate residue, respectively.

The cpds. are useful for treating leukemia (L1210 in mice) and other forms of cancer and inhibiting or preventing thrombus formation. 27.4.77 as 791276 Div. ex 4059487 (+ 18.3.75 - US - 559462) (18pp910).

BIOT- ★ D16 19964B/10 ★US 4141-973
Ultra pure, high molecular wt. hyaluronic acid - is non-antigenic and used as synthetic aq. humour and synovial fluid, as nerve tissue and wound protector and drug carrier
BIOTRICS INC 25.10.77-US-844833 (17.10.75-US-623333)
B04 (27.02.79) A61k-31/70 C07g-03

Sterile, pyrogen-free protein-free, non-antigenic hyaluronic acid (I) has an average mol. wt. of $\geq$750000; protein content below <0.5% wt.; UV absorption of a 1% soln. of the Na salt is <3.0 at 257nm and <2.0 at 280nm. Kinematic viscosity of a 1% of the Na salt in physiological buffer is >1000 centistokes, a molar optical rotation of a 0.1-0.2% soln. of the Na salt in physiological buffer is $<-11 \times 10^3$ degree-cm^2/mol. at 220nm. When 1ml. of 1% soln. of the Na salt in physiological buffer is used to replace about half of the vitreous humour of an owl monkey's eye, no more than 200 white blood cells per mm^2 of aq. humour infiltrate the eye.

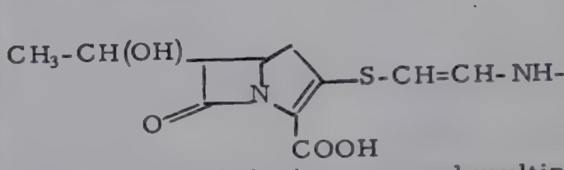
Used in treatment of inflammation and prevention of excess fibrous tissue formation, adhesion of scars, as synthetic synovial fluid in joints, treatment of arthritic conditions, as a carrier for drugs, as a nerve tissue protector, for preventing adhesion between mesothelial pericardial and pleural sheets, as a replacement for aq. humour in eye surgery, as a protective layer over skin wounds to prevent fluid loss and access of bacteria. 25.10.77 as 844833 (9pp916).

ICIL D16 82986Y/47 =US 4141-974
Aureolic acid type cpds. used as animal growth promoters - and microbiological prodn. of mithramycins
IMPERIAL CHEM INDS LTD 19.05.76-GB-020675
*B04 C03 +P32 (27.02.79) *BE-854-821 A61k-31/71*

The growth rate or the efficiency of the utilisation of foodstuffs in meat-producing animals is improved by orally administering an effective amt. of an aureolic acid gp. cpd. chosen from (1) mithramycins A, B or C; (2) aburamycins A, B, C or D; (3) olivomycins A, B, C or D; (4) variamycin; or (5) the ammonium, alkali(ne earth) metal and transition metal salts complexes and chelates of one of (1)-(4) or their mixts. 27.4.77 as 791189 (7pp910).

MERI ★ D16 19970B/10 ★US 4141-986
Broad spectrum antibiotics obtd. from Streptomyces flavogriseus - which contain a beta-lactam structure and sulphur and nitrogen outside the ring system
MERCK & CO INC 05.08.77-US-823258 (28.04.76-US-680831)
B04 (27.02.79) A61k-31/40 C07d-487/04

Two isomeric antibiotics, both of formula (I) and their salts are new.



(I)

One is called antibiotic 890A_2 and has 100 MHz nmr signals having chemical shifts in ppm. and multiplicities indicated as 1.33 (d, J=6, CH_3-CH); 2.07 (S, CH_3, C=O); 3-15 (m, C-CH_2-C), 3.69 (m, $\geq$CH-C=O), ~4.3 ($\geq$CHN and $\geq$CH-OH), 6.09 and 7.12 (doublets, J = 13.5, S-CH=CH-N).

The other is called antibiotic 890 A_5 and has 100MHz nmr resonance signals having chemical shifts in ppm. and multiplicities indicated as 1.29 (d, J = 6.2, CH_3-CH); 2.05 (S, CH_3C=O), 3.09 (d of d C-CH_2-C); 3.42 (d of d, J = 5.0, 3.0 >CH-C=O); 4-16 (m, >CH-N and >CH-OH); 6.00 and 7.11 (doublets, J = 13.8, S-CH=CH-N).

They are active against Gran-negative and Gram-positive bacteria. 5.8.77 as 823258 (19pp476).

See Also

D13 DS 2033386
D13 J5 4011250
D13 J5 4011264
D13 J5 4011290
D15 SU 602751
D13 DS 2802789
D13 J5 4011262
D13 J5 4011265
D13 US 4141791
D17 US 4141842
D13 GB 1541511
D13 J5 4011263
D13 J5 4011281
D14 J5 4014375
D22 NL 159299

D17: SUGAR; STARCH

MASW ★ D17 18235B/10 ★DT 2738-110
Flat-bottom sugar centrifuge - with shell of uniform wall thickness and shrunk reinforcing rings near perforations
MASCH BUCKAU WOLF R 24.08.77-DT-738110
P41 (01.03.79) B04b-07/18

Flat bottom centrifuge with a pendulum suspension for the sepn. of white sugar and syrup has perforations in the shell near the bottom and near the cover for the outflow of the syrup. The thin-walled shell of uniform wall thickness which is not machined on the inside or outside carries shrunk-on reinforcement rings at a distance of 10-15% of the shell dia. from the bottom and from the cover.

This results in much lower mfg. costs than for a bowl with thicker walls near the bottom and the cover which has to be machined out of the solid; it also is a more durable design and has a greater capacity. 24.8.77 as 738110 (21pp39).

JAOR ★ D17 18770B/10 ★J5 4011-245
Sugar soln. treatment - by passing through strong acidic cation exchange resin , weak-medium basic anion exchange resin, weakly acid anion exchange resin, etc.
JAPAN ORGANO KK 28.06.77-JA-076179
(27.01.79) C13d-03/14 C13f-01/14

A sugar soln. is passed in order through a bed of strongly acidic cation exchange resin, a bed of weakly - or medium-basic anion exchange resin, a bed of weakly acidic cation exchange resin, and through a mixed bed comprising strongly acidic cation exchange resin and strongly basic anion exchange resin. The soln. is passed through the weakly- or medium-basic anion exchange resin immediately after passing a regenerating soln. out. The weakly acidic cation exchange resin is regenerated by waste regeneration soln. for the strongly acidic cation exchange resin.

By placing a bed of weakly acidic cation exchange resin between weakly- or medium basic anion exchange and strongly acidic cation exchange- strongly basic anion exchange resin beds, sodium hydroxide eluted from the anion exchange resin is removed. This reduces the

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Telex: 267487

Your Ref:
Our Ref: Advice Note No. 16

27th April 1979

CENTRAL PATENTS INDEX

Material Despatched in Consignment of 27th April 1979

1: **ALERTING BULLETINS - COUNTRY ORDER**

20011B - 22033B	(B11)

EXAMINED JAPANESE APPLICATIONS

The advanced version of the alerting abstracts which will appear as the current version in Week B16 Alerting Bulletin (Country Order) are included in this week's consignment.

2: **ALERTING BULLETINS - CLASSIFIED**

17996B - 20010B	(B10)

3: **WEEKLY ALERTING BULLETIN INDEX BOOKLET**

20011B - 22033B	(B11)

4: **BASIC ABSTRACTS JOURNALS**

15967B - 17995B	(B09)

8: **PROFILE BOOKLETS**

11896B - 14157B	(B07)
14158B - 15966B	(B08)

PROFILE MANUAL CODE CARDS

Profile 2A
Section A

A2 137694 - 137701	(B06)
A10 137851 - 137880	(B06)

Profile 21A
Section H

13878	(B06)

Section J

19571 - 19575	(B06)

Section N

02609 - 02635	(B04)

9: **CS MICROFILM**

A Reel	12	08399B - 09776B	(B05)
A Reel	15	10427B - 11778B	(B06)
A Reel	17	12253B - 12477B	(B07)
B Reel	6	09906B - 10343B	(B06)
E Reel	7	08462B - 10175B	(B06)
E Reel	8	10178B - 10426B	(B06)
F Reel	5	09807B - 11842B	(B06)
G Reel	3	07738B - 10218B	(B06)
H Reel	3	08011B - 11624B	(B06)
J Reel	4	08002B - 10154B	(B06)

Section A Reel 16 delayed for technical reasons.

Directors: M. Hyams (Chair. & Man.) V. S. Hyams B. G. Paver A. B. Comfort P. T. Smith Executive Directors: A. M. Brooks M. J. Whiffin H. Birnbaum M. D. Dixon H. Winning I. S. Smith P. Norton S. J. Newey C. J. Page K. M. Walker M. E. Pope R. H. Hope T. M. Harvey

stallisation process is described in which a satd.

773119 (+22.1.75 - US - 542907) (8pp1379).

10: COMPLETE SPECIFICATION BOOKS

B No. 1098 15967B - 16258B (B09)
B No. 1099 16259B - 17995B (B09)
C No. 674 15967B - 17995B (B09)

12: CUMULATIVE ACCESSION NUMBER INDEX

A01 - A51 - 1978

13: COMPANY CODE CARDS

14158B - 15966B (B08)

17: MANUAL CODE CARDS

A 137670 - 138064 (B06)
B 14158B - 15966B (B08)
C 14158B - 15966B (B08)
D 22976 - 23026 (B06)
E 59560 - 59772 (B06)
F 30779 - 30851 (B06)
G 20334 - 20398 (B06)
H 13858 - 13889 (B06)
J 19530 - 19580 (B06)
K 06271 - 06280 (B06)
L 26974 - 27049 (B06)
M 33393 - 33472 (B06)

*19: PUNCH CODE CARDS

B 07989B - 09939B (427 cards) (B05)
C 07991B - 09937B (223 cards) (B05)
E 06051B - 07973B (B04)

21: PUNCH CODE SEARCH TAPES

B00002A - 93177A (A51)
C00002A - 93178A (A51)

NOTE: RIN Subscribers will receive this material plus screen card data for weeks A01 - A51.

*Item 19: The following delayed cards are included in this week's consignment:

Section B: 82985A(2), 84038A(3), 56916Y.
Section C: 82868A(4), 82876A(2), 84023A, 84042A(2).
Section E: 81000A(2), 81111A(2).

Section E excludes punch cards for 06462 06470B, 06472B, 06473B, 06474B, 06475B, 06476B, 06486B, 06501B.

The above excluded cards represent incomplete GB specifications, cards for which will be issued later.

23: WEEKLY SDI TAPE

20011B - 22033B (B1
C2119B - C4700B (B1

RIN SERVICE

Screen Cards

B Nos. 001 - 025 (BC
C Nos. 001 - 014 (BC

WEEKLY INDEXES

Delayed

Sheets and Cards

Delayed

CS MICROFILM BY COUNTRY

CANADA	1656-1657	OPI	20.3.7
CANADA	1660-1663	OPI	20.3.7
FR NEW LAW	2079-2084	OPI	9.2.7
DAS	566- 567	OPI	5.4.7
DT OLS	3555-3562	OPI	5.4.7
NETH	973- 976	OPI	5.4.7
UK OLD LAW	1106-1107	OPI	4.4.7

CA 1654-1655 and 1658-1659 delayed for technical reasons.

exchange resin beds, sodium hydroxide eluted from the anion exchange resin is removed. This reduces the

SCHEDULE OF FUTURE DESPATCHES

Due to a recent computer failure resulting in disruption of our production schedules, and to allow for the recent Easter Holidays, the despatch of materials will be a few days later than the usual Wednesday date for the next few weeks, but will return to normal by Wednesday 16th May. We apologise in advance for any inconvenience that these delays may cause to subscribers. The schedule for the next three weeks is given below:

B11 - Friday, 27th April
B12 - Thursday, 3rd May
B13 - Thursday, 10th May
B14 - Wednesday, 16th May

DELAYS TO UNITED STATES PATENTS

A table summarising the effects of the delays due to printing difficulties at the U.S. Patent Office is given below:

Week	Patents Published	Delay in publication of patents
B08	15 August 1978	12 Weeks
	13 February 1979	No delay
B09	20 February 1979	No delay
B10	27 February 1979	No delay
B11	22 August 1978	12 Weeks
	6 March 1979	No delay
B12	13 March 1979	No delay
B13	5 September 1978	13 Weeks
*B14	20 March 1979	
B15	27 March 1979	No delay
	3 April 1979	No delay
B16	29 August 1978	13 Weeks

*Delayed due to customs strike in London.
1 Week of printing delay backlog remains to be published.

process is described in which a satd.

773119 (+22.1.75 - US - 542907) (8pp1379).

exchange resin beds, sodium hydroxide eluted from the anion exchange resin is removed. This reduces the amt. of waste soln. for washing or eliminates the washing step for the preceding process. 28.6.77. as 076179 (6pp43)

NISO ★ D17 18771B/10 ★J5 4011-247
Starch treated with oils and fats - to improve gel characteristics in highly conc. starch paste
NIPPON SHOKUHIN KAK KK 25.06.77-JA-075736
(27.01.79) C13l-01/08

Process comprises adding 0.005-10 wt.% of oil and fat with >130 iodine value to starch to be adsorbed uniformly onto the starch. The oils and fats are e.g. of both plant or animal origin like sunflower (sic) oil, linseed oil, and sardine oil, which is e.g. added directly, in emulsion or in soln., to starch e.g. corn starch and wheat starch.

The processed starch shows improved gel characteristics in highly conc. starch paste, and exhibits improved viscoelasticity characteristics and ageing resistance, being obtd. without heating. In an example, emulsion of 2 pts. sardine oil in 200 pts. water was added to 2500 pts. suspension contg. 40% corn starch, stirred and dehydrated by centrifuge. The cake was dried and the prod. with 13% moisture content showed increased gel strength, and improved stability. 25.6.77. as 075736 (3pp43)

NISO ★ D17 18772B/10 ★J5 4011-248
Processed starch useful e.g. in paper industry - prepd. by mixing starch with fats and oils and metal (cpd.)
NIPPON SHOKUHIN KAK KK 25.06.77-JA-075737
(27.01.79) C13l-01/08

Prodn. of processed starch comprises admixing for adsorption with starch 0.005-10 wt.% of fats and oils, and 0.001-10 wt.% against the fat and oil as converted to single metal of magnesium, aluminium, calcium, iron, cobalt, copper, zinc or lead, (in)organic cpd. thereof.

The oil or fat is e.g. linseed oil, sunflower(sic) oil or sardine oil. The processed starch, utilising a small amt. of metals, has the oil and fat partic. strongly adhered on the surface and is mutually bonded among the particles. The starch can be converted to paste at lowered temp., and shows improved physical properties like viscoelasticity and adhesion, thus being useful in paper, corrugated board and other industries.

In an example, cobalt stearate 0.5 wt.% against soyabean oil was added to starch of 13% water content at a ratio of 5 pts. of oil + metal cpd. per 1000 pts., and stirred for 20 min. at room temp. The processed starch showed gel strength of 347 g and adhesion of 18.3 kg. 25.6.77. as 075737 (5pp43)

AJIN ★ D17 18773B/10 ★J5 4011-249
Non:agglomerated oil-processed starch giving lower viscosity slurry - produced in the presence of fatty acid mono:glyceride
AJINOMOTO KK 28.06.77-JA-076855
(27.01.79) C13l-01/08

An improved oil-processed starch (I), is produced by contact of starch (II) with oil (III) and fatty acid monoglyceride (IV), for fixation of (III) and (IV) in (II).

In the priorart, (I) is produced by the treatment of (II) with (III) contg. triglyceride. Adhesiveness of the product is so high that many lumps are formed during storage and the product adheres to the surface of appts. The viscosity of a slurry of this prod. is high and foam is generated from the slurry. These problems are overcome by use of (I) produced by the present method.

Typically (II) is corn starch, wheat starch, potato starch, tapioca starch or sweet potato starch; (III) is soy bean oil, rapeseed oil, olive oil, corn oil, palm oil, lard, tallow, sardine oil, whale oil or cuttle fish oil; (IV) is monoglyceride of lauric acid, myristic acid, stearic acid, oleic acid, linolic acid or linolenic acid; (II) may be contacted with (III) contg. (IV) or with (III) after or before the contact with (IV). The amt. of (III) mixed with (II) is 0.003-10% on (II) and the amt. of (IV)is 0.1-5 times that of (III). 28.6.77. as 076855 (6pp42)

STRK D17 01838S/01 =NL -159-286
Continuous crystallisation procedure
STORK-WERKSPOOR-SU (SUI - STRK) 26.09.69-NL-014625
*J01 (15.02.79) *BE-752-565 B01d-09/02 +C13f-01/02*

A crystallisation process is described in which a satd. salt soln. is seeded and the supersatd. soln. is fed into the lower end of a crystallisation vessel. The vessel is divided into compartments, each compartment communicating with its neighbouring compartment and each with an additional supply of seeding solution so that the required degree of supersaturation is maintained.

The pressure in the lowest compartment is controlled and the inclination of the vessel to the vertical determines the pressure gradient through the vessel. Each successive compartment is larger than the previous one to ensure that the same dwell time exists in each. Vapour and crystals are removed at the upper end of the vessel. 26.9.69. as 014625 (6pp1370)

STRK D17 01837S/01 =NL -159-437
Crystallizer for producing crystals from - a seeded saturated solution
STORK-WERKSPOOR-S (SUI - STRK) 26.09.69-NL-014626
*J01 (15.02.79) *BE-752-564 B01d-09/02 +C13f-01/02*

A crystallisation vessel comprises a cylinder into the lower end of which a satd. salt soln. is fed whilst, at the higher end, the crystals are removed. At the highest point there is a vacuum connection. A screw feeder coaxial with the cylinder rotates at such a speed that the coaxial velocity component is equal to the desired flow velocity thus reducing the turbulence but preventing the downward flow of agglomerates of crystals. The appts. can be tilted around a horizontal axis so that its inclination to the vertical and hence the pressure gradient in the solution can be varied. In an alternative form, the cylinder consists of two telescoping parts so that the length of the system and hence the dwell time of the solution can be varied. In a second alternative an extra tapered section is incorporated at the upper end. 26.9.69. as 014626 (7pp1370)

GENM D17 12381B/07 =US 4141-747
Large granule starch sepn. from native starch - by fractionation of starch slurry through several hydrocyclone separators and recycle of some streams
GENERAL MILLS CHEM (STAL) 04.08.77-US-822013
*G05 (27.02.79) *EP-----820 C13l-01/08 +C08l-03/02*

A large granule starch prod. is obtd. from native starch having a wide range particle size distribution. Starch is obtd. from wheat, barley or rye starches.

Prepn. is from initial aq. feed starch slurry at ≯15° Be from granular starch having particle size distribution contg. >20 wt.% starch, dry solids basis is 20-32 microns, 50-55 wt.% is 16-32 microns, and 45-50 wt.% is 2-16 microns, slurry is fed to first hydrocyclone separator to yield first aq. slurry at ≯22° Be and second aq. slurry at 8° Be; first aq. slurry is fed to second hydrocyclone separator to yield first recirculation stream of 3-5° Be and large granule stream of 18-22° Be; first recirculation stream is added to first hydrocyclone separator; second slurry from first separator is fed to third separator to yield by-product and second recirculation stream having ≯22° Be; second recirculation stream is fed to first separator; large granule stream is collected from second separator.

Starch prod. is used in carbonless copy paper coatings, obtd. in improved yield. 4.8.77 as 822013 (5pp931).

SCON D17 60645W/37 =US 4141-839
Multihydrocyclone for starch processing - has inserts with individual channels in common overflow and discharge chambers
SCHOLTEN-HONIG NV (SCFA) 23.02.74-DT-408767
*J01 P41 (27.02.79) *DT2408-767 +B01d-21/26 B01d-33/02*

A multihydrocyclone comprises parallel connected hydrocyclones having their overflow pipes and drains opening into respective headers.

The headers are each formed of an assembly of discharge conduits which terminate into collecting conduits having a throughf-low area proportional to the local amts. of flow. The discharge and collecting conduits are pref. constructed as recesses in parts of the cyclone housing, which is pref. cylindrical.

The flow velocity of effluent fractions is maintained at the desired level throughout, and thus prevents fouling, e.g. when processinf starch from potatoes. 28.2.77 as 773119 (+22.1.75 - US - 542907) (8pp1379).

MOBI ★ D17 19908B/10 ★US 4141-842
Oil recovery by waterflooding with thickened fluid - contg. xanthan gum, alcohol and alkali metal carbonate
MOBIL OIL CORP 28.03.77-US-782141
A97 E17 H01 Q49 (D16 E34) (27.02.79) E21b-43/22

Waterflooding of oil reservoirs having a temp. of >60°C is carried out using an aq. fluid contg. (a) a water-dispersible polysaccharide produced by the action of a Xanthomonas bacterium on a carbohydrate ("xanthan gum"); (b) 0.1-2.0 (pref. 0.1-1.0, esp. 0.1-0.5) vol. % of a 4-5C aliphatic alcohol; and (c) 0.001-0.1 (pref. 0.001-0.01, esp. 0.001-0.005)wt. % of an alkali metal carbonate.

The xanthan gum is suitably a commercial product of the "Kelzan" type. The alcohol is pref. n-butyl or isobutyl alcohol. The carbonate is pref. Na_2CO_3, used in an amt. sufficient to give a pH of 8.5-10.

The alcohol stabilises the xanthan gum against thermal degradation, and the alkali metal carbonate synergises this stabilising effect. 28.3.77 as 782141 (9pp367).

See Also

D15 EP---861

D18: SKINS; HIDES; LEATHER; TOBACCO

JOBB ★ D18 18063B/10 ★BE -871-561
Mfg. synthetic fibre sheet for cigarette filter tips - by spraying binding agent onto drum supported sheet
SOC JOB ANC ETAB BARDOU 23.12.77-FR-038957
A88 F04 P15 (A11) (15.02.79) A24c B01d D04h

A device is provided for applying a binding agent to a continuous sheet composed of short, synthetic fibres, e.g. of cellulose acetate, intended for the mfr. of filter tips for cigarettes. The sheet is drawn through a spray cabinet in which one side of the sheet is exposed to a fine spray of binding agent. The area exposed to spray is now an arc of a cylinder formed by the sheet lapping an arc of a support drum contacting the unsprayed face of the sheet. The sheet is held in contact with this arc by two jockey rollers on axes parallel to that of the support drum.

The effective arc of the support drum pref. extends into the spray cabinet chamber and deflectors are used to limit the sprayed area to a positively supported section of the sheet.

The delicate sheet is well supported as it travels through the spray cabinet. Previously, there was danger of tearing or snagging the sheet by friction against stationary parts of the cabinet. 26.10.78 as 871561 (8pp448)

DREE- D18 27742T/18 =DS 2050-539
Hydraulic setting - for counterpressure roller in a shaving machine according to material thickness
DREES & CO GMBH (BAY -) 15.10.70-DT-050539
*+P62 (01.03.79) *DT2050-539 C14b-01/06*

In a machine for trimming hides and skins to a uniform thickness, having a cutting cylinder and a counterpressure cylinder, the counterloading of the bearings is adjusted to suit the degree of deflection occurring during the passage of the leather.

Alongside the bearings of the cutter and counterpressure cylinders, and on their shafts, hydraulic tightening bearings exert counterloading to the deflection of the cylinders. The degree of counterloading is adjusted automatically by signals from a monitor which may act optically, pneumatically, etc. 15.10.70 as 050539. (4pp1045)

BRUG/ ★ D18 18469B/10 ★FR 2393-068
Shaped leather panels stiffened by internal coatings - of wax, rubber soln. or thermoplastic resin
BRUGUIERE H 03.06.77-FR-017015
A82 (02.02.79) C14b-01/56

Panels of natural or synthetic leather are shaped in high relief by close application as pliant damp hides, to the surface of a suitable three dimensional pattern and then allowed to dry until rigid. The hide is carefully removed from the pattern and then coated internally with a hardenable dressing of wax, rubber soln. or thermoplastic resin to stabilise the hollow shape. Opt. the external surface is also decorated with e.g. paint, flock, etc.

Esp. suitable for mfr. of miniature masks or models from e.g. sheep or goat hide. 3.6.77 as 017015. (7pp515)

YAMA/ ★ D18 18748B/10 ★J5 4011-201
Incombustible, flexible moulded prod. contg. waste leather - and porous inorganic insulating material, and coated with refractory material
YAMADA T 24.06.77-JA-075951
E37 (E16 E17) (27.01.79) C14b-07/04

The prod. is produced by adding to water thiourea, burnt alum, calcium silicate, ethylene glycol and soluble alkali metal salt of silicic acid to form a soln., admixing a soln. of phosphate, fluoride, halogenated hydrocarbon or halogenated hydrocarbon solvent with silicate oxide, borate and metal borate, adding pieces and powder of leather and porous inorg. material, admixing the two mixts., moulding, and coating layers, dots, hemispheres or triangular forms of refractory material resisting direct fire on the resulting moulding, opt. followed by coating heat-insulating material on the reverse side.

The prod. has air-penetrating, heat, insulating, fire proofing, and flexible properties, and resists flame of temp. ca. 750°C thus providing a new application for waste leather. 24.6.77. as 075951 (4pp43)

BRTA D18 20415U/15 =NL -159-448
Cigarette papers treated with sodium/potassium chlorates - - as burn control additives
BRIT AMER TOBACCO LTD (BRWI) 13.03.72-US-234210
*E34 F09 P15 (15.02.79) *US3722-515 D21h-05/16*

Cigarette has a paper covering, carrying thereon a pattern of rectangular areas of oxidation accelerator comprising $KClO_3$ and $NaClO_3$ in molar ratio of 2.6-10:1.

Specifically the treated atea of the cigarette paper is 3-40 cm^2, and the chlorate ion content of the treated area is 0.7-1.3 mg/cm^2. The oxidn. accelerator produces a smoke with considerably reduced amts. of undesirable components. The treated cigarettes can be kept under extremely moist conditions without loss of quality. 9.3.73. as 003392 (5pp913)

PLTE D18 32885Y/19 =US 4141-869
Heat sealing melt adhesive - comprising silicone cpd., pref. silicone oil, added to thermoplastic polymer e.g. copolyamide
PLATE BONN GES 14.10.75-DT-545874
*A81 F06 G03 (A23 A26) (27.02.79) *DT2545-874 +C08j-69/44 C08k-05/54 C08l-77*

Heat-sealing thermoplastic adhesive of thermoplastic polymer is prepd. which is resistant to washing and dry-cleaning.

Compsn. contains copolyamides contg. 80-20 wt. % lauric lactam and 20-80 wt. % $>$1 other polyamide forming material; copolyamides contg. 25-35 wt. % caprolactam, 20-40 wt. % lauric lactam, 9-25 wt. % hexamethylene diamine adipate and 10-40 wt. % HOOC-$(CH_2)_n$-COOH where n is 7-11; copolyamides contg. 30 wt. % caprolactam, 30-35 wt. % lauric lactam and 10-15 wt. % hexamethylene diamine adipate; copolyamides contg. 30 wt. % caprolactam, 30-35 wt. % lauric lactam, 15-35 wt. % HOOC-$(CH_2)_n$-COOH; copolyamides of polyamide-forming amide salt contg. $\geqslant$10C, polyamide omega-amino acid and opt. polyamide-forming lactam; or copolyamide of -forming amide salt contg. $>$ 10C, polyamide-forming lactam and crystallisable copolyesters based on terephthalic acid or diol.

Used for bonding substrates hydrophobically finished with silicone cpds., such as raincoat fabrics. 28.9.76 as 727512 (4pp931).

PHIM D18 53770Y/30 = US 4141-906
Smoking compsns. contg. beta-hydroxy esters or acids - giving fruity flavour that is preserved during processing and storage
PHILIP MORRIS INC 20.02.76-US-659691 (03.05.77-US-793400)
*E14 P15 (E13) (27.02.79) *US4036-237 + C07d-317/44*

Ethyl 2,2-dimethyl-3-hydroxy-3-(3',4'-methylenedioxyphenyl)-propionate and 2,2-dimethyl-3-hydroxy-3-(3',4'-methylenedixoyphenyl)propionic acid are new. The cpds. are used to release cherry or fruity flavour upon smoking. The flavours are kept and preserved on processing and during storage.

In parent patent, the smoking prod. contg. the β-hydroxy ester or acid of formula $R-CH(OH)CR_1R_2-COOR_3$ is claimed. In the formula, R is Ph, 4-methoxyphenyl, 3',4'-methylenedioxyphenyl, 4',5'-dimethoxyphenyl, 4'-methoxyphenyl or PhCH=CH-; R_{1-2} are each esp. Me or Et; and R_3 is H, alkali metal or 1-8C alkyl. 3.5.77 as 793400 Div. ex 4036237 (5pp982).

See Also

D12 GB 2003158 D15 J5 4010558

D2: DISINFECTANTS; DETERGENTS

D21 : DENTAL; TOILET PREPARATIONS

COLG ★ D21 18051B/10 ★BE -871-494

Deodorant stick based on alkali metal bi:carbonate - dispersed in soap based poly:alcohol gel

COLGATE PALMOLIVE CO 25.10.77-US-845503

E34 (15.02.79) A61k

Cosmetic deodorant stick comprises 0.1-3% min. and up to 70% max. of an alkali metal bi carbonate and 0-10% of a suspension agent dispersed in soap based gel comprising a polyalcohol opt. mixed with a monoalcohol, gelified by a small proportion of an alkali metal salt of a 14-20C satd. fatty acid.

Polyalcohols are pref. glycerol and lower alkyleneglycols, esp. propylene glycol. Alcohols are pref. lower and when mixts. are used the amt. $\leqslant$ 2.5 times that of the polyol. The gelling agent is pref. sodium stearate in an amt. of 2-15 wt.%. 24.10.78 as 871494 (19pp597)

BADI D21 69527S/44 =DS 2017-451

Cross-linked polycarboxylic acids, for thick - printing pastes

BASF AG 11.04.70-DT-017451

*A16 B07 F07 (A87 A96) (01.03.79) *DT2017-451 +C08f-220/02*

Crosslinked polycarboxylic acids are obtd. by pptn. polymerisation of olefinically unsatd. carboxylic acids, opt. together with $\leqslant$ 20% of other monoolefinically unsatd. monomers, and 1-5wt.%, referred to all monomers, divinyldioxane as crosslinking agent.

Water insol. prods. are obtd., whose neutralised prods. give thick gels in water even at very low concns. The gels are stable to saponification. They are highly suitable as thickeners for pharmaceuticals, cosmetics and printing inks for printing textiles without an adverse effect on the handle of the textiles. 11.4.70 as 017451. (4pp260)

DENE- ★ D21 18284B/10 ★DT 2738-693

Skin pores cleaning system - using film over magnet to collect magnetic particles with emulsion rubbed in pores

DEUTSCHE NEMECTRON 27.08.77-DT-738693

P31 (01.03.79) A61b-17/52 A61k-07/48

Foreign matter is removed from the pores of the human skin by rubbing an emulsion with magnetic or magnetisable particles in the skin and its pores. A permanent magnet is then applied to extract the magnetic particles together with the foreign matter. A flexible and porous film, clamped to the magnet, retains the particles with the foreign matter and is thrown away after use.

This saves the laborious cleaning of the magnet and makes the operation hygienically unobjectionable, even when different persons are treated in turn. 27.8.77 as 738693 (11pp39).

SHIS ★ D21 18297B/10 ★DT 2817-325

Make/up compsn. for use around eyes - contg. oils, waxes, pigments, usual additives, and in addn., ethyl ethoxy:ethyl cellulose and aromatic hydrocarbon resin (NL 28.2.79)

SHISEIDO KK 26.08.77-JA-102213

A96 (A18) (01.03.79) A61k-07/03

Make-compsns. contg. volatile and liq. oils, waxes and pigments are improved by addn. of (A) ethyl ethoxyethyl cellulose sol. in organic solvents or their mixts. with water; and/or (B) an aromatic hydrocarbon resin with softening temp. $\geqslant$120°C. The compsns. are pref. of the oily type, or consist of a water-in-oil emulsion. The content of (A) and (B) is pref. 1-15 wt.% w.r.t. the whole compsn..

The make-up compsns. adhere firmly to the skin and are resistant to moisture (sweat, tears) and to oils. 30.4.78 as 817325 (49pp70).

ALBR ★ D21 18420B/10 ★EP ---1-006

Surfactant N-carboxy-alkylated acylated ethylene di:amine cpds. - prepd. by reaction of imidazoline cpd. with halo alkanoic acid deriv.

ALBRIGHT & WILSON LTD 18.08.77-GB-034809

E16 (D25) (07.03.79) A61k-07/08 C07c-102 C07c-103/46 C11d-01/10

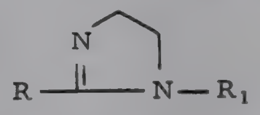
D/S: BE, CH, DT, FR, GB, LU, NL, SW.

(A) Cpds. of formula (I) are new:

$$R-CO-N(X)-CH_2CH_2NYZ \qquad (I)$$

(X is $-R_2-COO^{\ominus}$ or R_1;
each of Y and Z is $-R_2-COO^{\ominus}$ or R_1, or where X is $-R_2-COO^{\ominus}$ one of Y and Z may be H, provided that one and only one of X, Y and Z is R_1;
R_2 is 1-4 C opt. substd. alkylene;
R_1 is 1-4 C opt. substd. alk(en)yl;
R is a 6-22 C aliphatic gp.).

(B) A surfactant is prepd. by carbo-alkylating an imidazoline of formula (II) with an agent of formula (III)



(II)

$$Q-R_2-CO_2^{\ominus} \qquad (III)$$

(where R, R_1 and R_2 are as above; Q is halogen).

Reaction is at 40-90° C and pH is 7.0-11.5, and after 0.5 mole of (III) per mole of (II) has reacted the pH is maintained at 9.0-12.0 (pH measurements being made on a sample diluted to 10% solids).

(I) are surfactants with low skin irritancy and are partic. useful in hair shampoo compsns.

18.8.78 as 300300 (17pp949).

ISR: GB1352770; GB930296; 1 Journal Reference.

BOUD/ ★ D21 18440B/10 ★FR 2392-673

Tanning accelerating and sunburn preventing compsn. - contains one or two carotenoid(s), vitamin PP, copper sulphate and calcium carbonate

BOUDONIS E 31.05.77-FR-016812

B05 (02.02.79) A61k-31/07 A61k-33/34

The compsn. contains two (or alternatively only one) carotenoids, vitamin PP, $CuSO_4$ and $CaCO_3$. The carotenoids are, e.g. canthaxanthine and β-carotene.

A typical compsn. contains: (a) canthaxanthine 300 mg.; (b) β-carotene 50 mg.; (c) vitamin PP 100 mg.; (d) $CuSO_4$ 1 mg., and (e) $CaCO_3$ 50 mg.

The compsn. is prepd. by mixing the components in the order (d), (e), (c), (b), (a). Components (d) and (e) are finely powdered. 31.5.77 as 016812. (4pp903)

OREA D21 27146Y/16 =GB 1541-670

Cosmetics contg. polymers of unsatd. cpds. with hydroxylic cpds. - prepd. in aq. medium in presence of cerium ions

L'OREAL SA 15.10.75-LU-073587

*A96 (07.03.79) *BE-847-267 A61k-07*

Cosmetic compsn. contains in cosmetic vehicle $\geqslant$1 copolymer obtd. by copolymerising an unsatd. monomer with cpd contg. $\geqslant$1 -OH gp., in aq. medium and in the presence of cerium ions, the compsn. being free of cerium ions.

Pref. cerium ions are derived from cerium ammonium nitrate. Hydroxyl-contg. cpd. is pref. gelatine, cellulose, (modified) starch, collagen, a chitosan, nitrocellulose, a cellulose ether or cellulose carrying cationic gps. Unsatd. monomer is pref. derived from (meth)acrylic acid.

Compsns. are applied in the form of wave-setting lotions or in lacquers to the hair, to produce an excellent hold of the hairstyle and render the hair soft and glossy. Used as shampoos, rinses or dye compsns. 15.10.76 as

42951 (24pp931)

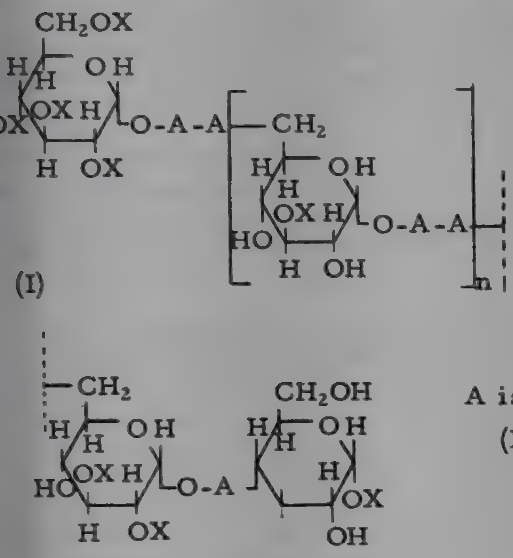
KANE ★ D21 18689B/10 ★J5 4011-108

Storage stable shampoo compsn. - contains anionic and nonionic surfactants and polysaccharide e.g. pullulan deriv.

KANEBO KK (SUMO) 27.06.77-JA-076838

A96 (27.01.79) A61k-07/06 C11d-03/37

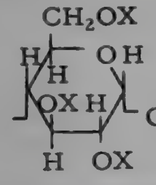
The shampoo compsns. comprise 0.2-7 wt.% of a polysaccharide cpd. of formula (I):



(I)

A is gp. of formula (II):-

(II)



where n is an integer of 40-200, X is a gp. $-R_1-N(R_2)R_3$ (where R_1 is 1-5C alkylene or 1-4C hydroxyalkylene and R_2 and R_3 are each H, 1-4C alkyl, phenyl or 1-4C alkyl-substd. phenyl and the ratio of number of X to that of H is 0.01-2) together with a shampoo base comprising anionic (e.g., soaps, sulphate ester salts of higher alcohol /polyalkylene glycol ether, sulphate esters of higher alcohols and their mixt.) and nonionic surfactant (e.g., alkylolamides of higher fatty acids, etc.) opt. in combination with an amphoteric surfactant (alkyl betaine type or imidazoline type, e.g., alkyldiaminoglycine hydrochlorate, etc.). (I) is e.g. pullulan-diethylaminoethylether (degree of polymerisation: 510; degree of substitution: 0.50).

The compsns. have excellent shelf life, affording flexible hair and preventing the hair from splitting. 27.6.77. as 076838 (6pp59)

LIOC ★ D21 18757B/10 ★J5 4011-223

Bathing compsn. - contg. inorganic reducing agent and azo-, quinoline-, tri:phenylmethane-, indigo- or natural dyestuff

LION DENTIFRICE KK 00.00.78-JA-003505 (04.04.74-JA-037367)

E24 (E33 E34) (27.01.79) A61k-07/50

Bathing compsn. contains (a) $\geqslant$1 inorganic reducing agent (I); and (b) azo gp., quinoline gp., triphenylmethane gp., indigo gp. or natural dyestuff as main dyestuff.

The compsn. shows dyestuff-stabilising action. Pref. (I) is Na-, Ca- and/or K bisulphite and/or Na thiosulphate.

A typical compsn. contained Na hydrogensulphite (1.40×10^{-5} mol/L), standard chlorine aq. soln. 1.0 ppm (1.43×10^{-5} mol/L) and yellow No. 4 dyestuff (0.6 mg/ 100 ml λ max = 428 mμ). 4.4.74. as 3505/78 Div. ex. 37367/74 (4pp69)

SHIS ★ D21 18765B/10 ★J5 4011-238

Solid cosmetics having good smoothness and adhesion - comprising mainly sericite powder of specified particle size and an oil component

SHISEIDO KK 27.06.77-JA-076347

(27.01.79) A61k-07/03

Solid cosmetic material is composed mainly of sericite powder of av. particle size of ca. 5u and max. particle size of<20 micron and an oil component at a ratio of 50-80%: 8-15%.

Cosmetics pref. further comprise 5-20% kaolin and/ increase impact resistance. The oil components are e.g. oils of plant, animal or mineral origin and synthetic oils e.g. liquid paraffin or lanolin. Perfumes may be added with antiseptics, UV absorbers and other additives e.g. vitamins, dyes and pigments.

Cosmetics show very good smoothness and increased adherence, produce novel feel in usage, while exhibiting the improved mouldability and impact resistance. 27.6.77. as 076347 (3pp43)

SEIK- ★ D21 18766B/10 ★J5 4011-239

Scurf- or dandruff-preventing agent - comprises a rosin obtd. by steam distilling turpentine collected from plants of the pine genera

SEIKEN KAGAKU KK 27.06.77-JA-075509

(27.01.79) A61k-07/06

The rosin is produced by steam-distilling turpentine collected from plants of pine genera to remove turpentine oil, and purifying the residue. The rosin is composed of abietic acid and other rosin acids, and is free from odour and toxicity. The rosin may be added to shampoos, hair tonics, or other hair dressing agents. The agent completely prevents scurf development and itching.

In an example, 60% ''Haitenol'' (RTM), 5% ''amizol'' (RTM) 15% ''Softazolin'' (RTM), 0.1% EDTA:2Na, 0.02% BHA, 0.3% perfume, 5% propylene glycol, 2% rosin and 9% polyoxyethylene oleyl ether, and balance water, were mixed to produce a scurf-preventing shampoo which showed improved scurf prevention effect. 27.6.77. as 075509 (3pp43)

SUNZ ★ D21 18767B/10 ★J5 4011-242

Dentifrice compsns. - contg. (N)-acyl glutamic acid salt and sodium acyl sarcosine or sodium (N)-acyl-(N)-methyl-beta alanine

SUNSTAR HAMIGAKI KK 24.06.77-JA-076020

E16 (E12) (27.01.79) A61k-07/22

Dentifrice compsns. are composed of an N-long-chain acyl glutamic acid salt (I) and sodium acyl sarcosine or sodium N-acyl-N-methyl-beta-alanine as foaming agent.

(I) is e.g. monosodium salt with a fatty acid residue of tallow constituting the long-chain acyl, which is lower in toxicity, and formulated at a ratio of 0.5-3%. Sodium sarcosin or the alanine deriv. is e.g. formulated at a ratio of e.g. $<$ 0.5% and 0.75%, respectively. The compsns. may be in the form of a powder or paste. Compsns. leave no abnormal taste.

In an example, 40% $CaCO_3$, 0.5% CMC, 0.5% kalaginan (sic) 13% glycerin, 7% sorbitol, 1.5% silicic acid, 33.9% water, 2% N-acyl glutamate (Amisoft (RTM) of Ajinomoto), 0.1% bactericide, 0.5% sodium lauryl sarcosine and 1% perfume were mixed to produce a dental paste with improved foaming property. 24.6.77. as 076020 (4pp43)

LIOC ★ D21 18768B/10 ★J5 4011-243

Tooth-paste with improved scale prevention property - comprises chlorhexidine salt, sodium mono fluorophosphate and carrageenan

LION DENTIFRICE KK 24.06.77-JA-075148

E34 (E14) (27.01.79) A61k-07/18

Toothpaste compsns. are composed of chlorhexidine salts, sodium monofluorophosphate and karagenane. The karagenane is e.g. a mixt. of k-karagenane and i-karagenane in a ratio of 8:2 to 1:9.

The compsns., contg. chlorohexidine, have improved scale preventive effect, and contg. sodium monofluorophosphate, exhibit improved decay preventive effect, and are free from cohesion. They are storage stable and easily extruded from tubes. 24.6.77. as 075148 (8pp43)

KANE ★ D21 18769B/10 ★J5 4011-244

Nail varnish which is not harmful to skin and nail - comprises a modified polyester in an organic solvent with nitrocellulose

KANEBO KK 23.06.77-JA-075020

A96 (A23) (27.01.79) A61k-07/04

The varnish is composed of a modified polyester, produced by addn. react. of a dioxirane cpd. with polyester from polycondensation reaction of cyclohexane-1,2-dicarboxylic acid, dipentaerythritol and monobasic higher fatty acid, dissolved in organic solvent along with nitrocellulose.

The monobasic fatty acid is e.g. 18-20C higher fatty acid, like (hydrogenated) castor oil fatty acid, steric acid and oleic acid. The polycondensation reaction is effected e.g. with 60-90 equiv.% of carboxyl of the cyclohexane-1,2-dicarboxylic acid based on hydroxyl of dipentaerythritol, at 100-200°C, to form a polyester of no. ave. mol.wt. 1500-2500. The addn. reaction is effected using 0.5-15 wt.% (of the polyester) of dioxirane cpd., like those of mol.wt. 500-1400, e.g. condensate of epichlorohydrin and Bisphenol A, at 160-185°C to produce a modified polyester of no.ave. mol.wt. 1800-4000, which is e.g. formulated at a ratio of 0.5-15 wt.% with 10-20 wt.% nitrocellulose.

The varnish is based on a solvent comprising toluene, lower alcohol ester of acetic acid, and aliphatic monohydric lower alcohol. 23.6.77. as 075020 (6pp43)

INAL- D21 29511F/00 =NL-159-280
Lotion for preventing hair loss contng procaine benzoic
MINISTER IND ALIMEN (MINA) 16.05.66-RU-051474
*B05 E19 (15.02.79) *NL6702-282 +A61k-07/06*

Lotion for the care, new growth, pigmentation or prevention of fall-out of hair, has a pH 2-6 and comprises (by wt.) 0.5-5% procaine acid addn. salt, 0.1-0.5% benzoic acid and 0.1-0.5% ascorbic acid, mixed with conventional cosmetic ingredients, dissolved, emulsified or dispersed in wetter or organic solvent. Pref. the lotion contains hydrocarbon(s) to degrease the hair.

Results depend on the age of the patient and condition of the hair. Typically irritation of the scalp and dandruff are eliminated after ~1 month; fall-out ceases and new growth starts after 2-3 months; grey hair is strongly pigmented after >6 months. The lotion can also be used in the prophylaxis of baldness. 15.2.67. as 002282 (3pp913)

LEPA= ★ D21 19642B/10 ★SU-603-381
Durable dental prostheses prodn. - additionally contains grafted copolymer of methyl methacrylate and polyvinyl ethyl:al, to improve strength
LENGD PAVLOV MEDICA (ASHI=) 07.12.76-SU-427609
A14 P32 (A96) (21.03.78) A61c-09

Dental prostheses are produced from a compsn. contg. (in wt. %): methylmethacrylate 28.0-29.5, grafted copolymer of methylmethacrylate and polyvinylethylal 65.7-68.0, triethylene-glycoldimethacrylate 2.4-3.0, benzoyl peroxide 0.8-0.9 and dimethyl aniline 0.8-0.9. The grafted copolymer has increased strength and biological durability.

Shteingart, M.Z., Shtraikhman, G.A., Zaitsev, B.A. Bul. 15/25.4.78. 7.12.76. as 427609 (2pp1047)

LUST/ ★ D21 19780B/10 ★US 4141-144
Acrylic dental material contg. muscovite mica - to control lustre and hue, for making prostheses or for cosmetic application
LUSTGARTEN S J 26.01.77-US-762526
A96 (27.02.79) A61k-05/06 C08k-03/34

Dental material comprises a polymerisable resin binder (I) which is >1 acrylic monomer; an agent for polymerising (I), an inorganic filler and finely divided particles of translucent muscovite mica (II) at 1-20 wt.% to control hue and lustre.

Pref. (II) has particle size 1-50u and may be (partially) coated with BiOCl, ZrO_2 or esp. TiO_2. Specified (I) are methacrylates, cyanoacrylates, N-phenylglycine-glycidyl methacrylate reaction prod. or esp. 2,2-bis[4-(3-methacryloxy-2-hydroxypropoxy)phenyl]propane (Ia). Similar compsns. in which the filler is opt. and (II) is 1-30 wt.% can be applied to teeth surfaces.

The materials are used for fillings, restorations, etc. and addition of (IV) allows predictable control of hue and lustre. They can also be painted on teeth for cosmetic purposes. The materials are stable without the need for UV inhibitors or absorbers. 26.1.77 as 762526 (8pp1251).

UYVI- ★ D21 19921B/10 ★US 4141-864
Osseous cement for dental and orthopaedic use - comprises acrylic monomer, filler and particles leachable from the cured cement
UNIV OF VIRGINIA 16.12.77-US-861295 (15.03.74-US-451480)
A96 (A14 D22) (27.02.79) A61k-05/06 C08l-33/10

The cement comprises (a) 10-40 wt.% (in)organic particles (I) leached by extracellular fluid of the host to leave a continuous pore structure; (b) 20-40 wt.% acrylic monomer; (c) 35-65 wt.% insoluble, non-diffusing, particulate, physiologically acceptable filler of particle size <100µ to increase viscosity to a pliable, mouldable paste and (d) initiator system for the monomer.

(I) has average particle size 50-250µ; has about the same pH as extracellular fluid and has no effect on its ionic strength; is nontoxic; is hard and non-deformable so that proper size porosity is maintained; has m.pt. greater than polymerisation temp. of the monomer; and is not swellable or soluble in monomer or polymer.

Tissue can grow into the pores left by leaching of (I) so a longer lasting bond between bone and prosthesis is obtd. (I) acts as a heat sink reducing thermal necrosis of the bone; reduces the amt. of monomer used and prevents outward migration of the toxic monomer. 16.12.77 as 861295 (8pp1251).

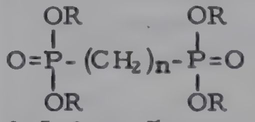
COLG ★ D21 19956B/10 ★US 4141-947
Variegated soap bar mfr. - by blending minor soap ingredients soap chips, and colouring agent in a screw mixer
COLGATE PALMOLIVE CO 07.07.76-US-703159 (09.01.75-US-539675)
(27.02.79) B29f-03/12

Soap bar is produced by continuously feeding soap chips, and a pre-blended emulsion of minor soap ingredients and colouring material into the hopper of a mixer unit that includes a screw mixer conveyor, and operating the mixer to blend the minor ingredients other than the colouring material throughout the mass to produce a variegated homogeneous soap mass at the discharge end of the conveyor. The mass is supplied to a double barrel vacuum plodder, and then the plodded mass is extruded and cut into bar form.

Provides a high speed continuous process for making variegated soap of uniform high quality, while avoiding the separate introduction of the various ingredients into the mixer. 7.7.76 as 703159 (5pp50).

HENK D21 61140Y/35 =US 4141-967
Cosmetics using esters of alkane disphosphonic acid as deodorants - partic. in aerosol compsns. contg. up to 10 percent agent
HENKEL KG AUF AKTIEN 23.02.76-DT-607225
*E11 (27.02.79) *BE-851-653 A61k-07/32*

Human body odour is suppressed by applying to areas of concentrated sweat glands a safe, but deodorising amt. of cosmetic prepn. contg. 0.1-10% alkaned:phosphonic acid ester of formula (I)



$$O{=}\underset{OR}{\overset{OR}{P}}{-}(CH_2)_n{-}\underset{OR}{\overset{OR}{P}}{=}O \quad (I)$$

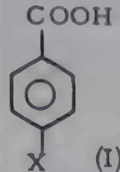
(where R is opt. branched 1-6C alkyl and n is 1-6) and the remainder customary cosmetic constituents.

Pref. ester is present in amt. 0.5-3 wt.% w.r.t. total compsn. Ester is that of methylene diphosphonic acid or ethane 1,2-diphosphonic acid or a tetraethyl-, tetraisopropyl- or tetraisobutyl ester.

Cosmetic prepn. can be supplied in form of a powder, pencil, roll-on or spray contg. propellant gas. 14.2.77 as 768489 (4pp931).

DOLL- D21 32793Y/19 =US 4141-96
Salts of hexetidine with aromatic carboxylic acids - useful as antimicrobials for oral hygiene and for purifn. of crude hexetidine
DOLL GMBH (DOLA) 16.06.76-DT-626935
*B03 C02 +P34 (27.02.79) *BE-848-064 A61k-09/68 C07d-239/04*

The mouth cavity is treated to inhibit the growth of micro organisms by applying an effective amt. of ≥1 salt of 1,3-bis-(β-ethylhexyl)-5-amino-5-methyl-hexahydropyrimidine with an aromatic carboxylic acid of formula (I) together with a suitable carrier and/or diluent.



(I)

In (I), X is -COOH, -OH, $-NH_2$, $-SO_3H$ or $-SO_2NH_2$.

3.11.76 as 738510 (8pp910).

COLG D21 62160A/35 =US 4141-969

Tooth paste stored in unlined aluminium container - contains calcium salt stabiliser, pptd. amorphous silica without aluminium and fluorine cpd.

COLGATE PALMOLIVE CO 22.02.77-US-770344
*E37 +Q34 (27.02.79) *DT2807-006 A61k-07/18 +B65d-81/24 B65d-85/14*

Dental cream compsn. compatible with surface of an unlined Al container contains dental vehicle and dispersed 10-35 wt.% polishing agent contg. synthetic pptd. silica free of alumina having wet cake moisture content <75%, oil absorption <125cc/gm., a pack density of >12lbs./cubic ft., valley abrasion of >5.0mg. wire loss, surface area <120m^2/gm., aggregate particle size 2-20 microns, an amorphous X-ray structure, a cpd. providing fluorine in amt. 0.01-1 wt.% and 0.01-0.3 wt.% water-soluble calcium chloride, bromide, iodide, acetate and nitrate.

Dental cream is otherwise calcium free and causes formation of gel pockets on Al container surface, air on wall and substantially etching and swelling of container when solubilised calcium amt. is <0.01%, and compatability with container being lost when calcium and >0.3 wt.% w.r.t. water. 22.2.77 as 770344 (4pp931).

DOLL- D21 32793Y/19 =US 4142-050

Salts of hexetidine with aromatic carboxylic acids - useful as antimicrobials for oral hygiene and for purifn. of crude hexetidine

DOLL GMBH (DOLA) 03.06.76-DT-624980 (00.00.75-DT-549733)
*B03 C02 (27.02.79) *BE-848-064 C07d-239/04 +A61k-09/68*

Salts of 1,3-bis(β-ethylhexyl)-5-amino-5-methyl-hexhydropyrimidine (hexetidine) with an aromatic carboxylic acid X-p-C_6H_4-COOH (where X is COOH, OH, NH_2, SO_3H or SO_2NH_2) are new. A typical cpd. is di-hexetidine-4-sulphobenzoate.

The cpds. are storage stable and have bacteriostatic and fungicidal activity. They are esp. used in toothpastes, gargles, chewing gum, etc. 3.11.76 as 738210 (7pp945).

See Also

D13 EP ---916 D15 J5 2738720

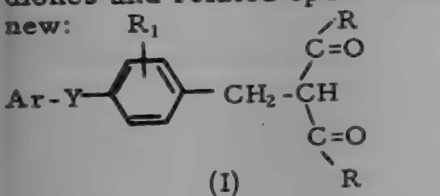
D22: BANDAGES; DRESSINGS

STER ★ D22 18014B/10 ★BE-870-103

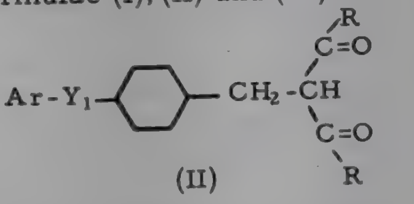
4-Benzyl or cyclohexyl or 2-furfuryl heptane-3,5 di:one derivs. - are antivirals used by topical application and as disinfectants

STERLING DRUG INC 06.09.77-US-830470
B05 C03 (B03 C02) (28.02.79) A61k C07c

4-Benzyl or cyclohexylmethyl and 2-furfuryl-heptane-3,5-diones and related cpds. of formulae (I), (II) and (III) are new:

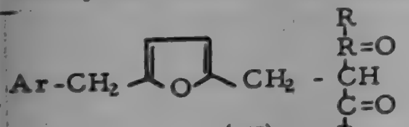


(I)



(II)

In the formulae, Ar is phenyl opt. substd. by 3,4-methylenedioxy or 1 or 2 substits. chosen from hydroxy, 1-3C alkoxy and halo; Y is $-CH_2-$, $-CH_2-CH_2-$, $-CH=CH-$, O or $-O-CH_2-$; Y_1 is $-CH_2-$, $-CH_2-CH_2-$ or $-OCH_2-$; R is 1-4C alkyl and R_1 is H or Cl.



(III)

(I) antivirals which are applied topically to humans or animals or used as disinfectants for inanimate surfaces, etc. in compsns. contg. 0.6 ppm-5 wt.% of active cpds. 31.8.78 as 870103 (24pp395)

WOOD- ★ D22 18077B/10 ★BE-871-629

Wood protection against moisture-induced decay - by boric oxide plugs solidified from molten material

WOOD-SLIMP GMBH 11.11.77-GB-047138
C03 E36 F09 P63 (15.02.79) B27k

Protection of wood against moisture-induced decay by insertion in holes in the wood of a compsn., esp. contg. boric oxide, which is solid at ambient temp. but prepd. from molten material.

Used for prevention of decay of timber used in railway sleepers, door and window frames, bridges, boats, etc. Molten boric oxide, allowed to set in holes, dissolves much more slowly than a compressed plug of solid B_2O_3. 27.10.78 as 871629 (12pp288)

ONTA ★ D22 18091B/10 ★CA 1048-733

Ultraviolet water purifier generating ozone - which is bubbled into water simultaneously treated with ultraviolet light

ONTARIO RES FOUND 02.02.77-GB-004331
E36 P34 (D15) (20.02.79) A61l-01 A61l-03 C02b-01/38 C02b-03

Liq. is treated using an appts. which includes an ultraviolet light source coaxially surrounded by a first chamber which is coaxially surrounded by a second chamber. The walls

parent to UV light. Liq. is passed through the second chamber while air is passed through the first.

The irradiation of the air by the UV light generates ozone which is then mixed with the liq. flowing through the second chamber while it is being irradiated with the UV light. Pref. the light source is mounted vertically and the air flows downwardly through the first chamber while the liq. flows upwardly through the second chamber.

The appts. forms a unit which can be installed in homes for the treatment of contaminated water. 30.1.78 as 295940 (11pp295)

BROW- ★ D22 18094B/10 ★CA 1048-874

Animal litter prepd. from dried, pelleted repulping rejects - with deodorant cpds., uses previously unwanted waste materials

BROWN CO 31.03.76-US-672471
E34 F09 P14 (20.02.79) A01k-01

Animal litter comprises pelleted and dried rejects of a fibre plant, contg. a deodoriser. The rejects are esp. from a paper repulping process, and contain mainly cellulose and mineral filler.

The deodorant is esp. sodium bicarbonate, and forms 1-10% of the compsn. The rejects contain 50-90 wt % cellulose and 10-50 wt % mineral fillers. Pref. 10-50% paper broke, esp. nonrepulpable broke, is added. The broke is added before dewatering which is carried out on a screw press, and the waste is then extruded and chopped. 31.3.77 as 275263 (11pp955)

BAXT D22 76114R/41 =DS 2016-269

Separation and preservation of lymphocytes - from whole blood

BAXTER TRAVENOL LAB 10.04.69-US-815235
*A24 B07 +P31 R16 (A97) (01.03.79) *BE-748-703 +A01n-01/02*

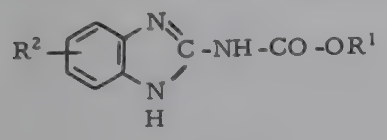
Process for prolonging the activity of lymphocytes isolated from blood comprises mixing with a liq. extract obtd. from the spores of Trigonella foenum graecum dispersed in a tissue culture medium nutrient. In partic., defibrinated blood (1 vol.), is mixed with the extract, (0.1-2 vols.) and the supernatant liquor is sepd. from the sediment; the liq. is then filtered through a synthetic polyamide fibre and the filtrate is dispersed in the nutrient medium. 6.4.70 as 016269. (5pp047)

FARB ★ D22 18204B/10 ★DT 2737-405

Silicone sealant compsns. contg. benzimidazolyl carbamate cpds. - as antimicrobial esp. antifungal additives

BAYER AG 19.08.77-DT-737405
A93 E13 G04 (A26) (01.03.79) A01n-09/22 C08l-83/04

New plastic microbicidal (esp. fungicidal) organopolysiloxane masses which can be stored at room temp. but which under the action of water or atmospheric air at room temp. are converted into elastic mouldings or coatings, are produced by mixing α, ω-dihydroxypolydiorganosiloxane with cross-linking silicon cpds., opt. with α, ω-bis (trimethylsilyloxy)polydimethylsiloxane, with fillers and with heavy metal salts or amines which accelerate cross-linking. The novelty of the masses is that they contain benzimidazole derivs. of formula (I): (where R^1 is 1-4C alkyl opt. substd. by OR^3; R^3 is 1-4C alkyl or phenyl; and R^2 is H, 1-4C alkyl, halogen or NO_2), opt. together with further fungicidally active substances.



(I)

Used in sealing compsns. for use in building, sanitary equipment and aquaria. The content of (I) prevents spotting and unsightliness due to microbial (esp. fungal) attack, but does not have any adverse effects on the properties of the sealant compsns. 19.8.77 as 737405 (11pp280).

EVER/ ★ D22 18333B/10 ★DT 2835-652
Disinfecting and cleaning contact lenses without allergic reaction - with cold soln. contg. ene:diol redox system, water-soluble oxidising agent and opt. heavy metal salt catalyst
EVERS H C A 22.08.77-SW-009348
E19 P34 R21 (E37) (01.03.79) A61l-13 G02c-11/08

Contact lenses are disinfected and cleaned with an antimicrobial soln. contg. $\geqslant 0.001$ M of an enediol redox system, in particular ascorbic acid (pref.), isoascorbic acid (pref.), dihydroxymaleic acid, dihydroxyfumaric acid, 2, 3-dihydroxy-2-cyclopenten-1-one, or their salt or other derivs.; and $\geqslant 0.0001$ M of a water-soluble oxidising agent, in particular an alkali metal percarbonate (pref. Na_2CO_4) or peroxide or H_2O_2. Opt., the soln. contains $\geqslant 0.000004$ wt.% of a heavy metal salt catalyst (pref. $CuSO_4$).

Soft and hard contact lenses are cleaned without using a heated appts. There is no allergic reactions. 14.8.78 as 835652 (11pp70).

SAWY/ ★ D22 18397B/10 ★EP -----949
Cardiac and vascular implantation prostheses - comprising support with surface layer pref. of aluminium, protein, agar or acrylamide polymer
SAWYER P N 26.08.77-US-827952
A96 P32 (07.03.79) A61f-01/22
D/S: BE, CH, DT, FR, GB, LU, NL, SW.

A prosthesis for implantation in bloody environments, esp. cardiac and vascular implants, comprises a support material and a surface layer, exhibiting a regular and periodic surface charge, pref. equivalent to 1 electron per 1000 sq. angstroms in a regular 3-D pattern. Since the support does not crosslink to the surface layer, an intermediate material (I) is provided to effect the crosslinking and set up structural continuity in the prosthesis.

The prosthesis functions with minimal thrombo genicity.

25.8.78 as 100752 (38pp966)
ISR: US3927422; FR2335198; DT2557947; US4082507; FR2378504; DT2720544; CH-593676; US3096560; US3276448; FR2029155; GB1008193; GB1064850; US3914802; US3744062; US3609768; US4038702; US3512183; DT1494939; GB1097787; US3563925; 1 Journal Reference.

PROC ★ D22 18403B/10 ★EP -----969
Diaper for incontinent adults - has specially located securing tabs ensuring a sealed fit around the thighs of the wearer
PROCTER & GAMBLE CO 30.08.77-US-829035
F07 P21 P32 (07.03.79) A41b-13/02 A61f-05/44
D/S: CH, DT, FR, GB, LU, NL, SW.

An absorbent diaper includes a narrow crotch engaging region and wider end thigh engaging regions carrying first (14) and second (15) tabs. A pair of spaced elastic elements (10,13) are located in the crotch engaging region and the second tab is located within a segment defined by a first line at an angle α of 90° to the adjacent elastic element and a second line at an angle β of 140° to the adjacent elastic element. The lines radiate from the end of the elastic element.

With the second tabs so located, a sealing contact around the thighs of the wearer is ensured when the diaper is fastened.

18.8.78 as 78200142.4 (21pp525)
ISR: US3860003; FR2345955; US3452753; FR2242043.

SCOP D22 83500X/45 =GB 1538-913
Forming staple fibre webs on suction surfaces - using pneumatic ducts with convergent divergent angles from three to four and a half degrees and inclined to surface at 10 to 30 degrees
SCOTT PAPER CO 10.04.75-US-566923
*F04 (24.01.79) *DT2615-640 D01g-25*

Appts. for forming fibrous webs from a gaseous suspension of fibres, specifically for achieving high speed, high quality nonwoven fibrous webs is described. Fibres are sepd. from a fibrous feed mat and entrained in a gaseous medium e.g. air at a fiberising roll and pass down a formation duct to a convex or linear foraminous forming surface through which the gas passes and where the fibres condense to form a web.

The downstream end of the duct bounds a web formation area on the forming surface. The front and back duct surfaces are planar and the angle between them is specified. The webs are for use in sanitary napkins, disposable diapers etc. 6.4.76 as 013899 (7pp1394)

DOMT D22 89720A/50 =GB 1538-919
Treatment of wood with ammoniacal preserving liquor - followed by exposure to carbon di:oxide to prevent deposition of solids
DOMTAR LTD 29.04.75-CA-225777
*C03 E35 F09 P63 (24.01.79) *CA1043-191 B27k-03/08*

Wood is treated with an ammoniacal treating liquor by charging the wood into a pressure vessel, submerging with ammoniacal liq. maintaining a superatmospheric pressure in vessel to impregnate wood with liq. reducing pressure, withdrawing excess liq. from vessel and subjecting wood to carbon-dioxide-contg. atmos. to react with ammoniacal chemical to form ammonium (bi)carbonate to inhibit subsequent deposition of treating chemical until wood is free of liq. Pref. carbon dioxide content of atmos. is $\geqslant$10wt. % (esp. $\geqslant$20 wt. %) and subjection time is $\geqslant$2 mins.

Process avoids use of chemicals which may cause objectionable stains or blotches on wood, minimises deposits and provides a relatively clean prod. 28.4.76 as 017208 (4pp931)

WARN D22 83064X/45 =GB 1541-752
Contact lenses sterilisation capsule - with platinum catalyst for destroying excess hydrogen peroxide at end of process
WARNER-LAMBERT CO 28.04.75-US-572551
*P34 R21 +P24 P32 P43 Q33 Q34 (07.03.79) *BE-841-196 B65d-51/16 B65d-81/22*

A capsule for soft contact lenses is formed by a hollow cylindrical body, a detachable closure for attachment to one end to form a waterproof seal and with a catalyst for decomposing the sterilising medium; and a second removable closure for the other end and having a passage terminating at the outer end and a valve for venting.

Pref. the valve is an annular truncated conical groove. The detachable closure is pref. a screw cap having a central post to which the catalyst is attached. The removable closure is pref. a lens basket. 7.4.76 as 014114 (7pp1376)

COLG D22 68421Y/38 =GB 1541-775
Tape fastener for disposable diaper - with retaining section for holding folded over end of diaper to minimise end leakage
COLGATE PALMOLIVE CO 19.08.76-US-715782
*P32 +P21 P34 (07.03.79) *US4047-528 A41b-13/02*

A disposable diaper includes an absorbent pad assembly having an absorbent pad, and a fluid-impervious backing sheet, and end portion of the assembly being foldable over an adjacent portion of the front surface; a tape fastener including a release sheet having a release surface attached to the front surface and a securement section having two surfaces with adhesive on one surface being releasably attached to the release surface and being unfoldable beyond the side edge of the end portion after peeling it from the release sheet, and a device for keeping the end portion folded over.

Pref. the release sheet is attached to the end portion of the backing sheet. 21.7.77 as 030671 (6pp1376)

TRIP- ★ D22 18511B/10 ★GB 2003-035
Surgical drape with central hole - surrounded by hem holding rigid but flexible draw thread with end loop
TRIPLUS SJUKVARDSPR 26.08.77-SW-009587
P31 (07.03.79) A61b-19/06

Drape has a central window to uncover an operation area and a hem around the hole. The hem has an opening for introduction of a rigid but flexible thread. One thread end has a loop through which its opposite end can be passed.

The thread is longer than the hole and is displaceable in the hem to adjust hole size, thread rigidity keeping the ho hole stretched to the selected size. 1.8.78 as 031814 (3pp)

CHUS ★ D22 18749B/10 ★J5 4011-203
Woody material treating agent - contg. alkyl isocyanurate as active component
CHUGAI PHARMACEUTICAL KK 24.06.77-JA-074527
C02 E13 F09 P63 (27.01.79) A01n-09/22 B27k-03/40

Woody material treating agent contains as active component trialkyl isocyanurate (I). (I) is esp. active against wood-putrefying bacteria and white ants, has a low toxicity to human beings and can be used safely. Wood-putrefying bacteria to which the agent is applied include Trichoderma viride, Aspergillus niger and Penicillium notatum.

Agent may contain insecticide, fungicide and/or antiseptics. In an example, 50 pts. wt. (I), 5 pts. wt. dodecylbenzenesulphonate, 5 pts. wt. polyoxyethylene alkylallyl ether and 40 pts. wt. xylene were mixed to prepare an emulsion. 4 pts. wt. of (I) and 96 pts. wt. methylnaphthalene were mixed to prepare a soln. 24.6.77. as 074527 (3pp108)

JAPS ★ D22 18763B/10 ★J5 4011-234
Deodorising compsn. for treating rubber, etc. or for household use - comprising conifer essential oil and citrus type aroma
JAPAN SYNTHETIC RUBBER 27.06.77-JA-076293
*A60 P34 (27.01.79) A61l-09/**

Deodorising compsn. contains (1)$\geq$1 coniferous tree type essential oil and/or component obtd. by extraction of such oil and (2)$\geq$1 citrus type aroma and/or component obtd. by extraction of such aroma in a wt. ratio of $20 > (1)/(2) > 1/29$.

Compsn. has little fragrance and has an effective deodorising action. The deodorising effect is synergistically increased by combined use of the conifer essential oil and citrus type aroma. Compsn. is effective against the smell of uncured rubber, smell generated at the time of processing rubber or curing rubber, smell of regenerated rubber, smell of polymer compsns. and smell generated when heating polymer compsns. at high temp. It is also suitable for household use.

As conifer type essential oil there is used e.g. Japanese cypres oil or Japanese Cedar oil. As citrus type aroma there is used e.g. lemon oil, orange oil or synthetic lemon oil. Excipients and other additives may be added. The compsn. is used e.g. as spray liquid, gel or aerosol. It shows high deodorising effect in small amts. and the effect lasts for a long time even after the bad smell disappears. In an example, a compsn. of Japanese cypres oil and lemon oil (1:1) was added to melted cured rubber in an amt. of 0.1 wt.%, and the bad smell was scarcely perceptible whereas the bad smell was noticeable when only Japanese cypres oil was used. 27.6.77. as 076293 (6pp108)

HURK/ D22 39944V/22 =NL-159-284
Disinfection of human or animal skin - by volatile disinfectant followed by persistant disinfectant
HURKA W 24.04.73-OE-003627
*E19 P34 (15.02.79) *BE-807-444 A61l-13*

Cows' udders are disinfected by a two-stage process. Immediately before milking, the teats are treated with one or more 1-3C alcohols, and after milking with a long-lasting

Specifically the disinfectant is chlorohexidine salt, esp. digluconate or dilactate. A combination pack can be used, having separate containers for the alcohol and the salt.

Udders and teats are kept germ-free, and minimal disinfectant is passed onto the milk. 19.4.74. as 005353 (3pp913)

TEVI- D22 60120X/32 =NL-159-285
Body fluid absorbing sheet - with permeable polypropylene fibre mat over absorbent cellulose mat on polyethylene foil backing BE160776)
TEVIC INT BV 24.01.75-NL-000874
*A96 F07 P21 P32 +P34 P73 (15.02.79) *DT2601-617 A61f-13/18 A61l-15 +B32b-05/26 B32b-07/04*

A moisture absorbent product is described consisting of $\geq$1 layer of a moisture absorbent material and covered, on one side, with a layer of permeable, moisture resistant material containing polypropylene fibres. Pref. the two layers are separated by a fibrous mat with a contact surface ratio of $<0.5\%$.

As there is a minimum of mechanical contact between the cover layer and the absorbent material, there is negligible flow back of absorbed moisture through the cover. 24.1.75. as 000874 (4pp1370)

BURN- ★ D22 19420B/10 ★NL-159-299
Container washing, sterilising and filling installation - e.g. for beer barrels, with reduction of cycle time by removing barrel from sterilising station after initial charge
BURNETT & ROLFE 21.11.66-GB-052017
P43 Q39 (D16) (15.02.79) B08b-09/12 B67c-03/30

The installation consists of a continuous chain transporting mechanism which transfers the barrels between three stations, the wash and sterilising station, the inverting station, and the filling station. The barrels are equipped with self-closing valves and connectors which connect to the delivery line connectors for the wash water, steam or fill liquid. At the first station, the barrel is washed and then charged with steam. It is then removed to the second station where it makes contact with a time delay switch which prevents the barrel from being inverted until the sterilisation period is complete. The barrel is then inverted and transported to the fill station.

The installation differs from the traditional system in that the barrel can be immediately removed from the first station after being charged with steam instead of having to remain coupled to the steam supply until the sterilisation is complete. Consequently, the cycle time is considerably reduced. 17.11.67. as 015679 (5pp1370)

COLG ★ D22 B/10 ★PT--67-602
Disposable diaper - has detachable sheet and ribbon secured with adhesive to one edge of absorbing tampon
COLGATE PALMOLIVE CO 31.01.78-PT-067602
*P32 (15.02.79) A61f-00/**

ENER- D22 23199U/17 =SU-603-321
Bulk sterilization - for medical supplies etc by high energy electron beam pulses
ENERGY SCIENCES INC (ENE -) 04.10.71-US-186427
*P34 (14.03.78) *DT2249-190 A61l-01*

Bulk sterilisation of medical supplies etc. is carried out by high energy electron beam using pulsed, single-frequency electron bombardment, which is uniformly distributed. The pulse repetition rate, pulse width and peak amplitude is such that the total radiation dose can be adjusted within the range of a few tenths to several Megarads with a dose rate higher than approx. 10 Megarads/sec. This wide-cut method (i.e., covering wide range of organisms) does not affect any important parameters, and it is used for blood, food, pharmaceuticals, cosmetics, cellulose products, etc. The beam energy is adjusted to a value in excess of approx. 1 MeV. The dose is between 1-4,5 Megarad approx.
Nablo, S.V. Bul. 14/15.4.78. 3.10.72. as 834408 (2pp)

ETHI ★ D22 19773B/10 ★US 4141-087

Synthetic absorbable sutures of isomorphic poly:oxalate copolymer - contg. residues of linear and cyclic diol(s)

ETHICON INC 19.01.77-US-752374

A25 F01 P32 P34 (A96) (27.02.79) A61f-01/24 A61l-17 C08g-63/18

The suture of oriented fibre comprises an isomorphic polyoxalate (I) having cyclic and linear units of formula $-[O.R.O.CO.CO]_x$ (where 5-95 mole % of R = $-(CH_2)_nA(CH_2)_n-$, the remainder is $-(CH_2)_{4+2n}-$; A is trans-1,4-cyclohexylene or p-phenylene; n = 1 or 2 (same for both types of R) and x is the degree of polymerisation giving a fibre-forming polymer of mol. wt. >10000). The sutures can be monofilaments or multifilaments, e.g. braids.

Filaments of (I) have good in vivo strength retention, are absorbed without adverse tissue reaction, high tensile and knot strengths (>30000 and 20000 psi. respectively) and can be sterilised by γ-radiation without deterioration. 19.1.77 as 752374 (10pp1251).

JAME/ ★ D22 19799B/10 ★US 4141-363

Flexible tape wound closing sucture - with wide rounded ends and central side notch for interlocking with similar tape

JAMES J L 20.11.75-US-633849

P31 (27.02.79) A61b-17/04

A suture for holding wound edges together comprises flexible thin tape with pressure sensitive adhesive on one side covered by glossy release paper. The tape has similar wider rounded ends and a narrower centre formed by inwardly tapering sides with a rectangular notch in one side to half the centre width.

The paper is much longer than the tape at one end and is folded around the tape and secured to the opposite side by an adhesive spot. The paper includes tabs to facilitate grasping and peeling. The notch allows a pair of such tapes to be interlocked, one end of each first being applied to opposite sides of a wound, the tapes being pulled in opposite directions to close the wound with the tapes crossing at the notches, and the other tape ends then being stuck down. 20.11.75 as 633849 (4pp1358).

LEWI/ ★ D22 19834B/10 ★US 4141-686

Disposable liquid steriliser unit incorporating ultraviolet tube - to generate bacteria-killing radiation within plastics jacket receiving liquid to be treated

LEWIS J H 24.03.77-US-781021

(27.02.79) C02b-01 C02b-03/02

A disposable unit for sterilising liq. comprises an elongated plastic jacket enclosing an elongated tube for generating UV radiation having a wavelength of 2537 Å. Opposing ends of the jacket provide inlet and outlet for the liq. and are furnished with electrically conductive terminals. Each end of the jacket is provided with an integrally moulded closure member and an internal fin for imparting turbulence to the flowing liq.

Used as water sterilisers employing UV radiation to kill bacteria. The mixts. are disposable and comprises inexpensive components. The use of a sheath is eliminated at low temps. A view port is provided in the jacket for determining if the tube is operating. Flow of liq. through the unit ceases when the tube fails to operate. 24.3.77 as 781021 (10pp1044).

PROC D22 02336B/02 =US 4141-772

Guiding reinforcing ply into nonwoven web - forming zone so that it is initially in plane of descending fibres

PROCTER & GAMBLE CO 27.06.77-US-810559

*F04 P21 P32 +P73 (27.02.79) *EP-----222 +B29d-07*

A fibrous fluff web is formed on the upper and lower surfaces of a flat reinforcing ply by passing the ply through a transverse flow deposition zone to form the lower surface fluff layer, inverting and reversing the ply by passing around a flat triangular member, and passing back through the deposition zone to form the upper surface fluff layer.

Two adjacent vacuum chambers are pref. used to compensate for increased airflow restriction when forming the upper layer. The ply is e.g. of wet strength tissue paper. 27.6.77 as 810559 (10pp1358).

ONTA D22 18091B/10 =US 4141-830

Ultraviolet water purifier generating ozone - which is bubbled into water simultaneously treated with ultraviolet light

ONTARIO RES FOUND 02.02.77-GB-004331

*E36 P34 (D15) (27.02.79) *CA1048-733 +C02b-01/38 C02b-03*

Liq.-treatment appts. comprises a first chamber enclosing a UV light source, surrounded by a second chamber having an inlet and outlet for liq. A device causes air to enter the first chamber and generate ozone by irradiation with the UV light.

The ozonated air is mixed with the liq. in the second chamber while the liq. is irradiated. The device is pref. a pump, and the source is pref. an elongate tube, the chambers being concentric with the tube.

The appts. effects the simultaneous treatment of e.g. water by ozone and UV light. 1.2.78 as 874144 (5pp1379).

ABBO ★ D22 19938B/10 ★US 4141-905

Bactericidal and fungicidal 2-methyl-1-naphthyl maleimide - prepd. e.g. from maleic anhydride and 2-methyl-1 naphthylamine

ABBOTT LABORATORIES 19.10.77-US-843610

A60 C02 E13 (27.02.79) C07d-207/40

N-(2-methyl-1-naphthyl)maleimide (I) is new. (I) is prepd. e.g. from maleic anhydride and 2-methyl-1-naphthylamine. (I) is used to protect substrates from bacterial or fungal attacks. Thus it can be used to treat leather and its substitutes, wood or plastic products, fabrics made from cellulosic or olefin polymers, outdoor wear, tents, boots, belts, tarpaulins or swimming pool liners or added to industrial fluids such as cooling water or hydrocarbon or metal cutting fluids or to cosmetics or paints. 19.10.77 as 843610 (4pp476).

LEMC/ ★ D22 19960B/10 ★US 4141-956

Timed cold steriliser - with the timer automatically reset on opening the steriliser

LEMCHEN M S 13.02.78-US-876961

P34 (27.02.79) A61l-03

Cold steriliser comprises a tray for contg. sterilant and instruments to be sterilised, a lid fitting over the tray, and a timer mounted on the lid. The timer is interconnected with a lid locking device so that the lid cannot normally be opened until the period for which the timer is set has elapsed. The timer can be manually overridden and the locking device unlocked during sterilisation, the timer then being automatically reset to its original setting for the sterilisation.

Used for sterilisation of doctors or dentists instruments and ensures that objects being sterilised are not prematurely withdrawn from the sterilant. 13.2.78 as 876961 (6pp50).

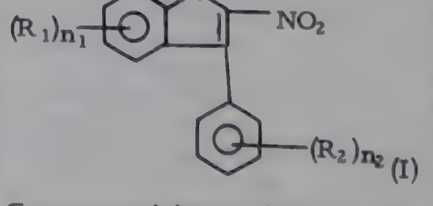
RIKL ★ D22 19971B/10 ★US 4141-990

Alkyl substd. 2-nitro-3-phenyl benzofuran cpds. - useful as antimicrobial, antitubercular, antiprotozoal and growth promoting agents and as disinfectants

RIKER LABS INC 26.02.74-US-445976

B02 C02 P34 (27.02.79) A61l-09 C07d-307/82

Benzofuran derivs. of formula (I) are new.



(I)

(where R_1 and R_2 are 1-4C alkyl; and n_1 and n_2 are 0-2 such that $n_1+n_2 = 2$). More generally cpds. where n_1 and n_2 are 0-3 and n_1+n_2 is 1-5 are disclosed.

Cpds. (I) are antimicrobial agents active against Gram-positive and Gram negative bacteria, protozoa and have antitubercular, antiparasitic and animal growth promoting activities. (I) can also be used for disnfecting and sterilising e.g. medical and dental equipment.

A specific cpd. is 5,7-dimethyl-2-nitro-3-phenylbenzofuran. 26.2.74 as 445976 (7pp957).

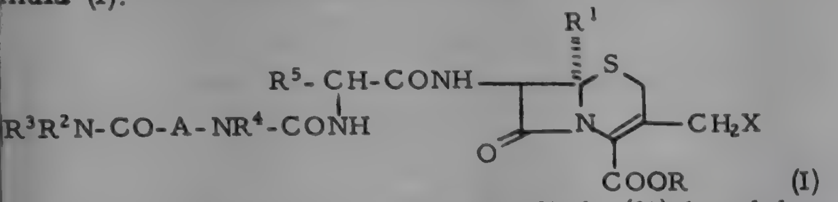
SQUI D22 44021A/24 =US 4142-045

Carbamoyl-alkyl-ureido-acetamido-cephalosporanic acid derivs. - useful as broad spectrum antibacterials and disinfectants

SQUIBB E R & SONS INC 16.08.76-US-714420 (10.02.78-US-876789)

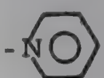
*B02 E13 (27.02.79) *US4086-422 C07d-501/36*

New carbamoylalkylureido cephalosporin cpds. are of formula (I):



(I)

In the formulae, R is H, lower alkyl, (di)phenyl-lower alkyl, tri(lower alkyl) silyl, trihaloethyl, an alkali(ne earth)metal ion, dibenzylamine, N, N-dibenzylethylenediamine, methylamine, triethylamine, N-ethylpiperidine or $-CH(R^6)-O-CO-R^7$. R^1 is in the α-configuration and is H or OCH_3, R^2 and R^3 are each H or straight chain 1-4C alkyl, or R^2 is H and R^3 is branched chain 3 or 4C alkyl, phenyl, benzyl or phenethyl, or R^2 and R^3 taken together with the N atom to which they are attached form pyrrolidyl or piperidyl. R^4 is H or lower alkyl. A is 1-6C alkylene R^5 is H, lower alkyl, 3-7C cycloalk(en)yl, 6 or 7C cycloalkadienyl, opt. substd. phenyl or phenyl-lower alkyl or opt. mono-substd. 2- or 3-thienyl, 2- or 3-furyl or 2-, 3- or 4-pyridyl. R^6 is H or lower alkyl, R^7 is lower alkyl. Also X is H, lower alkanoyloxy,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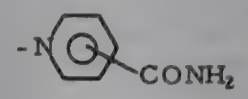
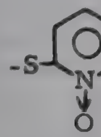


or


The new cpds. where R is H are useful as broad-spectrum antibacterials for therapeutic use and for disinfecting purposes. US 4086422 described antibacterial cpds. of formula [(I), $-CH_2X$ is $-CH_2SX$, where X is a defined heterocyclic gp.]. 10.2.78 as 876789 Div. ex 4086422 (16pp990).

See Also

D12 GB 2003158
D15 J5 4014368
D16 GB 1541473
D21 US 4141864

D23: OILS; FATS; WAXES

BERT/ D23 17910R/11 =DS 1937-460

Sealing materials based on animal vegetable or mineral - oils for use as mastics

BERTHELSEN E B (BER /) 26.07.68-DK-003632

*A13 G04 H08 (01.03.79) *DT1937-460 C09k-03/10*

Sealing material is based on filler-contg. animal or vegetable and mineral oil, and contains small solids (I) of expanded polymer, in amts. up to 25wt.%. Pref. (I) are polystyrene spheres and are present in amt. of about 10-wt.%.

After application, the new material has a constant vol., and is softer than known cements. The new material is useful e.g. for joining together roof ridge tiles. 23.7.69 as 937460. (2pp481)

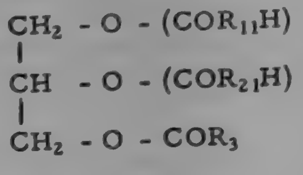
FARH ★ D23 18213B/10 ★DT 2737-607

Fatty acid nitrile(s) and glycerol prodn. - by reacting mono, di, or tri:glyceride(s) with ammonia in liq. phase at elevated temp. in presence of catalyst

HOECHST AG 20.08.77-DT-737607

E17 (E16) (01.03.79) C07c-31/22 C07c-120 C07c-121

Fatty acid nitriles and glycerol are produced by reacting mono-, di- or triglycerides or their mixt., having the formula (I) (where R_1, R_2 and R_3 are each satd. or unsatd. 3-23C hydrocarbon gps. opt. mono-substd. with OH) with ammonia in liquid phase in presence of a catalyst, at elevated temp.



$$\begin{array}{l} CH_2 - O - (COR_{11}H) \\ | \\ CH - O - (COR_{21}H) \\ | \\ CH_2 - O - COR_3 \end{array}$$

(I)

Process is improved by using as a catalyst a sulphonate (pref. an alkylarylsulphonate contg. 1-24C in the alkyl(s) and opt. up to two carboxyl gps.) or a carboxylate of Pb, Zn, Cd, Sn, Ti, Zr, Cr, Sb, Mn, Fe, Ni or Co. The temp. is pref. 220-240°C until 30-70% of glycerol is removed; then the temp. is increased gradually or stepwise (over 0.5-
5h) to 270-300°C, and the reaction is completed at this
temp.. The reaction mixt. is then subjected to fraction-
ation; the fatty acid amides are recycled, the fatty acid
nitriles $R_1(R_{21}R_3)CN$ are sepd. from the aq. phase, from
which glycerol is subsequently sepd. by the known meth-
ods.

Method is esp. suitable for processing natural, vege-
table or animal fats, but synthetic fats can also be used.
The one-stage process is relatively inexpensive. High
yields are obtd. (fatty acid nitriles ⩽ 97% theor.; glycerol
⩽ 95% theor). The process can be carried out continu-
ously. The fatty acid nitriles can be converted into corresp.
amines by hydrogenation. 20.8.77 as 737607 (20pp70).

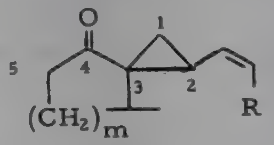
FIRM ★ D23 18353B/10 ★DT 2836-477

Spiro cpd. prodn. for use in perfumery industry - by reacting cyclopentanone or cyclohexanone with alkyl-di:halo-butene (NL 28.2.79)

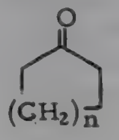
FIRMENICH SA 26.08.77-CH-010435

E15 (01.03.79) A61k-07/46 C07c-49/54

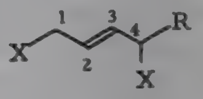
Prepn. of spiro cpds. (used as intermediates inperfume prodn.) of formula (I) is claimed (in which R is a lower alkyl; n = 1 or 2). Process comprises reacting cpds. of formula (II) and (III) (in which X is a halogen).



(I)



(II)



(III)

This reaction is pref. carried out in presence of a strong base (an alkali metal hydroxide, hydride, alkoxide or amide, pref. NaOH or KOH) in an inert organic solvent pref. THF. An alkali metal hydroxide is pref. used in presence of a phase transfer catalyst, the reaction temp. is pref. 65°C. (III) is pref. 1,4-dibromo-pent-2-ene. The pref. product is 1-(prop-1-en-1-yl)-spiro[2,4]heptan-4-one.

Cpds. are useful as precursors of jasmone and methyl jasmonate. Cis- and trans-isomers of spiro alkanones are obtd. Yields are high. 21.8.78 as 836477 (12pp70).

METG D23 23616Y/14 =GB 1541-707

Solvent recovery from solvent extracted substances e.g. oilseeds - uses steam turbine to drive column agitator and turbine exhaust for contacting

DRAVO CORP 28.11.75-US-636205

*J01 (07.03.79) *BE-848-701 B01d-01 +A23l-01/20*

Solvent extracted material is decolventised in a vessel which has a shaft with mixer arms, and a steam sparging device. High pressure steam is introduced into a turbine to rotate the vessel shaft, and part of the steam is passed into the vessel as part of the sparging requirements. Desolventised material and a vapour including solvent vapour are withdrawn from the vessel.

Pref. the low pressure steam withdrawn from the steam turbine is passed to a flash drum and then to the vessel. High pressure steam is pref. throttled to the drum. Useful in edible oil extracting. 5.7.76 as 027803 (6pp1376)

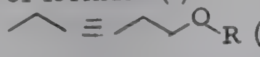
HASE ★ D23 19017B/10 ★J5 4012-309

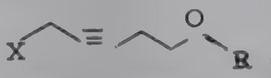
3-Hexynyl- and cis-3-hexenyl-ether(s) - useful as perfuming agents and as intermediates for cis-3-hexenyl-ether(s) or pheromone

HASEGAWA KK 28.06.77-JA-076187

C03 E17 (E14) (30.01.79) A61k-07/46 C07c-43/14

3-Hexynyl-alkyl-, 3-hexynyl-alkenyl- and 3-hexynyl-aryl-ethers, of formula (I) are new.


(I)


(II)

In the formula R is 1-10C alkyl, 3-10C alkenyl or 6-10C aryl.

(I) are prepd. by reacting β-halogenated ethyl-alkyl-, β-halogenated ethyl-alkenyl- or β-halogenated ethyl-aryl-ethers of formula (II) (where X is halo) with an alkali metal butynylide of formula M.≡⌒(III) (where M is an alkali metal atom) in the presence of an inert organic solvent. Pref. the reaction time is 2-20 hrs.

Cpds. (I) are useful as long-lasting perfuming agents or modifiers, and also useful as intermediates for synthesising cis-3-hexenyl-ethers or pheromone. 28.6.77 as 076187 (10pp75)

STAM D23 54060R/30 =NL-159-357

Dynamic hygroscopicity of urea granules - reduced by oil

STAMICARBON NV 23.01.69-NL-001099

*A43 C04 E16 (15.02.79) *BE-744-890 +B01j-02/30 C05c-09*

The dynamic hygroscopicity of synthetic urea fertiliser granules is reduced by heating the granulate at 30-65°C with a mixt. of 5-20 wt.% solid natural paraffin, 1-15 wt.% vegetable or animal oil or fat, and the balance of mineral oil.

The free-flowing properties of the granulate is enhanced and preserved, to facilitate transport and storage of bulk material in warm regions of relatively high humidity. 23.1.69. as 001099 (6pp913)

GIVA D23 42895R/24 =NL-159-359

Beta phenylethyl alcohol of perfume - grade

GIVAUDAN L & CIE SA 18.04.68-US-722224

*E14 (15.02.79) *GB1195-346 C07c-31/16 +C07c-29*

β-Phenylethyl alcohol is prepd. by catalytic hydrogenation of styrene oxide using a Raney nickel catalyst (I) and a palladium catalyst (II).

Specifically 1-10 pts. wt. (I) and 0.0001-0.1 pts. wt. (II) (as Pd or active carbon) are used per 100 pts. wt. styrene oxide. Hydrogenation is effected at 10-140°C and 3.5-35 kg/cm^2 in two stages. Initially reaction is at 10-60°C and 3.5 kg/cm^2 until hydrogen absorption is complete, and then at 90-140°C and 14 kg/cm^2. An inert polar solvent is used.

β-Phenylethyl alcohol is obtd. in good yields of perfume quality. 18.4.69. as 006024 (5pp913)

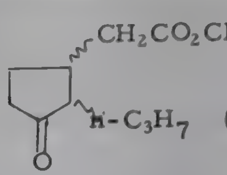
ROUR D23 43162U/31 =NL-159-362

Methyl (3-oxo-2-propyl-cyclopentyl)-acetate - for use in perfumes and cosmetics

ROURE DUPONT B 18.01.72-FR-001510

*E15 (15.02.79) *DT2301-828 A61k-07/46 C07c-69/74 C11b-09 +C07c-67/30*

Perfumed compsns. are produced by adding (3-oxo-2-propylcyclopentyl)acetic acid methyl ester of formula (I), to a conventional perfume or to natural and/or synthetic cpds. (I) has flowery-nuances (the cis-form being the more pronounced), and is used as a perfume or in prods. e.g. toilet water, cosmetics, washing agents. Nuances include jasmin, lemon and magnolia.


(I)

(I) are prepd. pref. by catalytic hydrogenation of the corresp. cyclopentenyl cpd, or esterifying the corresp. acid. 17.1.73. as 000683 (5pp913)

SVME= ★ D23 19470B/10 ★SU-602-539

Fat rendering unit - has tangential inlet for heat carrier into tapered chamber

SVERD MEAT COMBINE 23.02.76-SU-327100

(16.03.78) C11b-01/16

Improved efficiency of fat rendering unit is due to its melting chamber with peripheral tangent input of the heat carrier. The section of the melting chamber increases in the direction of fat stock motion while the section of the heat carrier chamber decreases.

The raw fat material is fed from the hopper to the rotating perforated drum for preliminary cutting by knives. The cut pieces are thrown to the inner wall of the drum by the centrifugal forces and are forced through the perforations. They drop into the annular melting chamber which receives the heat carrier through the tangent inlets. The direct contact of the carrier with the fat material ensures intensive rendering.

Vybornov, V.D., Kuzmenko, N.P., and Kravtsov, V.N. Bul. 14/15.4.78. 23.2.76. as 327100(2pp89)

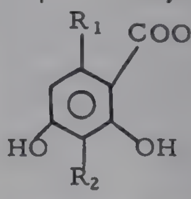
DRAG- D23 38718A/22 =US 4142-053

Beta-resorcylic ester prodn. from corresp. di:hydro cpds. - by esterification and aromatisation with acetic anhydride then saponification, useful in perfumes

DRAGOCO GEBERDING & 23.11.76-DT-653177

*E14 (27.02.79) *DT2653-177 C07c-69/88*

A β-resorcylic acid ester of formula (I) (where R and R_1 are 1-3C alkyl, R_2 is 1-3C alkyl or H), is prepd. by aromatising the corresponding substd. dihydro-β-resorcylic acid ester by heating equimolar amts. of ester and sulphuric acid with ≥1 equimolar acetic anhydride to form diacetate; diacetate is saponified using acidic or alkaline methods, the prod. is recovered.


(I)

Pref. diacetate is prepd. under conditions utilising a protective gas. Sulphuric acid is added dropwise to anhydride and resorcylate at room temp., then refluxed.

Prod. is used as perfume ingredient as synthetic oakmoss extract. 24.8.77 as 827427 (3pp931).

D24: SOAP; SOAP DETERGENTS

PRON/ ★ D24 19769B/10 ★SU-603-591

Rotary press for soap tablets mfr. - has transporter ring with spring-loaded flange section and transition plate to protect easily damaged products

PRONIN O YA 03.11.75-SU-186555

P52 P71 (28.03.78) B21j-07/14 B30b-11/12

The rotary press body is equipped with a rotary table which carries several sets of moulding tools consisting of the die sets are companion ejector rods actuated by a cam. The semi-finished products are fed in along the loading chute by means of a small conveyor.

Around the rotor is a ring whose upper edge is located below the chute to enable the pressed tablets of soap to pass under the chute thereby maintaining a path which is devoid of collision possibilities. Adjacent to the ring is a plate for the outfeed guide and the conveyor. There is a guard flange to prevent the completed tablets from falling off the ring. This is comprised of a series of movable sections each held in position by a spring. The sections are depressed as they approach the outlet point by the guide cam so that they pass under the plate.

Further protection is provided for the soap tablets, or similar easily-damaged products, by a transition plate which connects the die outlet area the ring, and the angle

racket ejectors fitted to the ends of the rods.
Pronin, O.Ya., Mikhelson, L.K. Bul. 15/25.4.78.
.11.75. as 186555(5pp810)

MEY ★ D24 19923B/10 ★US 4141-866
ster soap of long chain branched mono:carboxylic acid - is ubricant for structural resin e.g. PVC
EMERY INDUSTRIES INC 23.01.78-US-871354 (23.12.74-US-535603)
A60 E17 (27.02.79) C08h-03 C08k-05/10 C09f-05/08 C11c-03/02

An ester soap is derived from a 2-25C aliphatic hydroxy cpd. having 1-10 prim. or sec. OH gps. and a 25C+ α-alkyl branched aliphatic monocarboxylic acid. The ester soap is partly saponified with an alkali metal, alkaline earth metal, amphoteric metal or heavy metal.

The acid is obtd. by free radical addn. of a 3-12C satd. aliphatic monocarboxylic acid and a mixt. of 22-100C olefins, ≥85 wt.% of the olefins being 22-60C.

Used as an internal or external lubricant for structural resins, partic. rigid PVC during extrusion, injection moulding or blow moulding. 23.1.78 as 871354 C.i.p. 4029683 (+13.9.76 - US - 722990) (10pp1302).

D25: OTHER DETERGENTS

SANO ★ D25 17999B/10 ★BE-870-010
Liq. detergent compsn. for cleaning hard surfaces - contg. nitrilo carboxylic acid, ethoxylated alkylphenol, sequence polymer, and alkanolamine
SANDOZ SA 10.03.78-CH-002644 (29.08.77-CH-010499)
A97 E19 (A25 A26) (28.02.79) C11d-01/76 C11d-03/30 C11d-10/02

Aq. detergent compsn. contains as active cpds. (A) 3-6 pts. wt. nitrilocarboxylic acid; (B) 2-6 pts. wt. 5-25 times ethoxylated (8-24C alkyl) phenol; (C) 5-15 pts. wt. alkanolamine; (D) 1-3 pts. wt. propylene oxide/ethylene oxide sequence polymer with a mol. wt. of 1500-2500 and with 5-15% ethylenoxy units at the end of the chain; (E) 0-3 pts wt. 8-14C alcohol and (F) 0-1 pt. wt. water-sol. silicone oil. The compsn. is prepd. by mixing the active cpds. with demineralised water and it is used as a 1-5 wt.% aq. soln.

The compsns. can be used for cleaning appts., reactors and pipework esp. made of glass or metal and also for cleaning walls and ceilings. They have only small tendency to foam and have a high detergent power for cleaning deposits of colourants, fats, proteins, starch, oily residues, etc. 28.8.78 as 870010 (9pp597)

PROC ★ D25 B/10 ★BR 7804-164
Detergent compsn. contg. nonionic surfactant mixts. - for cleaning solid surfaces soiled with fats and/or oils
PROCTER & GAMBLE CO 26.06.78-US-919181 (29.06.77-US-811220)
(20.02.79) C11d-01/83 D06l-01 29.6.78 as 004164

UNIL ★ D25 18355B/10 ★DT 2837-079
Liquid injection in cleansing agent - through central nozzle in perforated extrusion plate and compression chamber
UNILEVER NV 25.08.77-GB-035691
(01.03.79) B29b-01/04 C11d-13/18 C11d-17

Liquids can be injected into cleansing agents (soap or synthetic cleansers without soap) through a central hole in an extrusion die with many perforations. The dies have two patterns of perforations in two circles side by side. The space between them and the final extrusion opening converges, with a central piece of the shape of the not perforated die plate, to the final extrusion openings.

The result is a cleanser with a better quality of the stripes, if a dye is injected. Any velocity difference is equalised upstream of the perforated extrusion die. 24.8.78 as 837079 (12pp39).

KALI ★ D25 18367B/10 ★EP -----870
Sodium sulphate addn. to sodium aluminium silicate - to improve rheological properties of pastes and/or re-dispersibility of powders
KALI-CHEMIE AG 24.08.77-DT-738085
E33 (E34) (07.03.79) C01b-33/28 C11d-03/12
D/S: BE, CH, DT, FR, GB, NL, SW.

The rheological properties of NaAl silicate pastes and the re-dispersibility of NaAl silicate powders are improved by admixing the pastes with 1-25 wt.% Na_2SO_4.

NaAl silicates are used as builders in detergent compsns.

addn. prevents irreversible agglomeration. On re-dispersion in water, spray-dried powders regain their original particle size distribution. Na_2SO_4 is cheap and may be used in detergent compsns.
25.7.78 as 100496 (11pp200).
ISR: FR2319577; FR2306167; FR2340128; FR2332321; 1 Journal Reference.

PROC ★ D25 18404B/10 ★EP -----970
Continuous prodn. of di:peroxy:di:carboxylic acid(s) - by oxidn. of corresp. di:carboxylic acid with controlled feed rates of hydrogen peroxide, sulphuric acid and water
PROCTER & GAMBLE CO 11.04.78-US-895411 (31.08.77-US-829310)
E17 F06 (07.03.79) B01j-01 C07c-179/10
D/S: BE, CH, DT, FR, GB, NL.

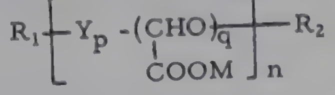
Continuous prodn. of linear 8-16 C α,ω-diperoxycarboxylic acids (I) comprises continuously adding to a stirred reactor, at 15-45°C, H_2O_2, water, H_2SO_4 and corresp. dicarboxylic acid (II). The prod. is continuously withdrawn, filtered, washed with water and dried. Inlet flow rates of H_2SO_4, H_2O_2 and H_2O are sufficient to maintain liq. concn. of 60-80% H_2SO_4, 0.5-15% H_2O_2 and 5-39.5% H_2O in the reactor. Pref. reactor is a high speed recycle reactor, partic. one with a plug flow section and a stirred tank section.

(I) are esp. useful as fabric bleaching agents. Process gives larger crystals of (I) which are more easily collected. Faster reaction conditions are obtd. with fewer safety problems.
21.8.78 as 200149 (22pp949)
ISR:-

MONS ★ D25 18418B/10 ★EP ---1-004
Polymeric acetal carboxylate detergent builders - stable in alkaline solns. but depolymerisable in acid media to biodegradable components
MONSANTO CO 08.05.78-US-904067 (22.08.77-US-826424)
A25 (A97) (07.03.79) C08g-02/14 C11d-03/37
D/S: BE, CH, DT, FR, GB, LU, NL, SW.

Intermediate priorities: 22.8.77(2)-US-826425, 826426.

A polymer having the formula:



$$R_1\left[Y_p-(\underset{\displaystyle COOM}{\underset{|}{C}}HO)_q\right]_n R_2$$

where Y is at least one comonomer randomly distributed in the polymer; n ≥ 4 (average); p = 0-2; q ≥ 1; R_1 and R_2 are chemically stable gps. which stabilise the polymer against rapid depolymsn. in alkaline solns.; and M is an alkali metal, ammonium, 1-4C alkyl or a 1-4C alkanolamine, is a novel cpd.

The polymer is useful as a complexing agent and detergency builder. It is at least as effective as sodium tripolyphosphate and depolymerises rapidly in a non-alkaline medium to form low mol. wt. components which are readily biodegradable.

18.8.78 as 300298 (29pp558)
ISR: GB876956; FR2233338.

PROC ★ D25 18474B/10 ★FR 2393-099

Liq. compsn. for softening textile materials - contg. substd. poly:amine and nonionic lubricant for fabrics

PROCTER & GAMBLE CO 30.05.77-GB-022738
A87 E16 F06 (A25) (02.02.79) D06m-13/34

The compsn. contains (a) 0.5-12 pref. 1-8wt.% substd. polyamine or corresp. salt of partial salt, of formula : $R-N^+(R_1)(R_2)\,[(CH_2)_n-N^+(R_1)_2]_m\,R_2\ A^-$ (where R is 12-22-C alkyl or alkenyl; R_1 is H, 1-3C alkyl, $-(C_2H_4O)_pH$ or $-(C_3H_6O)_gH$ (where $p+g \leqslant 15$); m is 1-5; n is 2-6; R_2 is R or R_1 onccondition that $\nless 1$ of the radicals R_2 is R; A^- is >1 anion with a total charge which balances that on the N atoms); (b) 0.5-12 pref. 1-8wt.% non-ionic lubricant for fabrics; and (c) a liq. medium.

Component (b) is (1) a $\geqslant$16C ester derived from a 12-24C fatty alcohol and a 1-8C mono- or poly-carboxylic acid; (2) a $\geqslant$16C ether of a 10-24C fatty alcohol and a 2-8C mono- or poly-alcohol; or (3) a cpd. of formula R_3-Z-R_4 (where R_3 has 12-24C atoms and R_4 has 1-6C atoms in the alkyl chain, which can contain an oxygen link; Z is S, -NHCO- or -CONH-).

The compsn., used as a softening rinse, gives to the fabric good surface characteristics. 29.5.78 as 015969. Add. to 13.7.76 as 021450. (16pp1319)

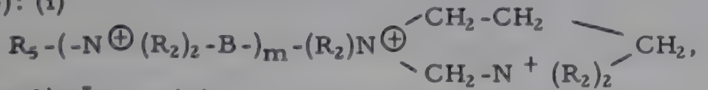
PROC ★ D25 18475B/10 ★FR 2393-100

Textile softening compsn. in form of aq. dispersion - contg. cationic surfactant and nonionic lubricant for fabrics

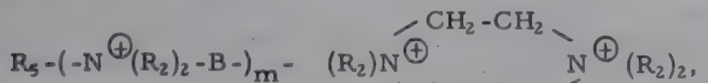
PROCTER & GAMBLE CO 30.05.77-GB-022739
E19 F06 (02.02.79) D06m-13/34

A compsn. for treatment of textiles is in the form of an aq. dispersion, the dispersed phase contg. (a) a cationic surfactant; and (b) a non-ionic lubricant for fabrics.

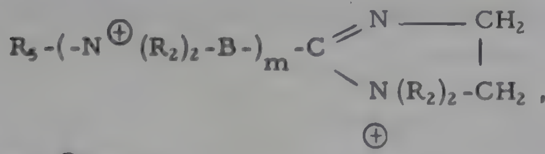
Component (a) is (1):
$R_1-A-(XH_2)_n-N^{\oplus}(R_2)_2-(-B-N^{\oplus}(R_2)_2-)_m-R_2,\ (m+1)X^-$ (where R_1 is 8-22C alkyl or alkenyl; A is -O-, -S-, -COO-, -OCO-, -CONH-, -NHCO-, or $-C_6H_4-$; B is 2-6C polymethylene possibly contg. an alicyclic or aromatic radical; R_2 is H, 1-4C alkyl, 1-4C acyl, 1-4C alkoxy, benzyl, $(C_mH_{2m}O)_pH$ (where m is 2-4, p is 1-3), or $(CH_2)_3N(R_6)_2$ (where R_6 is H, 1-4C alkyl, $(C_mH_{2m}O)_pH$); X^- is an anion; n is 1-4; m is 0-6).
(2): $R_3-N^{\oplus}(R_4)_2-(B-N^{\oplus}(R_2)_2-)_m-R_4,\ (m+1)X^-$ where R_3 is 10-22C alkyl or alkenyl; R_4 is 1-4C acyl, 1-4C alkoxy, benzyl, $(CH_2CH_2NH)_pH$ or $(CH_2)_3N(R_6)_2$.
(3): (i)



$(m+2)X^-$; or (ii):



$(m+2)X^-$, (where R_5 is 10-22C alkyl or alkenyl possibly contg. -O-, -S-, -COO-, -OCO-, -CONH-, -NHCO-, or $-C_6H_4-$), (4):



, $(m+1)X^-$, or (5):

$R_5-N^{\oplus}H(R_2)_2,\ X^-$.

(b) is (w) a $>$16C ester of a 12-24C fatty alcohol and a 1-8C mono- or poly-carboxylic acid; (x) a mono-ether of a 10-24C fatty alcohol and a 2-8C mono- or poly-alcohol; (y) $R_3'-Z-R_4$, (where R_3' has 12-24C atoms and R_4 has 1-6 C atoms in the alkyl chain, which can contain an oxygen link; Z is S, -NHCO- or -CONH-); or (z) a fatty acid ester of a 1-8C mono- or poly-alcohol or its anhydride.

The compsns. is used in a softening rinse for fabrics. 29.5.78 as 015970 Add. to 13.7.76-015970 (20pp1319)

INTE- D25 90605X/49 =GB 1538-893

Stabilising particles of peroxy salts pref. sodium percarbonate - by enrobing with sodium carbonate, sulphate and silicate

INTEROX SA 23.05.75-LU-072575
*E34 (24.01.79) *BE-842-014 C01b-15*

A particulate normally unstable alkali metal persalt of alkali metal percarbonate, perpyrophosphate, pertripolyphosphate, persilicate or peroxymonosulphate is stabilised by coating with a solid coating agent contg. sodium carbonate and compatible sodium salts such as sodium sulphate or silicate.

Pref. sodium sulphate is used to yield molar ratio of carbonate to sulphate of 0.5-5:1 (esp. 3:1). Amt. of coating agent used is pref. 0.5-20 wt.% w.r.t. persalt, (esp. 3-15 wt.%), and amt. of silicate used is pref. 1-20 wt.% (esp. 15wt.%) calculated as SiO_2 w.r.t. coating agent.

Persalt cpds. are used as bleaching cpds. in powdered detergent mixts., and have good solubility, but good stability in humid conditions. 18.5.76 as 020562 Add to 1466799 (8pp931)

ALBR D25 65000X/35 =GB 1541-561

Liquid cleaning compsn. contg. polyphosphate with improved stability - prepd. from polyphosphoric acid of 80-81 percent phosphorus pentoxide content

ALBRIGHT & WILSON LTD 11.02.75-GB-005845
*E34 (07.03.79) *BE-838-446 C11d-03/06*

Liq. cleaning compsn. of pH 8-12 comprises $\geqslant$1 surfactant together with an aq. builder soln. of alkali metal salts of $>$1 polyphosphoric acid. Builder soln. is obtd. by reacting an aq. polyphosphoric acid soln. contg. 80-81 wt.% phosphorus pentoxide with a basic deriv. of an alkali metal such that no hydrolysis of polyphosphoric acid species occurs.

Pref. reaction between polyphosphoric acid soln. and basic deriv. of alkali metal is carried out at pH 6-12 at 15-70°C. Basic deriv. is pref. of potassium opt. with $\leqslant$ 50 mole % sodium basic deriv.

Esp. used in detergent industry as compsn. is capable of sequestering heavy metal ions found in hard water areas, can act as a dispersant for solid particles, as a buffer, and interact synergistically with other detergents.
26.3.76 (6pp931)

PROC D25 03248Y/02 =GB 1541-576

Washing compsn. contg. oxid. bleach and e.g. iron porphine catalyst - avoiding attack on dyed fabrics, but bleaching dyes in soln.

PROCTER & GAMBLE CO 20.06.75-GB-026337
*E12 (07.03.79) *NL7606-702 C11d-03/28 D06l-01/12 D06l-03/02*

Fabrics are washed in an aq. bath in which the staining of fabrics due to the transfer of oxidisable dyes is inhibited. The bath contains a dissolved cpd. of iron porphins substd. in the meso-positions by 4 phenyl or pyridyl gps., $\geqslant$1 phenyl/pyridyl contg. $\geqslant$1 solubilising substituents, haemin chloride or their water-sol. derivs., or iron phthalocyanines opt. sulphonated at $\geqslant$1 benzene rings. The bath is also supplied with 10^{-4}-10^{-2} molar bleaching agent, added at rate not greater than the removal of the bleaching agents from bath by reaction with contents.

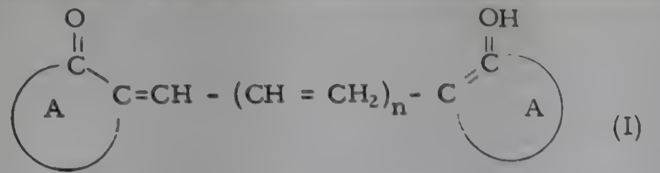
Staining of fabrics by fugitive dyes such as tea, coffee, wine and fruit stains are prevented, without damage to fabrics. 18.6.76 (8pp931)

YGOS ★ D25 18688B/10 ★J5 4011-106

Detergent compsns. - contg. bis-pyrazolone cpd. colourant, bactericide or disinfectant, pH controller, perfume, surfactant, chelating agent, etc.

YAMAMOTO KAGAKU GOS KK (SAKI) 28.06.77-JA-077463
A97 E23 (27.01.79) C11d-03/40

Detergent compsn. comprises (a) $\geqslant$1 colourant of formula (I); (b) a bactericide or disinfectant (which does not destroy the colourant, e.g. quat. ammonium salt such as benzyltrimethyl ammonium chloride, organic sulphur disinfectant such as tetramethylthiuram, or organic nitrogen disinfectants such as sodium azide; (c) a pH controller; (d) perfume; (e) surface active agent; (f) chelating agent; (g) excipient; and (h) filler.


(I)

In the formula, ring A represents 1-phenyl-3-substituted-5-pyrazolone ring where the phenyl group at 1-position represents sulphonate or carboxylate salted with an alkali(ne earth) metal ammonium or a lower alkyl ammonium and ≥1 carboxylic acid group which may be coupled with the phenyl gp. and the subst. at 3-position represents a lower alkyl, carbonyl or lower alkoxycarbonyl group and a methine group is coupled at 4-position which may be substituted by a lower alkyl group and is zero, 1 or 2. 28.6.77. as 077463 (11pp59)

PROC ★ D25 B/10 ★J5 4011-107

Detergent compsn. - contg. orthophosphate and pyrophosphate and aluminosilicate or precipitated silica

PROCTER & GAMBLE CO 21.12.77-CA-293605 (27.06.77-CA-281476)

E36 (27.01.79)

15.3.78. as 029757

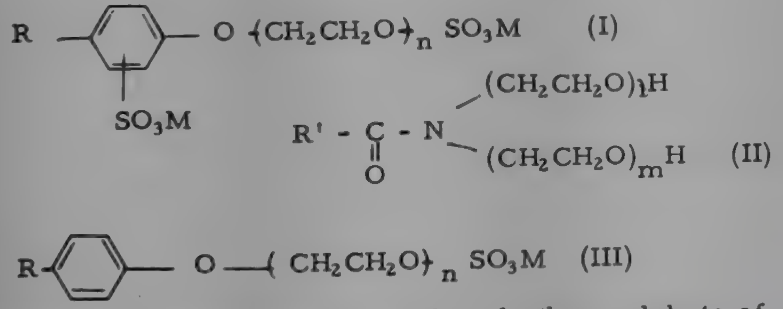
LIOY ★ D25 19190B/10 ★J5 4013-511

Liq. detergent compsn. - contg. anionic surfactant contg. polyoxyethylene alkyl-phenyl ether sulphate, alkali and polyethylene alkylamide

LION FAT & OIL KK 01.07.77-JA-078901

A25 E12 (A97) (01.02.79) C11d-01/29 C11d-03/04 C11d-10/02

Liq. detergent compsns. comprise (a) 1-10 wt.% anionic surfactant contg. ≥40 wt.% of a polyoxyethylene-alkyl-phenyl ether sulphate of formula (I) opt. in combination with a polyethylene-alkylphenyl ether sulphate of formula (III); (b) 2-5 wt.% caustic alkali and (c) 5-15 wt.% polyethylene-alkylamide of formula (II).


(I) (II) (III)

In the formulae 5-15C straight or branched chained alkyl, n is 3-15; M is Na or K; R' is 9-17C straight or branched chained alkyl, l and m are each > 1 and (l + m) is about 3-12.

The liquid compsns. can remove fouling produced by oxidn. or resinification of lubricating oil, surface active agents, fats, etc. under heating and have long storage life. 1.7.77. as 078901 (4pp59)

KAOS ★ D25 19349B/10 ★J5 4014-386

Nonionic oxyalkylene surfactant used esp. for emulsion polymerisation - is derived from a poly:hydric alcohol and has only one ether linkage

KAO SOAP KK 05.07.77-JA-080093

A97 E17 (02.02.79) B01f-17/42 C07c-43/04 C08f-02/30 C11d-01/72

A nonionic surfactant comprises a cpd. derived from a polyhydric alcohol and having only ether linkage of formula $M\left[O\{AO\}_m R\right]_n$ (I). In (I) M is a polyhydric alcohol residue having 6 hydroxyl gps. per one molecule, AO is oxyethylene gp. or oxypropylene gp., n is 3-8, m 1-50, n x m is between 1 and 150, and R is H or 8-24 C satd. or unsatd. alkyl and ≥1 of nR gps. is alkyl. The cpds. include the sesqui-lauryl ether of polyoxyethylene(contg. 40 oxyethylene gps) sorbitol, sesquistearyl ether of polyoxyethylene (contg. 60 oxyethylene gps.) sorbitol etc.

The surfactant, having a characteristic chemical structure, e.g., a number of alkyl gps. and a variety of hydrophilic gps, has a great power to emulsify, disperse, and dissolve substances, partic. exhibits a greater emulsi- in the emulsion polymerisation of ethylenic

(5pp117)

DOTH/ ★ D25 B/10 ★J5 4014-406

Detergent compsn.

DOTHORO V 05.07.77-US-812688

(02.02.79)

12.4.78. as 043074

AIRL D25 72912A/41 =NL-159-352

Stable sodium percarbonate prepn. - by contacting aq. hydrogen peroxide with saturated sodium carbonate pre-purified by caustic soda and salt addn.

AIR LIQUIDE L' 19.01.67-FR-091689

*E34 (15.02.79) *DS1667-801 C01b-15/10*

Sodium percarbonate is prepd. by a continuous recirculation reaction from a sodium carbonate soln., which opt. contains bicarbonate but from which heavy metals have been removed, and a 30-90 wt.% H_2O_2 soln.

The conc. soln. of sodium carbonate is first treated with an excess of ≯50 mol.% NaOH (based on the amt. required for converting bicarbonate to carbonate), and 0.1-3 mol.% (based on sodium carbonate) of a soluble Mg, Ca or Zn salt. The soln. is filtered, and H_2O_2 soln. added at 30-40°C. Sodium percarbonate is crystallised out, and sepd., and the mother liquor recirculated.

Specifically 20 mol.% excess of NaOH is used, and 0.5 mol.% soluble metal salt is added. The sodium percarbonate is cropped after cooling the mother liquor to 10°C, and dried e.g. with air at 50°C in a fluidised bed. Good yields are obtd. 17.1.68. as 000744 (7pp913)

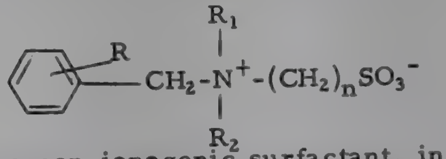
PROC D25 31202T/20 =NL-159-434

Detergent compsn - contng a zwitterionic cpd

PROCTER & GAMBLE CO 29.10.70-GB-051507

*E14 (15.02.79) *DT2153-477 C11d-01/92*

Washing agent comprises a mixt. of a sulphobetain (I)


(I)

and a non-ionogenic surfactant, in a wt. ratio of 9-1:1-9.

In the formula, R is 8-24C alkyl; R_1 and R_2 are 1-6C alkyl; and n is 1-4.

The combination of components impart properties such that much less strengthening agents (i.e. phosphates and strong chelating agents) are required, thus reducing the nutrient source for algae growth. If required, phosphates can be omitted entirely, thus eliminating a source of water-contamination. 28.10.71. as 014837 (7pp913)

AYRO- D25 16279S/09 =NL-159-435

In-situ cleaning and re-insulating of electric - generators etc

AYRODEV PROCESSES (AYR -) 22.08.69-NL-012821

*(15.02.79) *NL6912-821 C11d-07/50*

Electrical machines are cleaned using an agent comprising a cationic surfactant salt of an amine with a ≥12C hydrocarbyl residue and an organic acid, an aromatic hydroxy-acid or its ester, and an organic solvent. After cleaning the solvent is allowed to evaporate. Pref. the machine is then coated with an insulating varnish or other coating material.

Agent is esp. suitable for machines fouled with carbon-contg. material, salts, water etc. (i.e. on sea-going vessels). It does not impair the drying and hardening of insulating varnishes, as occurs using oil-based cleansers. 22.8.69. as 012821 (3pp913)

PROC D25 08409B/05 =US 4141-841

Antistatic, fabric softening detergent additive - contg. a quaternary ammonium salt, dispersion inhibitor and organic agglomerating agent

PROCTER & GAMBLE CO 18.07.77-US-816761

*E19 (27.02.79) *EP-----416 D06m-13/46*

Particulate detergent additive for preventing static build-up on textiles and softening fabrics when applied from a detergent wash liquor, is an agglomerate of 5-75 wt.% water-soluble neutral or alkaline salt; 5-75% particles being intimate mixt. of 80-20 wt.% of quat. ammonium cpd. $[R_1R_2R_3R_4N]^+Y^-$ where 1-2 R gp. is 16-22C aliphatic or 10-16C alkyl phenyl or alkyl benzyl, remainder R gps. being 1-4C alkyl, 2-4C hydroxyalkyl and cyclic structures contg. N, Y is anionic hydroxide, halide, sulphate, methylsulphate, ethylsulphate and phosphate ion; 20-80 wt.% dispersion inhibitor being solid organic material having max. solubility in water of 50ppm. at 25°C and softening point at 100-200°F; 5-75 wt.% organic agglomerating agent. Individual particles have size 10-50µ.

Compsn. may also contain certain types of smectite clay to enhance fabric-softening properties. 18.7.77 as 816761 (14pp931).

FARH D25 26933A/15 =US 4141-938
Mixed orthophosphate ester(s) prepn. - from phosphorus pentoxide, alcohol and poly:ol in defined ratio
HOECHST AG 07.10.76-DT-645211
*E11 H07 M12 (27.02.79) *BE-859-433 C07f-09/09*

Mixt. of acid phosphoric acid esters are prepd. where P_4O_{10} is reacted by mixing or kneading it with a blend contg. a monohydric alcohol and an alkane polyol contg. 2-12C and 2-6-OH gps. in molar ratio of P_4O_{10} to monohydric alcohol to alkane polyol of 1:2:4/n, n being no. of -OH gps. present in polyol.

Reaction is carried out at 0-120°C in the presence of inert gas over 1-6 hrs. and cooling resultant prod. Orthophosphoric acid esters are similarly prepd. by reacting phosphorous (V)-oxide with mixt. of monohydric and polyhydric alcohol under anhydrous conditions.

Prods. are used as acid cleaning compsns. for metals. Derivs. are used as emulsifiers, wetting agents, lubricants, antistatic agents or foam-regulating additives. 16.11.77 as 851944 (+ 3.10.77 - US - 838464) (6pp931).

See Also

D15 DT 2737259 D15 J5 2738720 D21 EP --1006

AAIN= 19.07.77 AS ARMN INORG CHEM A97 D13 (A14) =GB 2003-166
Chewing gum base - 12242B/07
ABBO 19.10.77 ABBOTT LABORATORIES A60 C02 D22 E13 *US 4141-905
Bactericidal and fungicidal 2-methyl-1-naphthyl maleimide - 19938B/10
ABHE= 30.07.74 AS BELO HEAT MASS D16 J07 *SU -602-756
Thermally sensitive material dryer - 19594B/10
AGEN 30.06.77 AGENCY OF IND SCI TECH D16 *J5 4011-877
Device for contacting e.g. oxygen with a liq. - 18927B/10
AGRO- 03.09.75 AGROTECHNIKA NP D15 =DS 2639-836
Water treatment plant - 20376Y/12
AIRL 19.01.67 AIR LIQUIDE L' D25 E34 =NL -159-352
Stable sodium percarbonate prepn. - 72912A/41
AIRL 01.06.77 AIR LIQUIDE L' B05 D16 =FR 2393-061
Tetracycline antibiotics fermentation prodn. - 00263B/01
AJIN 29.03.74 SANRAKU-OCEAN KK B02 D16 =US 4141-972
Purine nucleoside-5-phosphate-2 or 3 -mono or di-phosphates - 69160W/42
*AJIN 28.06.77 AJINOMOTO KK D17 *J5 4011-249
Non:agglomerated oil-processed starch giving lower viscosity slurry - 18773B/10
AKCH= 28.06.74 AS KAZA CHEM SCIE C03 D23 =CA 1048-846
Food quality fat concentrate having good stability - 07815X/05
ALBR 11.02.75 ALBRIGHT & WILSON LTD D25 E34 =GB 1541-561
Liquid cleaning compsn. contg. polyphosphate with improved stability - 65000X/35
*ALBR 18.08.77 ALBRIGHT & WILSON LTD D21 E16 (D25) *EP ---1-006
Surfactant N-carboxy-alkylated acylated ethylene di:amine cpds. - 18420B/10
ALFA 18.04.75 ALFA-LAVAL AB D13 =CA 1048-955
Paracasein cutting machine - 83491X/45
*ALFA 26.08.77 ALFA LAVAL STALLTEC D15 J02 *GB 2003-043
Liquid aerating stirrer e.g. for manure or sewage - 18516B/10
ALHA/ 17.08.77 ALHAUSER E B07 D15 =DT 2737-121
Pyrogen-free sterile water prodn. by reverse osmosis - 16396B/09
*ALMI= 08.08.74 AS LATV MICROBIOL D16 *SU -602-544
Microbiological glucoamylase prodn. - 19475B/10
*AMCY 26.10.76 AMERICAN CYANAMID CO A91 D15 J01 (A14) *US 4141-827
Clarification of coal washing waste water - 19903B/10
AMCY 14.02.77 AMERICAN CYANAMID CO A96 D22 F04 =PT --67-517
Tissue resorbable haemostatic surgical dressings - 60760A/34
AMHP 22.08.77 AMERICAN HOME PROD CORP D13 =DT 2836-575
Edible, sprayable, lecithin vegetable oil compsn. - 15979B/09
AMHP 22.08.77 AMERICAN HOME PROD CORP D13 =US 4142-003
Edible, sprayable, lecithin vegetable oil compsn. - 15979B/09
*ANVR 18.05.77 AGENCE NAT VALORISATION B04 D16 *FR 2393-004
Alkaloid extracted from Alangium vitiense - 18465B/10
ARCA- 07.01.77 ARCALON BV D15 E36 J09 =PT --67-495
Pyrolysing wet organic residues, esp. drain sludge - 49708A/28
*ASAE 08.07.70 ASAHI ELECTROCHEM IND KK D15 E36 *J7 9002-617
Separating suspended particles from e.g. waste water - 19388B/10
*ASAH 28.06.77 ASAHI CHEMICAL IND KK B04 D16 *J5 4011-233
Detoxicant for treating renal and hepatic diseases - 18762B/10
*ASAH 29.06.77 ASAHI CHEMICAL IND KK A97 D16 J01 *J5 4011-088
Sepn. of organic cpd. adsorbed on protein - 18677B/10
*ASAH 25.08.77 ASAHI KASEI KOGYO A41 D15 E16 *DT 2743-683
Continuous adsorbent regeneration - 18292B/10
ASHE= 23.02.76 AS USSR HEAT PHYS D15 J01 =SU -602-750
Freeze-desalting concentrator - 82046Y/46
*ASHI= 07.12.76 AS USSR HIGH MOLEC CPDS A14 D21 (A96) *SU -603-381
Durable dental prostheses prodn. - 19642B/10
*ASMI= 06.02.74 AS USSR MICROORGANISM D16 *SU -602-540
Culture fluid microorganisms concentration monitor - 19471B/10
ATAD- 18.04.67 ATAD SA D14 =NL -159-269
Liquid sterilization/pasterurization - 26533S/16
*ATDE- 30.01.78 A & T DEV CORP D15 *US 4141-798
Solar still defined by parallel dikes sepd. by ditch - 19885B/10
AUHE= 23.02.76 AS UKR HEAT PHYS D15 (D13 D16) =SU -602-751
Freeze crystalliser for brine desalination or concn. of drinks - 86975Y/49
*AVIC- 29.08.77 AVICON INC D12 (D18 D22) *GB 2003-158
Pyrogen-free collagen prodn. - 18542B/10
AYRO- 22.08.69 AYRODEV PROCESSES D25 =NL -159-435
In-situ cleaning and re-insulating of electric - 16279S/09
*AZOV= 01.07.76 AZOV-BLACK SEA FISH D12 *SU -603-365
Uniform distribution of small fish on transporter trays - 19638B/10

*BABA- 05.07.77 BABA RES INST KK D15 E31 J01 M25 *J5 4014-388
Coal chelating agent for hexavalent chromium redn. and adsorption - 19351B/10
BADI 11.04.70 BASF AG A16 B07 D21 F07 (A87 A96) =DS 2017-451
Cross-linked polycarboxylic acids, for thick - 69527S/44
BADI 13.09.73 BASF WYANDOTTE CORP D13 =CA 1048-853
Chemically peeling edible fruit and vegetables - 24549W/15
BADI 16.09.74 BASF AG B02 C02 D13 E13 =DS 2534-689
Thiophene-saccharin cpds - 24791X/14
BADI 27.07.77 BASF AG A97 D25 =GB 2003-205
Cold bleaching activators for washing compsns. - 08009B/05
BADI 27.07.77 BASF AG A97 D25 =SW 7808-049
Cold bleaching activators for washing compsns. - 08009B/05
*BADI 25.08.77 BASF AG A25 D15 H03 (A97) *EP -----933
Oil-absorbing hydrophobic polyurethane foams - 18388B/10
BAHR/ 14.02.75 BAHR A D15 =GB 1541-510
Filter process for dehydrating sewage sludges - 57879X/31
BAKP 03.11.76 BAKER PERKINS HLDGI D13 =GB 1538-885
Lollipop producing machine - 35232A/20
*BALA/ 11.10.76 BALABANOV I G D15 J01 *SU -603-419
Efficient ion-exchange filter - 19669B/10
BAXT 10.04.69 BAXTER TRAVENOL LAB A24 B07 D22 (A97) =DS 2016-269
Separation and preservation of lymphocytes - 76114R/41
BEAF 12.08.77 BEATRICE FOODS CO D13 =DT 2834-093
Natural tasting cheese substitute compsns. - 14565B/08
BECI 14.10.75 BECKMAN INSTRUMENTS INC B04 D16 =CA 1048-910
Fluorometric isoenzyme analysis - 12820Y/08
BEEC 20.04.74 BEECHAM GROUP LTD B02 C02 D16 =SW 7811-200
Clavulanic acids and derivs - 72840W/44
BEEC 20.04.74 BEECHAM GROUP LTD B02 C02 D16 =SW 7811-201
Clavulanic acids and derivs - 72840W/44
BEEC 20.04.74 BEECHAM GROUP LTD B02 C02 D16 =SW 7811-202
Clavulanic acids and derivs - 72840W/44
BEEC 20.04.74 BEECHAM GROUP LTD B02 C02 D16 =SW 7811-203
Clavulanic acids and derivs - 72840W/44
*BEER= 03.01.77 BEER NON-ALCOHOLIC D13 *SU -603-368
Carbonated non-alcoholic drink based on sugar syrup, whey and lemon - 19641B/10
BEHW 02.07.74 BEHRINGWERKE AG B04 C03 D16 =DS 2431-720
Crystalline C-reactive protein production - 05768X/04
*BENC 18.08.77 BENCKISER-KNAPSACK D15 E11 F06 M14 (D25 F09) *DT 2737-259
Amino-alkane-carboxylic-di:phosphonic acid prodn. - 18188B/10
BENC 18.08.77 BENCKISER-KNAPSACK D15 E11 F06 M14 (D25 F09) =EP -----930
Amino-alkane-carboxylic-di:phosphonic acid prodn. - 18188B/10
BERG 31.07.74 BERGWERKSVERBAND GMBH D15 =CA 1048-940
Waste water purifn by adsorption of activated carbon - 78746W/48
BERT/ 26.07.68 BERTHELSEN E B A13 D23 G04 H08 =DS 1937-460
Sealing materials based on animal vegetable or mineral - 17910R/11
*BIOC= 17.12.75 BIOCHEM INST D16 *SU -602-859
Champagne quality control analysis - 19618B/10
*BIOL= 06.02.74 BIOL INSTR DES BUR D16 *SU -602-540
Culture fluid microorganisms concentration monitor - 19471B/10
BIOR- 24.06.77 BIO-RESEARCH CENTRE A41 D16 E13 G02 =J5 4011-297
Microbiological prepn. of epoxide cpds. - 15534B/08
BIOT- 03.06.70 BIOTEKNIKA INT INC D16 H04 =J7 9002-788
Microbiological decomposition of petroleum - esp sea contamination - 79285S/50
*BIOT- 17.10.75 BIOTRICS INC B04 D16 *US 4141-973
Ultra pure, high molecular wt. hyaluronic acid - 19964B/10
*BLUE- 25.08.77 BLUE CIRCLE IND LTD D15 *GB 2003-129
Removal of heavy metals from water - 18536B/10
BOEH 07.04.75 BOEHRINGER C H SOHN D16 =DS 2559-462
Active dry yeast for baking brewing - 90869X/49
BORS/ 12.08.77 BORST A H D15 =GB 2003-128
Combined waste water treatment and rubbish disposal - 89700A/50
*BOUD/ 31.05.77 BOUDONIS E B05 D21 *FR 2392-673
Tanning accelerating and sunburn preventing compsn. - 18440B/10
BRAU- 00.00.76 BRAUN K O KG A96 D22 F07 =DT 2737-268
Readily torn elastic bandage for surgical and sports usage - 80224A/45
BRIM 27.06.75 BRISTOL MYERS CO B04 C03 D16 (D22) =GB 1541-473
Antibiotic figaroic acid complex - 03938Y/03
*BROW- 31.03.76 BROWN CO D22 E34 F09 *CA 1048-874
Animal litter prepd. from dried, pelleted repulping rejects - 18094B/10
BRTA 13.03.72 BRIT AMER TOBACCO LTD D18 E34 F09 =NL -159-448
Cigarette papers treated with sodium/potassium chlorates - 20415U/15
BRTO 07.04.75 BOC INT LTD A97 D15 =GB 1541-837
Oxygenation of polluted water - 34411Y/19
*BRTO 05.08.75 BRITISH OXYGEN LTD D15 *US 4141-823
Waste water treatment to reduce BOD - 19899B/10
*BRUG/ 03.06.77 BRUGUIERE H A82 D18 *FR 2393-068
Shaped leather panels stiffened by internal coatings - 18469B/10
*BUCM 24.08.77 BUCHERGUYER MASCH D16 *DT 2738-172
Large horizontal container drive - 18245B/10
BUHL 05.06.70 GEB BUHLER AG C03 D13 =NL -159-268
Food and fodder prodn - from cheap raw materials - 80687S/51
*BURN- 21.11.66 BURNETT & ROLFE D22 (D16) *NL -159-299
Container washing, sterilising and filling installation - 19420B/10

*CANC- 22.08.77 INST OF CANCER RES B04 D16 *EP -----938
Macromolecular complexes of biological origin - 18392B/10

*CARL/ 12.09.77 CARLSON H C D12 *US 4141-114
Appts. for shucking bivalve molluscs - 19776B/10
CHEM- 16.08.77 CHEMAP AG A96 D16 =DT 2831-085
Cultivating animal cells as monocellular layer - 16413B/09
CHEM- 16.08.77 CHEMAP AG A96 D16 =NL 7806-515
Cultivating animal cells as monocellular layer - 16413B/09
*CHER= 11.01.77 CHERKASSK MECH ENG D12 *SU -603-364
Meat cutting compact machine - 19637B/10
*CHIY 01.07.77 CHIYODA CHEM ENG CO D15 *J5 4013-659
Polluted soil purification in closed system - 19254B/10
*CHIY 04.07.77 CHIYODA CHEM ENG CO D15 *J5 4013-466
Treating soil or sludge contg. heavy metals - 19163B/10
CHRI/ 03.02.70 CHRIST C D13 =FR 2392-608
Ensilage process for vegetable or animal substances - 30451A/17
CHUS 06.09.69 CHUGAI SEIYAKU KK C02 D16 =DS 2044-023
Miticidal macrotetrolide antibiotic - 20006S/11
*CHUS 24.06.77 CHUGAI PHARMACEUTICAL KK C02 D22 E13 F09 *J5 4011-203
Woody material treating agent - 18749B/10
CHUS 18.08.77 CHUGAI SEIYAKA KK B02 C02 D13 =NL 7808-487
Animal e.g. cattle, sheep or pigs growth promotion - 16289B/09
CHUS 18.08.77 CHUGAI SEIYAKA B02 C02 D13 =NL 7808-487
Animal e.g. cattle, sheep or pigs growth promotion - 16289B/09
CIBA 17.08.73 CIBA GEIGY AG B04 D16 =SW 7808-905
Fermentative prodn. of desacetoxycephalosporin C - 16346W/10
COAG- 19.08.77 LA COMML AGRICOLA D14 =DT 2835-112
Mixing and distributing machine for farm animal fodder - 89679A/50
COAG- 19.08.77 LA COMML AGRICOLA D14 =NL 7808-460
Mixing and distributing machine for farm animal fodder - 89679A/50
COLG 15.03.72 COLGATE PALMOLIVE CO A96 D21 =PT --59-423
Is encapsulated and ony liberated when the dentifrice is used - 50298U/35
COLG 13.07.73 COLGATE PALMOLIVE CO D25 =CA 1048-709
Dual purpose detergent softening compsn. - 85697V/50
*COLG 09.01.75 COLGATE PALMOLIVE CO D21 *US 4141-947
Variegated soap bar mfr. - 19956B/10
COLG 19.08.76 COLGATE PALMOLIVE CO D22 =GB 1541-775
Tape fastener for disposable diaper - 68421Y/38
COLG 24.01.77 COLGATE PALMOLIVE CO A97 D25 =PT --67-558
Combined detergent and scrubbing article - 68847A/38
COLG 22.02.77 COLGATE PALMOLIVE CO D21 E37 =US 4141-969
Tooth paste stored in unlined aluminium container - 62160A/35
COLG 15.07.77 COLGATE PALMOLIVE CO D25 =NO 7802-445
Toilet soap contg. polyethylene oxide and fatty acids - 82204A/46
COLG 17.08.77 COLGATE PALMOLIVE CO A97 D24 (A14 D25) =DT 2835-001
Soap tablet contg. fatty acid salt and interpolymer - 89696A/50
*COLG 25.10.77 COLGATE PALMOLIVE CO D21 E34 *BE -871-494
Deodorant stick based on alkali metal bi:carbonate - 18051B/10
*COLG 31.01.78 COLGATE PALMOLIVE CO D22 *PT --67-602
Disposable diaper - B/10
COLO- 24.05.77 COLOPLAST INT SA A96 D22 (A18) =J5 4013-693
Non-irritating stoma bag sealing or closing material - 89980A/50
COLT- 30.06.77 COLTENE AG A96 D21 (A26) =J5 4013-559
Silicon compsn. for showing pressure spots under dentures - 02160B/02
CORP 22.10.76 CPC INTERNATIONAL INC D13 (D17) =FR 2393-067
Sepg. a corn starch milk into protein and starch - 15966A/09
*CRIM= 08.12.75 CRIMEA GLAVPRODINTO D16 *SU -602-813
Grape juice sampler - 19606B/10
*CROM- 01.09.78 CROMBACH INVESTMENT D12 *BE -870-134
Hand tool to open bivalve shellfish esp. oysters - 18019B/10
CSIR 18.07.77 COMMONWEALTH SCIENT ORG D14 =GB 2003-019
Threshing drum for stripping haulm from vegetable matter - 11282B/06

*DAGE= 11.11.73 DAGESTAN NUTRIENT B04 D16 *SU -602-549
Neisseria meningitidis selective culturing medium - 19479B/10
*DAIK- 24.06.77 DAIKI GUM KOGYO KK D15 E36 J03 *J5 4010-559
Electrolytically treating waste water to remove phosphorus component - 18572B/10
DAIL 19.09.75 DAICEL KK A88 D18 F06 (A11) =CA 1048-886
Cigarette filters contg. cellulose acetate fibres - 22221Y/13
DDAL/ 05.01.77 DA DALT G D16 =PT --67-492
Cylindrical wine-making vessel pivoted about open end - 73191A/41
DEGS 19.03.77 DEUTSCHE GOLD & SILBER D25 E34 =PT --67-581
Stabilised sodium percarbonate for washing powders - 67099A/38
*DEME/ 03.06.77 DEMERSON J R M D15 *FR 2392-940
Activated carbon filter to purify tap water for drinking - 18459B/10
*DENE- 27.08.77 DEUTSCHE NEMECTRON D21 *DT 2738-693
Skin pores cleaning system - 18284B/10
DOLL- 00.00.75 DOLL GMBH B03 C02 D21 =US 4142-050
Salts of hexetidine with aromatic carboxylic acids - 32793Y/19
DOLL- 16.06.76 DOLL GMBH B03 C02 D21 =US 4141-968
Salts of hexetidine with aromatic carboxylic acids - 32793Y/19
DOMT 29.04.75 DOMTAR LTD C03 D22 E35 F09 =GB 1538-919
Treatment of wood with ammoniacal preserving liquor - 89720A/50
*DOTH/ 05.07.77 DOTHORO V D25 *J5 4014-406
Detergent compsn. - B/10
*DOUW 24.08.77 DOUWE EGBERTS KON D13 *DT 2835-519
Juices and extracts concn. - 18329B/10
DRAG- 23.11.76 DRAGOCO GEBERDING & D23 E14 =US 4142-053
Beta-resorcylic ester prodn. from corresp. di:hydro cpds. - 38718A/22
DRAG- 27.06.77 DRAGOCO GERBERDING D22 E17 (D21) =J5 4011-235
Compsn. contg. 3,7,11-tri:methyl-dodeca-2,6,10 trien-1-ol - 00432B/01
DRAG- 27.06.77 DRAGOCO GERBERDING D21 E17 =J5 4012-313
Glycerine:tri-3,5,5-tri:methyl-hexanoate - 06187B/04
DREE- 15.10.70 DREES & CO GMBH D18 =DS 2050-539
Hydraulic setting - 27742T/18

EAST 11.12.75 EASTMAN KODAK CO A97 B04 D16 =DS 2656-063
Cholesterol oxidase and cholesterol esterase, prodn. - 41723Y/24
EBAI 17.05.74 EBARA INFILCO KK D15 E33 =J5 0147-158
Waste water treatment using aluminium sulphate as flocculant - 19410B/10
*EBAI 17.05.74 EBARA INFILCO KK D15 E33 *J7 9002-790
Waste water treatment using aluminium sulphate as flocculant - 19410B/10
*EBAI 29.06.77 EBARA INFILCO KK D15 *J5 4011-882
Desalinating sea water, brine or waste water - 18931B/10
EDEL 24.05.77 EDELFETTWERKE SCHLUTER D13 =DT 2738-536
Coffee mixture mfr. for use in coffee bags - 70825A/40
EFFE- 15.08.77 EFFEM FOODS PTY C03 D13 =NL 7808-449
Animal food, esp. for cats and dogs, based on animal blood - 14161B/08
ELBI- 18.08.77 ELBICON ELECTRONICS D14 =DT 2836-025
Foreign body detection by reflected polarised infrared light - 06418A/04
ELBI- 18.08.77 ELBICON ELECTRONICS D14 =NL 7808-355
Foreign body detection by reflected polarised infrared light - 06418A/04
*ELIL 20.10.77 ELI LILLY & CO B03 C02 D13 E13 *US 4141-907
Antibiotics 20-deoxy-narasin and 20-deoxy-epi-17 narasin - 19939B/10
ELMQ/ 27.07.77 ELMQVIST O A88 D15 =SW 7708-597
Heat exchanger flow elements comprising plastics foils - 15958B/08
ELMQ/ 27.07.77 ELMQVIST O A88 D15 =SW 7708-598
Heat exchanger elements utilising solar energy - 15959B/08
*EMEY 23.12.74 EMERY INDUSTRIES INC A60 D24 E17 *US 4141-866
Ester soap of long chain branched mono:carboxylic acid - 19923B/10
ENER- 04.10.71 ENERGY SCIENCES INC D22 =SU -603-321
Bulk sterilization - 23199U/17
*ENVI- 18.10.76 ENVIRONMENTAL ELEME D13 *GB 1541-853
Removing floating contaminant from liq. - 18509B/10
*ETHI 19.01.77 ETHICON INC A25 D22 F01 (A96) *US 4141-087
Synthetic absorbable sutures of isomorphic poly:oxalate copolymer - 19773B/10
*EVER/ 22.08.77 EVERS H C A D22 E19 (E37) *DT 2835-652
Disinfecting and cleaning contact lenses without allergic reaction - 18333B/10
EVER/ 22.08.77 EVERS H C A D22 E19 (E37) =GB 2003-033
Disinfecting and cleaning contact lenses without allergic reaction - 18333B/10

FARB 15.02.74 BAYER AG A23 D15 J01 (A91) =US 4142-035
Polycondensates as metal-absorbents, coatings, stabilisers and cats - 58976W/36
FARB 28.02.74 BAYER AG B02 D16 =CA 1048-950
Prepn. of 7-amino-3-cephem-4-carboxylic acids - 61574W/37
FARB 09.09.76 BAYER AG D15 =US 4141-829
Treating waste water contg. organic matter by oxidn. - 19659A/11
FARB 17.05.77 BAYER AG D15 =J5 4013-465
Two/stage biological waste water treatment - 87948A/49
*FARB 19.08.77 BAYER AG A93 D22 E13 G04 (A26) *DT 2737-405
Silicone sealant compsns. contg. benzimidazolyl carbamate cpds. - 18204B/10
FARB 19.08.77 BAYER AG A93 D22 E13 G04 (A26) =EP -----892
Silicone sealant compsns. contg. benzimidazolyl carbamate cpds. - 18204B/10
*FARB 27.08.77 BAYER AG B02 C01 D15 E11 (D21 D25) *DT 2738-720
Sequestering agent cyclic di-phosphonic acid derivs. - 18285B/10
*FARB 27.08.77 BAYER AG B03 C02 D13 *EP -----947
Tri:hydroxy-piperidine derivs. - 18396B/10
FARH 23.07.74 HOECHST AG A97 B04 D16 =SU -603-347
Moenomycin fermentation prodn. - 11415X/07
FARH 07.10.74 HOECHST AG A97 D12 (A11) =US 4142-013
Cellulose hydrate sausage casings - 30141X/17
FARH 15.05.76 HOECHST AG A88 D15 =DS 2621-698
Treating waste water, esp. from cess pits, with flocculants - 82920Y/47
FARH 07.10.76 HOECHST AG D25 E11 H07 M12 =US 4141-938
Mixed orthophosphate ester(s) prepn. - 26933A/15
FARH 19.08.77 HOECHST AG A97 D25 E11 (E34) =NL 7808-535
Detergent additive contg. sodium sulphate and/or tri:poly:phosphate - 11931B/07
*FARH 20.08.77 HOECHST AG D23 E17 (E16) *DT 2737-607
Fatty acid nitrile(s) and glycerol prodn. - 18213B/10

*FARH 20.08.77 HOECHST AG D13 E17 (D21 E16) *EP -----916
Simultaneous prepn. of fatty acid nitrile(s) and glycerol - 18378B/10
FARM- 06.02.74 FAR-MAR-CO INC C03 D13 =CA 1048-847
Fortifying food and feed prods. with amino acids - 86442W/52
*FATS= 23.07.76 FATS RES INST D13 *SU -603-366
Butter-like margarine with high linoleic acid content - 19639B/10
FELT- 14.03.75 FELTEX LTD D15 F06 #CA 1049-163
Contaminated water purif - 24133W/14
*FERR- 18.08.77 FERRUM AG D14 *DT 2834-985
Date stoning machine - 18321B/10
FIRM 28.06.77 FIRMENICH SA D23 E13 =J5 4012-368
3-Methyl-2-(3-methyl-but-2-en-1-yl)-furan prepn. - 04549B/03
*FIRM 26.08.77 FIRMENICH SA D23 E15 *DT 2836-477
Spiro cpd. prodn. for use in perfumery industry - 18353B/10
*FISH= 30.12.76 AZOV-BLACK SEA FISH D16 *SU -603-367
Agaroid prepn. from Black sea phyllophora algae - 19640B/10
FMCC 28.03.75 FMC CORP A97 D13 (A11) =CA 1048-852
Spreadable heat resistant edible jelly - 28269X/15
FORB/ 15.12.76 FORBERG S D15 E32 K05 =FR 2392-936
Titanate ion exchangers prepn. - 46152A/26
*FREU- 21.07.77 JF FAB FREUDENDAHL C03 D13 *DK 7703-303
Appts. for treating straw with ammonia - B/10
FRNG 26.11.71 FRINGS H FA D16 J01 =DS 2254-860
Continuous ultra-filtration plant - 35107U/25
*FUIT 05.07.77 FUJITSU LTD D15 *J5 4014-366
Recovery system for high purity water - 19335B/10
*FUKU/ 05.07.77 FUKUI K A97 D15 E12 F06 (F09) *J5 4014-382
Reductive decolouriser for treating e.g. dyes - 19347B/10
*FUSE/ 03.06.77 FUSEY P A97 D15 *FR 2392-941
Removing clogging oils and fats removed during used water purification - 18460B/10

GASB/ 09.02.76 GASBARRO G N D12 =CA 1048-718
Poultry carving machine - 57989Y/33
*GELF/ 01.08.76 GELFAND E D C03 D16 (D13) *SU -602-552
Vegetable raw material hydrolysate neutralisation - 19482B/10
GENM 04.08.77 GENERAL MILLS CHEM D17 G05 =US 4141-747
Large granule starch sepn. from native starch - 12381B/07
GENO 10.06.74 GENERAL FOODS CORP D13 =CA 1048-850
Rapidly setting gelatine dessert mixture - 00459X/01
*GENO 25.08.77 GENERAL FOODS CORP D13 *DT 2836-304
Sepn. and recovery of aroma constituents - 18350B/10
GENO 29.08.77 GENERAL FOODS CORP A97 D13 E23 =GB 2003-016
Stabilising erythrosine in acid food prods., esp. drinks - 04084B/03
*GENO 17.05.78 GENERAL FOODS CORP D13 *US 4142-002
Brewable mixt. of comminuted roast coffee and wheat - 19977B/10
GIVA 18.04.68 GIVAUDAN L & CIE SA D23 E14 =NL -159-359
Beta phenylethyl alcohol of perfume - 42895R/24
GIVA 09.08.76 GIVAUDAN L & CIE SA D13 E16 =FR 2392-610
Food flavouring compsn. - 14382A/08
GIVA 31.05.77 GIVAUDAN L & CIE SA D13 =FR 2392-611
Bread- or meat-like food flavourings - 90029A/50
GIVA 31.05.77 GIVAUDAN L & CIE SA D13 =J5 4011-280
Bread- or meat-like food flavourings - 90029A/50
GIVA 11.08.77 GIVAUDAN L & CIE SA D13 E13 =EP -----907
4-Cyano-tetra:hydro-furan-3-one(s) and 4-hydroxy derivs. - 14604B/08
GRAC 10.12.76 GRACE W R CO A96 B04 D16 (A25) =FR 2393-005
Dispersion of solns. of immobilised protein(s) esp. enzymes - 27023A/15
*GRAN- 27.10.77 GRANDS MOULINS PARI D11 *BE -871-553
Small oven for browning pre-baked loaves etc. on rollers - 18061B/10
*GRIF/ 13.12.65 GRIFFIN G D D16 *DS 1592-657
Compost turning and aerating machine - 18101B/10
GRUN/ 23.01.76 GRUN G C03 D13 J04 (J02) =US 4141-316
Mixing of granular materials with treatment liquids - 36310Y/21

*HAGE- 24.08.77 HAGER + ELSASSER D15 J01 *DT 2738-120
Thermal regeneration of water treatment material - 18238B/10
*HAGG 11.01.68 HAG AG D13 *DS 1668-236
Multistage recovery of antioxidants from green coffee beans - 18102B/10
*HANA/ 29.06.77 HANANO T B06 C05 D13 E34 *J5 4012-103
Gel forming process - 19004B/10
*HASE 28.06.77 HASEGAWA KK C03 D23 E17 (E14) *J5 4012-309
3-Hexynyl- and cis-3-hexenyl-ether(s) - 19017B/10
HASH/ 31.08.73 HASHIMOTO S A97 D15 G04 =J7 9002-786
Water purifying agent prepn - 67427X/36
HAVE- 23.10.73 HAVERHILL MEAT PROD D12 =DS 2450-277
Animal stunning tongs - 19307W/12
*HAWK 19.08.77 HAWKER SIDDELEY BRA A88 D15 *DT 2834-393
Screen seal arrangement - 18313B/10
HENK 28.12.70 HENKEL KG AUF AKTIEN D15 E34 J01 =DS 2063-939
Water purification - 49122T/31
HENK 07.05.73 HENKEL KG AUF AKTIEN D25 =CA 1048-909
Washing agents for dish washing machines - 76861V/44
HENK 24.09.73 HENKEL KG AUF AKTIEN C02 D22 =CA 1049-026
Epoxide/caprolactam/diamine addition prods - 24469W/15
HENK 18.05.74 HENKEL KG AUF AKTIEN A97 D25 E16 (A25) =CA 1049-042
Ethoxylated amino-alcohol surfactant - 80229W/49
HENK 23.02.76 HENKEL KG AUF AKTIEN D21 E11 =US 4141-967
Cosmetics using esters of alkane disphosphonic acid as deodorants - 61140Y/35
HENK 18.06.77 HENKEL KG AUF AKTIEN D25 E33 =BR 7803-838
Aluminosilicate cpds. contg. combined surfactants - 91495A/51
HENN- 29.08.77 HENNINGSEN FOODS D14 J08 =GB 2003-042
Horizontal spray dryer for food products etc. - 01958B/02
HENN/ 01.12.75 HENNESSY J B D12 =GB 1541-589
Manual measuring instrument esp. for animal carcase fat layers - 42692Y/24
HENR/ 12.07.76 HENRIKSON S A D15 =GB 1541-531
Lime water soln. for sewage treatment - 06711A/04
HERR/ 25.08.77 HERRNDOBLER F D11 =DT 2738-403
Ingredients and processes for mfg. rolled sugar free cakes - 00057B/01
*HETO 17.01.75 HETEROORG CPDS AS USSR B04 C03 D16 *SU -602-543
Aminoacid and lower peptide mixt. prepn. - 19474B/10
*HITA 01.07.77 HITACHI KK D15 *J5 4013-464
Bubble-removing device for e.g. aerobic incubating liq. - 19162B/10
*HITA 01.07.77 HITACHI KK D15 L03 M11 *J5 4013-494
Calcium fluoride and phosphate-contg. sludge treatment - 19180B/10
*HITF 28.06.77 HITACHI SHIPBLD ENGG KK D15 E37 *J5 4011-067
Treatment of muddy water sludge - 18662B/10
HOEK- 29.03.77 HOEKA SIERPLEISTERS A82 C03 D22 F09 =J5 4011-202
Wood preservative treatment - 70810A/40
HOFF 12.10.72 HOFFMANN-LA ROCHE AG C02 D13 =DS 2342-213
Antibacterial treatment of fish food - 34013V/18
HOFF 12.08.77 HOFFMANN-LA ROCHE AG D23 E15 =DT 2834-557
2,2,4-Tri:methyl-cyclopent-4-en-1,3-di:one prepn. - 14605B/08
HOFF 12.08.77 HOFFMANN-LA ROCHE AG D23 E15 =EP -----885
2,2,4-Tri:methyl-cyclopent-4-en-1,3-di:one prepn. - 14605B/08
HOLB/ 02.06.77 HOLBEK K C03 D22 E12 F09 (E31 E32) =FR 2393-086
Wood preservative impregnated cellulose fibres - 87861A/49
*HORI- 29.06.77 HORIUCHI ITARO KK D13 E13 *J5 4012-400
Stevioside prepn. from Stevia rebaudiana - 19060B/10
HURK/ 24.04.73 HURKA W D22 E19 =NL -159-284
Disinfection of human or animal skin - 39944V/22
*HYDR= 02.08.76 HYDRAULIC ENG RES D15 J01 *SU -603-404
Filter for purifying bilge water - 19656B/10

ICIL 12.12.74 ICI UNITED STATES D17 E17 =CA 1049-047
Polyhydroxy alcohols prodn. - 48007X/26
ICIL 19.05.76 IMPERIAL CHEM INDS LTD B04 C03 D16 =US 4141-974
Aureolic acid type cpds. used as animal growth promoters - 82986Y/47
*ICIL 08.09.77 IMPERIAL CHEM INDS LTD D16 (D13) *BE -870-188
Microbiological prodn..of single cell protein - 18028B/10
IDEK 19.01.76 IDEMITSU INDUSTRIES KK A11 B07 C03 D13 (A96 A97 D16) =GB 1541-511
Gel-forming polysaccharide prepd. by Arthrobacter cultivation - 52614Y/30
INAL- 16.05.66 MINISTER IND ALIMEN B05 D21 E19 =NL -159-280
Lotion for preventing hair loss contng procaine benzoic - 29511F/00
INFL 30.06.77 INT FLAVORS & FRAGR INC D23 E17 =J5 4012-311
Substd. oxy:acetaldehyde(s) and their acetal(s) prepn. - 83955A/46
INFL 30.06.77 INT FLAVORS & FRAGR INC D23 E14 =J5 4012-359
1,1,4,4-Tetra:methyl-tetra:hydro:naphthalene prepn. - 81998A/45
INFL 15.08.77 INT FLAVORS & FRAGR INC D13 E24 =DT 2835-387
Stabilised red beet dye compsns. - 06001B/03
INFL 15.08.77 INT FLAVORS & FRAGR INC D13 E24 =NL 7808-446
Stabilised red beet dye compsns. - 06001B/03
*INMO- 20.07.77 IND MONTAGE HVID D14 *DK 7703-291
Cold container - B/10
INMR 31.05.77 INST MERIEUX B04 D16 =FR 2393-065
Bacterial esp. Bordetella pertussis endotoxin fractionation - 00267B/01
*INRG 27.10.77 INST NAT RECH AGRON C02 D13 *BE -871-560
Orotic acid and urea feedstuff additive - 18062B/10
INSP 08.08.77 INST PASTEUR A97 D16 (A14) =DT 2834-067
Coated supports for cell culture - 09966B/06
INTE- 23.05.75 INTEROX SA D25 E34 =GB 1538-893
Stabilising particles of peroxy salts pref. sodium percarbonate - 90605X/49
IRCE 06.09.74 IRCEBA INST RECH B04 D16 =CA 1048-931
Microbial antigenic nasal sprays - 20729X/12
*IRRM 24.08.77 ISRAEL INST FOR RES DEV B04 C03 D16 *GB 2003-029
Fowl cholera vaccine against Pasteurella multocida - 18510B/10
ISHI 09.01.74 ISHIKAWAJIMA-HARIMA HEAV D15 =J5 0100-842
Treating polluted water contg. salt - 19408B/10
*ISHI 09.01.74 ISHIKAWAJIMA-HARIMA HEAV D15 *J7 9002-787
Treating polluted water contg. salt - 19408B/10

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*JAME/ 20.11.75 JAMES J L D22 *US 4141-363
Flexible tape wound closing sucture - 19799B/10
*JAOR 28.06.77 JAPAN ORGANO KK D17 *J5 4011-245
Sugar soln. treatment - 18770B/10
*JAOR 04.07.77 JAPAN ORGANO KK D15 E31 *J5 4013-467
Treating calcined ash by/produced in waste water treatment - 19164B/10
*JAOR 04.07.77 JAPAN ORGANO KK D15 *J5 4013-471
Removing regeneration agents from ion-exchange resin beds - 19167B/10
*JAPS 10.06.77 JAPAN SYNTHETIC RUBBER B04 D13 (D16) *J5 4011-250
Polysaccharide-contg. powdery food prodn. - 18774B/10
*JAPS 27.06.77 JAPAN SYNTHETIC RUBBER A60 D22 *J5 4011-234
Deodorising compsn. for treating rubber, etc. or for household use - 18763B/10
JELK/ 31.05.77 JELKS J W C03 D13 #FR 2392-607
Increasing digestability of cellulosic plant material - 75799Y/42
*JOBB 23.12.77 SOC JOB ANC ETAB BARDOU A88 D18 F04 (A11) *BE -871-561
Mfg. synthetic fibre sheet for cigarette filter tips - 18063B/10
JOHJ 07.01.74 JOHNSON & JOHNSON A96 D22 F09 (F04) =CA 1048-866
Stabilised, fluffy, light wood pulp wadding - 496⁵5W/30
JOHJ 02.06.77 JOHNSON & JOHNSON A96 D22 E12 =FR 2392-678
Binder for orthopaedic bandage - 90017A/50
JONK/ 16.08.77 JONKERS M K P B07 D21 =DT 2835-684
Fluorine compsn. teeth treatment device - 16378B/09
JONK/ 16.08.77 JONKERS MK? B07 D21 =NL 7709-035
Fluorine compsn. teeth treatment device - 16378B/09

KABI 05.12.74 KABI AB B04 D16 =CA 1048-998
Polypeptide chromogenic substrates for serine proteases - 31921X/18
*KALI 24.08.77 KALI-CHEMIE AG D25 E33 (E34) *EP -----870
Sodium sulphate addn. to sodium aluminium silicate - 18367B/10
KAME- 24.06.75 KAMEDA SEIKA KK D11 =J5 2003-669
Flat food with rectangular cavities - 15425B/08
*KANE 23.06.77 KANEBO KK A96 D21 (A23) *J5 4011-244
Nail varnish which is not harmful to skin and nail - 18769B/10
*KANE 27.06.77 KANEBO KK A96 D21 *J5 4011-108
Storage stable shampoo compsn. - 18689B/10
*KANE 04.07.77 KANEBO KK D11 *J5 4014-373
Water soluble granular moulding e.g. biscuit prodn. - 19342B/10
*KANF 05.07.77 KANEGAFUCHI CHEM KK A88 D15 J01 *J5 4014-376
Tubular material for ultrafiltration - 19344B/10
KANF 11.08.77 KANEGAFUCHI KAGAKU D16 =GB 2003-177
Yeast fermentation appts. - 11920B/07
*KANF 25.08.77 KANEGAFUCHI CHEM KK A97 B04 D16 *GB 2003-135
Purification of macromomycin antitumour antibiotic - 18537B/10
*KAOS 05.07.77 KAO SOAP KK A97 D25 E17 *J5 4014-386
Nonionic oxyalkylene surfactant used esp. for emulsion polymerisation - 19349B/10
*KARM- 18.07.77 KARMOY MEK VERKSTED D12 *NO 7702-549
Arrangement for sorting fish according to size - B/10
*KARU/ 16.05.77 KARUBIAN R D12 *US 4141-142
Portable, carcass splitting saw - 19779B/10
*KATS/ 16.08.77 KATSUNUMA N B04 D16 *DT 2835-878
Oligosaccharide prepd. from Enterobacteriaceae - 18337B/10
KCOM= 28.06.74 KAZA COMPLEX FEEDSTUFFS C03 D23 =CA 1048-846
Food quality fat concentrate having good stability - 07815X/05
KEND 24.06.77 KENDALL CO D22 E13 =BR 7803-871
Sterilisation using ethylene oxide-contg. gas mixt. - 00433B/01
KITA 27.02.76 KITASATO RES INST B04 D16 =GB 1541-512
Coccidiostatic and antibacterial antibiotic asukamycin - 63373Y/36
*KIYO- 30.06.77 KIYOMI KAGAKU KK D13 E13 *J5 4012-377
3-Hydroxy-2-alkyl-4H-pyran-4-one(s) prepn. - 19048B/10
KLEI- 03.07.73 KLEIN A KG D15 =CA 1048-854
Dewatering of sludge after pretreatment - 00922W/01
*KODA/ 29.06.77 KODAMA T A11 D15 *J5 4011-955
Chitosan derivs. useful for prepn. of absorbents - 18970B/10
*KOEI 05.07.77 KOEI CHEM IND KK D15 E31 *J5 4014-396
Sepn. of hexavalent chromium - 19358B/10
*KOKC 24.06.77 KOKOKU CHEM IND KK D15 E37 *J5 4010-560
Removing e.g. snails and flies, from waste water - 18573B/10
KONN 26.01.77 GIST-BROCADES NV B04 C03 D16 =PT --67-554
Orally-administrable rabies vaccine - 56795A/32
KONN 20.07.77 GIST-BROCADES NV A81 B04 D25 (A96 A97 D16) =DK 7803-234
Enzyme particles resistant to powdering under pressure - 06068B/04
*KUBI 05.07.77 KUBOTA KK D15 *J5 4014-372
Ion exchange device for water - 19341B/10
KULZ 02.06.77 KULZER GMBH A96 D22 L02 (A14) =FR 2393-020
Material for prepn. of bone cement - 72816A/41
KURS 07.04.73 KURARAY KK D21 E17 H07 =CA 1049-051
2,6,10,15,19,23-Hexmethyltetracosane-10,15-diol derivs - 75217V/43
KYOW 27 02 76 KYOWA HAKKO KOGYO K B04 D16 =GB 1541-512
Coccidiostatic and antibacterial antibiotic asukamycin - 63373Y/36
*KYOW 25.06.77 KYOWA FERMENTATION KK B04 D16 J04 *
Fermentative prepn. of uricase for uric acid determn. - 1879
KYOX 07.04.73 KYOWA GAS CHEM IND CO D21 E17 H07
051
2,6,10,15,19,23-Hexmethyltetracosane-10,15-diol derivs - 7

LANG- 26.08.77 LANG APPARATEBAU GM D15 =DT 2738-53
Proportional dosing of liq. additive, esp. disinfectant,
16003B/09
*LARS/ 19.08.77 LARSSON K H D13 E11 (E13) *DT 2834-999
Sepg. polar lipid(s) from non-polar lipid(s) for use as foo
18322B/10
*LEMC/ 13.02.78 LEMCHEN M S D22 *US 4141-956
Timed cold steriliser - 19960B/10
*LEPA= 07.12.76 LENGD PAVLOV MEDICA A14 D21 (A96) *SU
Durable dental prostheses prodn. - 19642B/10
*LERE= 12.01.77 LENGD REFRIG IND D12 *SU -603-362
Foodstuff casing filling machine - 19636B/10
LESA 24.12.76 LESAFFRE CIE D16 (D11)· =FR 2393-062
Screening method for selecting new strains of baker's yeast -
*LEWI/ 24.03.77 LEWIS J H D22 *US 4141-686
Disposable liquid steriliser unit incorporating ultraviolet tube -
LIFE- 08.07.77 LIFE SAVERS INC A97 D13 =BE -870-191
Chewing gum with long lasting sweetness - 04517B/03
*LIND/ 18.07.75 LINDMAN W E D15 J01 *GB 1541-601
Waste liquids purificn. - 18498B/10
*LINM 25.08.77 LINDE AG D15 (D17) *EP -----861
Purifying organically contaminated waste waters contg.
18363B/10
*LIOC 04.04.74 LION DENTIFRICE KK D21 E24 (E33 E34) *J5 4011-
Bathing compsn. - 18757B/10
*LIOC 24.06.77 LION DENTIFRICE KK D21 E34 (E14) *J5 4011-243
Tooth-paste with improved scale prevention property - 18768B/
*LIOY 27.06.77 LION FAT & OIL KK D15 E33 (D18) *J5 4010-558
Treating waste water contg. grease from hides, etc. - 18571B/1
*LIOY 01.07.77 LION FAT & OIL KK A25 D25 E12 (A97) *J5 4013-5
Liq. detergent compsn. - 19190B/10
*LIPP/ 27.08.77· LIPPELT W D11 *DT 2738-778
Dough kneading machine - 18290B/10
LONB- 30.05.77 LONDON BRICK CO LTD D15 =FR 2392-943
Treating waste water by contact with mineral material - 70869A
*LUST/ 26.01.77 LUSTGARTEN S J A96 D21 *US 4141-144
Acrylic dental material contg. muscovite mica - 19780B/10

*MAGA= 23.07.75 MAGARACH D16 *SU -602-546
Reprocessing alcohol fermentation waste from wine prodn. - 19
*MANN/ 26.08.77 MANNCHEN U C04 D15 *DT 2835-285
Digesting water purificn. sludge with worms - 18326B/10
*MART/ 27.12.76 MARTINI A D13 (D16) *US 4141-791
Milk coagulating enzyme prodn. - 19880B/10
*MASW 24.08.77 MASCH BUCKAU WOLF R D17 *DT 2738-110
Flat-bottom sugar centrifuge - 18235B/10
MATU 09.11.72 MATSUSHITA ELEC IND KK A91 D15 (A14 A23
=DS 2355-893
Bactericidal membrane for water purificn - 40275V/22
MEIJ 30.05.75 MEIJI SEIKA KK D13 =DS 2523-967
Sugar coating of food by spraying liquefield droplets - 92763X/50
MEIJ 24.05.76 MEIJI SEIKA KAISHA B02 D16 =US 4141-790
(7)-Amino-cephem derivs. prodn. - 86955Y/49
MEIJ 30.06.77 MEIJI KK D13 =J5 4011-954
Starch hydrolysate for use as mild sweetener in foodstuffs - 06466
*MERI 28.04.76 MERCK & CO INC B04 D16 *US 4141-986
Broad spectrum antibiotics obtd. from Streptomyces flavogr
19970B/10
MERI 02.06.77 MERCK & CO INC B04 D16 =FR 2393-064
Automatic appts. for virus growth - 87850A/49
MERI 22.07.77 MERCK & CO INC B04 D16 =DK 7803-268
Parainfluenza vaccine - 10360B/06
*MERI 19.08.77 MERCK & CO INC B02 D16 *EP -----931
Thienamycin prepn. from an N-acyl or N-di:acyl deriv. - 18387B/10
MERI 19.08.77 MERCK & CO INC B02 D16 =EP -----932
(N)-Acyl-thienamycin cpds. prepn. - 09813B/05
*MERZ/ 18.08.77 MERZ H D15 *DT 2737-263
Portable sea water desalination plant - 18189B/10
METG 28.11.75 DRAVO CORP D23 J01 =GB 1541-707
Solvent recovery from solvent extracted substances e.g. oils
23616Y/14
MEYN/ 25.11.75 MEYN P D12 =CA 1048-717
Mechanically cutting open poultry - 07584Y/05
MGEI 06.10.67 MASCH H GEIGER D15 =NL -159-454
Bar screen cleaning plant - 94400X/51
*MIDC- 25.10.77 MIDCON PIPELINE EQ D15 *US 4141-824
Water purificn. using upflow through sand bed - 19900B/10

25.09.74 MILES LABORATORIES INC D13 F01 (D12) =CA 1048-726
et-spun vegetable protein fibres - 15025X/09
06.01.75 MILES LABORATORIES INC D13 F01 (D12) =DS 2600-219
repn of intermittently fused fibrous protein product - 35897X/19
15.08.77 MILES LABORATORIES INC B04 D16 J04 =DT 2835-296
evice for liq. control soln. prepn. - 14632B/08
E 07.10.77 MILES LABORATORIES INC D13 (D12) =US 4141-999
imulated bacon product formed of fat and lean layers - 14203B/08
E= 03.06.76 MINSK MEAT DAIRY D12 *SU -603-361
ig carcass cleaning machine - 19635B/10
O- 03.11.77 MIRODUR IT SPA D14 J02 *BE -871-651
Machine for simultaneously grinding and mixing several substances - 8081B/10
C 27.06.77 MITSUI PETROCHEM IND KK D13 E23 (D16) *J5 4011-281
Anthocyanin pigment prodn. - 18785B/10
C 28.06.77 MITSUI PETROCHEM IND KK A81 D21 G03 (A14 A96) =J5 2-338
Hardenable adhesive compsn. - 04563B/03
C 13.10.77 MITSUI PETROCHEM IND KK A81 D21 G03 (A14 A96) =J5 1-149
Hardenable adhesive compsn. - 04563B/03
TO 07.02.68 MITSUBISHI HEAVY IND KK D15 J01 *J7 9002-620
Multistage flash evaporator for treating brine - 19391B/10
TO 08.05.68 MITSUBISHI HEAVY IND KK D15 J01 *J7 9002-621
Multistage flash evaporator for treating brine - 19392B/10
TO 13.05.68 MITSUBISHI HEAVY IND KK D15 J01 *J7 9002-622
Brine heater for multistage flash evaporator - 19393B/10
ITO 22.05.68 MITSUBISHI HEAVY IND KK D15 J01 *J7 9002-623
Multistage evaporator for treating brine - 19394B/10
ITQ 28.06.77 MITSUBISHI ELECTRIC CORP D15 *J5 4011-068
Freezing and remelting sludge to improve dewatering - 18663B/10
ITQ 29.06.77 MITSUBISHI ELECTRIC CORP D15 *J5 4011-876
Device for freezing and remelting sludge - 18926B/10
ITQ 29.06.77 MITSUBISHI ELECTRIC CORP D15 E36 J01 *J5 4012-147
Purifying effluent contg. nitrous ions and sulphur oxide(s) - 19008B/10
ITQ 04.07.77 MITSUBISHI ELECTRIC CORP D15 *J5 4014-371
Dewatering appts. - 19340B/10
ITR 28.06.77 MITSUBISHI RAYON KK A91 D15 J01 *J5 4011-083
Coagulating agent - 18675B/10
ITU 14.06.74 MITSUBISHI CHEM IND KK A91 D15 (A26) *J7 9002-791
Decolourising and reducing COD of waste water - 19411B/10
IUR/ 27.07.77 MIURA Y A96 B04 D16 =SW 7808-161
Anticoagulant for blood or plasma - 10449B/06
OBI 28.03.77 MOBIL OIL CORP A97 D17 E17 H01 (D16 E34) *US 4141-42
Oil recovery by waterflooding with thickened fluid - 19908B/10
OEN- 25.06.77 MO ENGINEERING KK D15 *J5 4010-561
Purifying condensed water contg. organic cpds. - 18574B/10
OJO 24.03.69 MOJONNIER BROS CO D13 =J7 9002-630
Carbonation of beverages - 67395R/37
MOMI 19.07.76 MORINAGA & CO LTD D13 *GB 1541-773
Controlling degree of caramelisation of candy - 18505B/10
MONS 18.11.70 MONSANTO CO A32 D18 (A17 A88) =J5 4011-299
Cigarette filter - 33877T/21
MONS 20.06.77 MONSANTO CO D22 E15 (D21 D25) =BR 7803-884
Space deodorant compsn., used esp. as aerosol spray - 00325B/01
MONS 22.08.77 MONSANTO CO A25 D25 (A97) *EP ---1-004
Polymeric acetal carboxylate detergent builders - 18418B/10
MOSU 02.09.75 MOSCOW LOMONOSOV UNIV D16 *SU -602-545
Aspergillus ochraceus HP 19 strain - 19476B/10
RSC 18.04.74 MARS LTD C03 D13 =SW 7811-534
Pectate thickener or gelifying agent for foods - 60378W/37

NALC 31:05.77 NALCO CHEMICAL CO A97 D15 K05 M25 (A14) *US 4141-854
Breaking emulsions from organic solvent extn. of uranium - 19915B/10
NARE- 19.08.77 NAT RESEARCH LABS D22 E12 #DT 2738-041
Antimicrobial heavy metal complexes with polyfunctional acids - 79262Y/44
NARE- 19.08.77 NAT RESEARCH LABS D22 E12 #NL 7709-190
Antimicrobial heavy metal complexes with polyfunctional acids - 79262Y/44
NASI/ 06.10.76 NASICA J R A92 B07 D02 (A96) =FR 2392-879
Thermoplastic laminated sheet for sterile packages esp. sachets - 10339A/06
NATL 01.07.77 NL INDUSTRIES INC D21 L02 M22 =J5 4014-381
Organophilic clay gellant for alcohol compsns. - 72499A/40
* NATR 01.11.77 NATIONAL RES DEV CORP B04 D16 J04 *BE -871-717
Enzymatic analysis using nitro-styrene derivs. - 18088B/10
* NEID/ 13.05.71 NEIDL G D15 *DS 2124-202
Sewage aerating and homogenising installation - 18107B/10
NEST 21.07.69 SOC PROD NESTLE SA D13 (D16) =DS 2033-386
Sour milk product - 04037S/02
NEST 05.03.74 SOC PRODS NESLE D13 E16 (E14) =CA 1048-849
Treatment of foodstuff poor in lysine by addn. of L-lysine - 50941W/31
NIFI- 01.06.77 NIHON FILTER KK D15 M28 =FR 2392-942
Heavy metal recovery from waste water - 89883A/50
NIIM/ 16.07.76 NIIMI T D15 =DS 2731-887
Sewage and industrial wastes treatment - 06755A/04
* NIRA 30.06.77 UNITIKA KK D15 *J5 4011-879
Device for continuous ion exchange in waste water - 18929B/10
NIRO 29.08.72 NIRO ATOMIZER A/S D13 =US 4141-783
Spray drying plant - 20490V/11
* NISE- 25.06.77 NIPPON SEIFUN KK D13 *J5 4011-251
Mixt. for coating Tatsuta-fry to simplify cooking procedure - 18775B/10
* NISO 25.06.77 NIPPON SHOKUHIN KAK KK D17 *J5 4011-247
Starch treated with oils and fats - 18771B/10
* NISO 25.06.77 NIPPON SHOKUHIN KAK KK D17 *J5 4011-248
Processed starch useful e.g. in paper industry - 18772B/10
NISS 27.01.76 NISSHIN FLOUR MILL KK D11 #GB 1541-504
Preventing cave-in of baked goods - 50334Y/28
* NISS 28.06.77 NISSHIN FLOUR MILL KK D13 *J5 4011-258
Dry sepn. of soybean protein - 18776B/10
* NISS 28.06.77 NISSHIN FLOUR MILL KK D13 *J5 4011-277
Preventing discolouration of pigmented synthetic meat - 18784B/10
* NITL 04.07.77 NITTO ELECTRIC IND KK D14 (D16) *J5 4014-375
Easily assembled tubular membrane separator - 19343B/10
* NITL 04.07.77 NITTO ELECTRIC IND KK A97 D15 H03 J01 (A14) *J5 4014-392
Sepn. of thin oil film from the surface of water - 19355B/10
* NITT 28.06.77 NITTO CHEM IND KK A91 D15 J01 *J5 4011-083
Coagulating agent - 18675B/10
* NIYA- 29.06.77 NIPPON YAKIN KOGYO D15 E31 M12 *J5 4012-149
Treating hexavalent chromium-contg. alkaline waste water - 19009B/10
NODA 05.04.75 NODA INST SCI RES B04 D16 =DS 2659-878
Creatine amidino hydrolase prodn. - 81420Y/46
NOVO 23.08.77 NOVO INDUSTRI A/S D16 (D17) =DT 2833-644
Glucose isomerase activated by water-soluble iron salt - 15971B/09
* NREN 14.06.74 NIPPON RENSUI KK A91 D15 (A26) *J7 9002-791
Decolourising and reducing COD of waste water - 19411B/10

OCTR- 07.05.75 OCTROPA INT OCTROOI B04 C03 D16 =US 4141-970
Treating pregnant mammals with bacterial endotoxins - 88782X/48
OCTR- 22.03.76 OCTROPA INT OCTOOI C03 D13 E19 =US 4141-994
Diet additive contg. acyl lactylate emulsifier - 72773Y/41
* OILC= 22.03.76 OIL CHEM AUTOM RES D16 *SU -602-541
Microorganisms culture automatic control - 19472B/10
* ONTA 02.02.77 ONTARIO RES FOUND D22 E36 (D15) *CA 1048-733
Ultraviolet water purifier generating ozone - 18091B/10
ONTA 02.02.77 ONTARIO RES FOUND D22 E36 (D15) =US 4141-830
Ultraviolet water purifier generating ozone - 18091B/10
OREA 15.10.75 L'OREAL SA A96 D21 =GB 1541-670
Cosmetics contg. polymers of unsatd. cpds. with hydroxylic cpds. - 27146Y/16
OREA 10.05.77 L'OREAL SA D21 E23 =J5 4011-240
Colourant soln. for hair dyeing compsn. prepn. - 82087A/46
OREA 24.06.77 L'OREAL SA. D21 E13 =J5 4011-241
Dye compsns. for keratin fibres esp. hair - 06301B/04
OREA 19.08.77 L'OREAL SA D25 E14 (E12) =DT 2836-276
Hair colouring compsn. contg. oxidn. dyes - 14189B/08
OREA 19.08.77 L'OREAL SA D25 E14 (E12) =DT 2836-300
Hair colouring compsn. contg. direct colourants - 14188B/08
OSAG 10.08.76 OSAKA GAS KK D15 =US 4141-828
Oxidn. of ammonia present in waste water - 14400A/08
OSAY 01.07.77 ENSO GUTZEIT OY D15 E14 F09 =J5 4013-663
Purifying waste waters, esp. sulphate pulp bleaching waters - 04344B/03
* OSHI/ 10.06.77 OSHIMA H D15 J02 *US 4141-939
Bubble generator using supersonic wave action - 19954B/10

PANL- 31.03.77 PANLABS INC B02 C02 D22 (D13) =SW 7803-623
De:thia-penicillin derivs. from new Streptomyces species - 72706A/41
PARK 06.09.74 PARKE DAVIS & CO B03 D22 =CA 1049-005
Antibacterial aminotridesoxy-butirosine A - 07493X/05
PASE 15.12.70 PASSAVANTW MICHELBACHER D15 =DS 2061-722
Reciprocating sludge scraper - 45868T/29
PASE 21.04.77 PASSAVANTW MICHELBACHER D15 J01 =DS 2717-756
Sweeper for settling ponds - 82341A/46
PERS 31.05.77 PERSONAL PRODUCTS CO A96 B04 D22 (A11) #FR 2392-672
Inhibiting bacteria with dialdehyde starch or cellulose - 50320Y/28
PFIZ 16.04.74 PFIZER INC B04 C03 D16 (D13) =NL -159-436
Antibacterial antibiotics from Actinoplanes auranticolor ATCC 31011 - 72489W/44
PFIZ 04.02.77 PFIZER INC B03 D22 E13 G02 (D15) =PT --67-568
Antibacterial 4''-deoxy-4''-amino-erythromycin derivs. - 58751A/33
PFIZ 01.06.77 PFIZER INC B04 D16 =FR 2393-007
Animal growth promoting polypeptide antibiotic 46192 - 40248A/22
PFIZ 24.06.77 PFIZER INC B04 C03 D16 (D13) =J5 4012-302
Poly:cyclic-ether antibiotics from Actinomycetes ATCC 31286 - 02359B/02
* PFIZ 18.08.77 PFIZER INC B04 D16 *EP -----991
Antibacterial antibiotic 47444 - 18411B/10

UNGE- 02.02.77 UNION GEN SAVONNER A97 D25 E19 =PT --67-593
Washing powder esp. for automatic machines - 57211A/32
• UNIC 21.06.74 UNION CARBIDE CORP D15 *US 4141-822
Activated sludge sewage treatment - 19898B/10
UNIC 18.11.74 UNION CARBIDE CORP D15 =CA 1049-162
Biological effluent treatment plant - 20880X/12
UNIC 30.03.77 UNION CARBIDE CORP A97 D12 (A25) =SW 7803-558
Extrudable collagen food casing contg. polyoxyethylene sorbitan ester - 70723A/39
UNIC 28.06.77 UNION CARBIDE CORP A97 D12 =J5 4011-252
Food casings providing brown smoke colour - 02455B/02
UNIC 25.08.77 UNION CARBIDE CORP D22 =DT 2836-818
Shrink wrapped stick of concertina folded tubular sausage casing - 15999B/09
UNIC 25.08.77 UNION CARBIDE CORP D22 =GB 2003-015
Shrink wrapped stick of concertina folded tubular sausage casing - 15999B/09
• UNIC 25.10.77 UNION CARBIDE CORP D15 *US 4141-831
Appts. for removing solids from sedimentation tank - 19904B/10
• UNIC 25.10.77 UNION CARBIDE CORP D15 *US 4141-832
Removal of solids from sedimentation zone using scraper blade - 19905B/10
UNIC- 05.06.70 UNICEF UTD NATIONS C03 D13 =NL -159-268
Food and fodder prodn - from cheap raw materials - 80687S/51
UNIL 04.12.73 UNILEVER LTD D13 =CA 1048-851
Hard butter for coating confectionery - 39224W/24
UNIL 11.11.75 UNILEVER NV D12 #SU -603-319
Fish filleting machine - 80553W/49
UNIL 19.05.76 UNILEVER NV B05 D21 =FR 2392-664
Dentifrices with anti-caries activity - 88501Y/50
UNIL 23.11.76 UNILEVER NV B05 C03 D13 =FR 2392-675
Premix compsn. contg. minor essential food ingredient - 36665A/21
UNIL 04.01.77 UNILEVER NV D21 E33 #SW 7809-549
Antiperspirants contg. basic aluminium cpds. - 51801A/29
UNIL 06.05.77 UNILEVER NV D25 E12 =J5 4013-512
Isotropic aq. liq. compsn. for washing textiles - 82553A/46
UNIL 28.07.77 UNILEVER NV A96 D21 =SW 7808-205
Sprayable hair lacquer compsn. - 08019B/05
UNIL 22.08.77 UNILEVER NV D25 E34 =DT 2836-277
Aq. liq. detergent compsn. prepn. for washing clothes etc. - 14186B/08
• UNIL 25.08.77 UNILEVER NV D25 *DT 2837-079
Liquid injection in cleansing agent - 18355B/10
• UNIL 30.08.77 UNILEVER NV D13 *BE -870-011
Iced confectionery esp. ice lollipops - 18000B/10
UNIL 21.08.78 UNILEVER NV D25 E34 =GB 2003-172
Aq. liq. detergent compsn. prepn. for washing clothes etc. - 14186B/08
UNIL 23.08.78 UNILEVER NV D25 =GB 2003-082
Liquid injection in cleansing agent - 18355B/10
UNIO 18.01.77 UCB SA B02 C02 D13 =PT --67-537
6-Amino-2-spiro-heterocyclyl-penam carboxylic acids - 53859A/30
UNIO 18.01.77 UCB SA B02 C02 D13 =PT --67-538
Spiro-thiopyran or-pyran penicillin derivs. - 53860A/30
UNIV 15.08.77 KANSAS STATE UNIV D15 J01 =DT 2835-322
Granular bed fluid filter - 14575B/08
• UNVO 18.02.75 UOP INC A97 B04 D16 *US 4141-857
Support matrix prepn. for immobilising enzymes - 19916B/10
USDC 03.06.77 US SEC OF COMMERCE D13 =DT 2822-964
Precooked potatoes for supply to restaurants etc. - 87825A/49
USDC 03.06.77 US SEC OF COMMERCE D13 =FR 2392-609
Precooked potatoes for supply to restaurants etc. - 87825A/49
• USHE/ 25.10.77 USHER T A D14 *BE -871-526
Machine to trim heads of carrots, etc. for canning - 18055B/10
USMC 08.04.75 USM CORP D18 =CA 1048-715
Animal skin dust collection - 81575X/44
UTIR- 16.04.75 R UTI R SRL C04 D16 =GB 1541-594
Stable odour-free organic fertilizer - 66822X/36
• UYVI- 15.03.74 UNIV OF VIRGINIA A96 D21 (A14 D22) *US 4141-864
Osseous cement for dental and orthopaedic use - 19921B/10

• VOTE= 28.12.72 VORON TECHN INST D16 *SU -602-542
Mfr. of dried yeast for alcoholic fermentation of molasses - 19473B/10

WADL 05.11.76 WADLEY RES INST BLOOD BK B04 D16 =FR 2393-063
Detecting pathogens in fluid samples by centrifuging - 33443A/19
WARN 28.04.75 WARNER-LAMBERT CO D22 =GB 1541-752
Contact lenses sterilisation capsule - 83064X/45
• WIMM/ 22.08.77 WIMMER O D15 J01 *DT 2737-759
Sludge-thickening centrifuge - 18225B/10
WINC- 04.04.75 WINCANTON ENG LTD D13 =GB 1541-836
Drainage plates for cheese moulds - 63491X/34
WISS- 17.08.77 WISSENSCHAF KERAMIK D17 L02 =DT 2820-721
Plasticising ceramic masses with microbial polysaccharide - 89779A/50
WITC 04.11.74 WITCO CHEMICAL CORP D25 E14 =CA 1048-888
Dried linear alkyl-aryl sulphonate detergent - 38357X/21
WOLF 13.08.77 WOLFF WALSRODE AG A97 D15 F09 (A23) =EP -----714
Water-soluble basic polymer with polyethylene glycol units - 14411B/08
• WOOD- 11.11.77 WOOD-SLIMP GMBH C03 D22 E36 F09 *BE -871-629
Wood protection against moisture-induced decay - 18077B/10
• WORL- 29.08.77 WORLD DEV LABS D15 J01 *GB 2003-054
Reducing impurity concn. of solution by reverse osmosis - 18520B/10

• YAMA 24.06.77 YAMANOUCHI PHARM KK B02 C02 D16 *J5 4011-298
3-Heterocyclic thiomethyl cephalosporin prodn. - 18793B/10
• YAMA/ 24.06.77 YAMADA T D18 E37 (E16 E17) *J5 4011-201
Incombustible, flexible moulded prod. contg. waste leather - 18748B/10
YANM 22.07.71 YANMAR DIESEL ENGINE D15 =J4 8021-352
Cyanide content redn. of effluent - 19409B/10
• YANM 22.07.71 YANMAR DIESEL ENGINE D15 *J7 9002-789
Cyanide content redn. of effluent - 19409B/10
• YGOS 28.06.77 YAMAMOTO KAGAKU GOS KK A97 D25 E23 *J5 4011-106
Detergent compsns. - 18688B/10
• YGOS 28.06.77 YAMAMOTO KAGAKU GOS KK D15 E23 *J5 4012-143
Treating washing liq. contg. blue colouring agents - 19007B/10

• ZAID 25.08.77 ZAIDAN HOJIN BESEIB A97 B04 D16 *GB 2003-135
Purification of macromomycin antitumour antibiotic - 18537B/10
• ZHGE/ 19.02.76 ZHGENTI TS YA D16 *SU -602-861
Protein biosynthesis in embryonic tissue cytoplasm determn. - 19620B/1
• ZIEM/ 31.12.75 ZIEMKE W H A97 D11 *US 4141-998
Powdered sour:dough bread flavouring compsn. - 19974B/10
• ZIND/ 21.11.77 ZINDER V A97 D13 *US 4141-578
Toffee apple stick - 19825B/10
ZYLI- 06.08.76 ZYLISS ZYSSET AG D14 =DS 2635-577
Citrus fruit juice expeller - 86660Y/49

29511-F BDE
NL 6702-282 Q00
GB 1177-511 R02
CA -889-818 T03
DT 1617-633 U37
FM ---6-102 Q01
NL -159-280 B10

33067-F BDE
BE -709-655 Q00
DT 2000-410 R29
GB 1206-233 R37
GB 1216-233 R49
CH -516-519 T08
J7 2007-339 T09
CA -899-333 T20
DS 1668-965 V16
AU 6832-434 Q01
ZA 6800-388 Q01
US 3475-403 Q01
NL 6800-870 Q01
FR 1554-088 Q01
EI 6800-055 Q01
NL -159-365 B10

17910-R ADGH
DT 1937-460 R11
NL -158-831 B02
DS 1937-460 B10

32809-R D
FR 2010-458 R19+
CA -889-775 T03
GB 1265-205 T09
US 3652-293 T16
CH -521-093 T26
NL -159-264 B10+

42895-R DE
GB 1195-346 R24
CH -503-673 S20
US 3579-593 S21
CA -876-753 S31
J7 3007-625 U10
DS 1918-852 Y18
NL -159-359 B10

54060-R ACDE
BE -744-890 R30
NL 6901-099 R31
DT 2002-824 R31
FR 2030-228 S03
ZA 7000-334 S09
DL --83-343 S39
GB 1288-333 T36
CA -917-438 U02
DT 2002-824 U46
J7 4019-260 V24
NL -159-357 B10

67395-R D
BE -747-260 R37
NL 7004-134 R40
DT 2011-869 R43
FR 2039-888 S13
GB 1299-622 T50
CA -920-943 U09
US 3741-552 U28
J7 9002-630 B10

68455-R D
DT 1911-114 R38
DS 1911-114 B10

76114-R ABD
BE -748-703 R41
DT 2016-269 R42
FR 2060-491 S37
J7 2037-524 T39
GB 1302-564 U02
CA -933-092 U38
CH -543-878 V03
DS 2016-269 B10

01837-S DJ
BE -752-564 S01
DT 2032-909 S28
FR 2062-847 S40
ZA 7005-230 T29
GB 1325-333 U31
GB 1326-215 U32
US 3879-173 W18
DS 2032-909 X04
NL -159-437 B10

01838-S DJ
BE -752-565 S01
NL 6914-625 S14
DT 2032-903 S15
FR 2064-277 S41
ZA 7005-229 T02
DT 2032-903 T50
US 3932-142 X04
NL -159-286 B10

04037-S D
BE -752-656 S02
DT 2033-386 S07
CH -506-952 S27
FR 2053-050 S30
DL --82-634 S36
GB 1259-445 T01
CA -913-454 T46
US 3962-464 X25+
DS 2033-386 B10

16279-S D
NL 6912-821 S09
NL -159-435 B10

20006-S CD
NL 7013-102 S11+
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FR 2060-438 S37
J7 3010-525 U14
GB 1318-708 U22
US 3777-023 U50
CA -938-552 U52
J7 4001-842 V06
CH -568-716 X02+
SU -429-570 X17+
DS 2044-023 B10+

23136-S DE
BE -756-656 S13
DT 2046-576 S14
NL 7014-109 S14
ZA 7006-342 S22
FR 2062-609 S40
US 3725-474 U16
CA -926-418 U22
GB 1326-785 U33
J7 4042-557 V50
DS 2046-576 B10

26533-S D
CA -868-110 S16+
SU -297-155 T13
SU -316-216 T27
US 4030-406 Y26+
DS 1667-933 A09+
NL -159-269 B10+

52761-S D
BE -762-382 S32+
NL 7101-421 S34
J4 6001-820 S40
DT 2005-293 S47
FR 2079-261 T06
GB 1290-117 T38
DT 2005-293 T45
CA -926-693 U23
CH -535-543 U25
NL -159-265 B10+

69527-S ABDF
DT 2017-451 S44
DS 2017-451 B10

79285-S DH
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J7 9002-788 B10

80687-S CD
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J7 6009-811 X17
NL -159-268 B10

27742-T D
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FR 2109-755 T39
US 3744-278 U31
GB 1361-836 V31
DS 2050-539 B10

31202-T DE
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NL 7114-837 T20
J4 7008-779 T23
ZA 7107-220 T32
FR 2117-068 T45
GB 1331-062 U38
BE -774-607 U45
CH -564-597 W34
DS 2153-477 X32
NL -159-434 B10

33877-T AD
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NL 7115-391 T23
DT 2156-375 T24
J4 7011-999 T26
ZA 7107-695 T36
FR 2114-696 T43
GB 1341-400 U51
CH -546-543 V17+
CA -956-537 V45+
IL --38-123 W15+
US 3939-849 X10+
SU -529-803 Y49+
J5 4011-299 B10+

45868-T D
DT 2061-722 T29
DS 2061-722 B10

49122-T DEJ
DT 2063-939 T31
DS 2063-939 B10

20415-U DEF
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BE -796-616 U40
NL 7303-392 U40
DT 2311-059 U40
GB 1351-560 V18
ZA 7301-421 V22
CA -968-245 W23
CH -573-019 X15
DS 2311-059 Y09
NL -159-448 B10

23199-U D
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FR 2155-980 U30
J4 8048-263 U37
US 3779-706 U52
GB 1361-300 V30
CA -963-984 W12
J7 7035-236 Y40
DS 2249-190 A02
SU -603-321 B10

35107-U DJ
DT 2254-860 U25
FR 2160-853 U38
CH -558-197 W09
GB 1417-564 W50
DS 2254-860 B10

43162-U DE
DT 2301-828 U31
BE -794-233 U31
NL 7300-683 U32
ZA 7208-967 U43
FR 2173-652 U51
J4 8080-543 V02
GB 1347-667 V08
DS 2301-828 X17
CH -574-243 X23
SU -482-040 X24
CA -992-091 X29
US 3970-682 X31
SU -484-680 Y02
NL -159-362 B10

50298-U AD
BE -796-387 U35
DT 2311-042 U40
NL 7303-603 U40
FR 2175-780 U52
J4 9000-453 V11
ZA 7300-946 V47
GB 1383-281 W07
OE 7302-196 X07
CH -581-468 X52
CA 1027-482 A12
PT --59-423 B10

20490-V D
NL 7311-844 V11
DT 2343-191 V12
FR 2197-519 V22
ZA 7305-734 V35
GB 1439-540 X25
CA -997-203 X41
SU -587-841 A47
US 4141-783 B10

21006-V D
BE -804-548 V12+
DT 2343-182 V13+
FR 2197-820 V22+
CH -555-946 V52
CH -548-957 V26
ZA 7307-136 V43
CH -553-729 V44
CH -554-297 V44
US 3868-323 W10+
DL -111-670 W23
NL 7312-315 W45+
GB 1445-157 X32+
IL --43-086 Y07+
CA 1012-900 Y28+
DS 2343-182 Y39+
NL -159-289 B10+

34013-V CD
NL 7313-342 V18
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FR 2202-654 V29
J4 9069-493 V36
GB 1404-553 W36
US 3903-275 W37
IL --43-082 Y08
CA 1009-954 Y21
DS 2342-213 B10

39944-V DE
BE -807-444 V22
ZA 7308-066 V43
NL 7405-353 V45
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NO 7304-423 V50
SW 7405-405 V51
DK 7402-229 V52
SF 7303-576 W06
FR 2227-014 W08
J5 0008-393 W13
OE 7303-627 W50
CA -987-067 X18
GB 1435-228 X20
IL --43-455 X42
CH -588-286 Y27
NL -159-284 B10

40275-V AD
DT 2355-893 V22+
FR 2206-111 V37
J4 9070-451 W05
J4 9076-333 W05
J4 9076-332 W05
GB 1449-239 X38+
CA -998-893 X46+
J7 7005-184 Y10
US 4071-636 A07
DS 2355-893 B10+

75217-V DEH
NL 7404-391 V43+
DT 2416-584 V45+
FR 2225-404 W06+
J4 9125-311 W13
J4 9133-302 W13
J5 0050-303 W36
GB 1450-969 X40+
US 4011-277 Y11+
J7 8020-961 A30
J7 8027-241 A35
CH -605-484 A41+
CH -605-503 A41+
J5 3111-003 A44
J7 8039-406 A46
J5 3149-904 B06
CA 1049-051 B10+

76861-V D
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BE -814-581 V47+
DT 2412-836 V48+
SW 7403-380 V52+
DK 7401-385 W03+
FR 2236-928 W17+
ZA A742-862 W27
J5 0132-011 W50+
GB 1473-571 Y20+
US 4071-377 A07+
CA 1048-909 B10+

85697-V D
BE -817-610 V50
DT 2433-079 W07
DK 7403-770 W14
FR 2236-925 W17
CA 1048-709 B10

00922-W D
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CA 1048-854 B10

07481-W AD
BE -817-631 W05
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NL 7409-476 W05
SW 7408-706 W10
DK 7403-673 W14
FR 2236-926 W17
J5 0039-305 W23
ZA 7404-463 W35
GB 1475-798 Y23
J7 8035-569 A43
CA 1049-193 B10

16346-W BD
DT 2438-100 W10+
BE -818-924 W10+
NL 7410-058 W10+
SW 7409-375 W15
DK 7403-859 W22+
J5 0048-191 W26+
PT --62-442 W30+
FR 2252-406 W37+
FR 2257-682 W44+
GB 1480-379 Y29+
CH -596-306 A15
CA 1048-430 B09+
SW 7808-905 B10+

19307-W D
BE -821-271 W12
DT 2450-277 W18
NL 7413-698 W19
DK 7405-503 W29
FR 2247-978 W30
GB 1477-310 Y25
US 4031-591 Y27
IT 1024-652 A39
CA 1044-749 B02
DS 2450-277 B10

24133-W DF
ZA 7308-172 W14
DT 2449-842 W18
BE -821-320 W19
FR 2248-238 W30
GB 1457-682 X50
CA 1049-163 B10+

24469-W CD
DT 2347-932 W15
BE -820-210 W15
NL 7411-626 W15
SW 7411-097 W20
DK 7404-637 W24
FR 2244-784 W26
J5 0058-001 W29
US 3945-996 X14
OE 7407-622 X50
OE 7407-620 X50
OE 7606-034 Y39
GB 1491-245 Y45
CH -598-296 A19
CA 1049-026 B10

24549-W D
DT 2441-019 W15
FR 2243-654 W25
J5 0053-554 W28
US 3920-856 W49
ZA 7405-819 X03
GB 1473-222 Y19
IL --45-577 Y30
CA 1048-853 B10

39224-W D
BE -822-816 W24
NL 7415-663 W25
DT 2456-865 W44
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GB 1495-254 Y50
CH -601-471 A33
CA 1048-851 B10

41028-W CD
BE -825-092 W25
NL 7413-804 X14
DT 2449-605 X14
J5 1039-279 X20
FR 2285-083 X27
GB 1458-638 X51
OE 7410-057 Y01
DS 2449-605 Y03
US 4011-346 Y11
CH -596-778 A15
NL -159-266 B10

49655-W ADF
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NL 7417-011 W30
SW 7500-062 W35
J5 0095-573 W39
FR 2256-978 W43
US 3950-218 X17
GB 1460-399 Y01
CA 1048-866 B10

50941-W DE
BE -824-485 W31
DT 2423-089 W38
NL 7501-245 W39
FR 2262-923 W52
J5 1007-303 X10
ZA 7500-379 X13
PT --63-433 X25
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SU -582-767 A43+
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38357-X DE
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GB 1541-510 B10+

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DK 7600-232 X42
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66822-X CD
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GB 1538-893 B10

90869-X D
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DS 2559-462 B10+

92763-X D
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FR 2312-199 Y11+
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94400-X D
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NL -159-454 B10

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CA 1048-886 B10+

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32793-Y BCD
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DK 7605-015 Y30+
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SW 7612-402 Y40+
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DK 7700-243 Y46
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ZA 7702-902 B05+
FR 2392-672 B10+

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GB 1541-511 B10+

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SU -602-750 B10

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NL -159
=264 32809R D13
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=266 41028W C03D13+P1
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=269 26533S D14+P3
=280 29511F B05D21E19
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=285 60120X A96D22F07P2+P7
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•299 19420B D22P4Q3
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=357 54060R A43C04D23E16
=359 42895R D23E14
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NL 7709
=035 16378B B07D21+P3
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NL 7806
=515 16413B A96D16

NL 7808
=355 06418A D14P4R1+P1Q3
=446 06001B D13E24
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=460 89679A D14+P1
=474 14176B D17
=487 16289B B02C02D13
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NO 7702
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NO 7802
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NO 7804
=167 44395A A18D22J04M25R1

OE 7706
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PT --59
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PT --67
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=558 68847A A97D25P2
=568 58751A B03D22E13G02
=581 67099A D25E34+P4
=593 57211A A97D25E19
•602 B D22P3

SU -602
•539 19470B D23
•540 19471B D16R1
•541 19472B D16
•542 19473B D16
•543 19474B B04C03D16
•544 19475B D16
•545 19476B D16
•546 19477B D16
•549 19479B B04D16
•550 19480B D16
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•552 19482B C03D16
=750 82046Y D15J01+Q2Q7
=751 86975Y D15+Q2Q7
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SU -603
#319 80553W D12
=321 23199U D22P3
=347 11415X A97B04D16
=348 13096X C03D16H04
•360 19634B D11
•361 19635B D12
•362 19636B D12
•364 19637B D12
•365 19638B D12
•366 19639B D13
•367 19640B D16
•368 19641B D13
•381 19642B A14D21P3
•404 19656B D15J01
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SW 7708
=597 15958B A88D15Q7
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SW 7801
=533 47821A A96D21P3

SW 7803
=558 70723A A97D12
=623 72706A B02C02D22

SW 7808
=049 08009B A97D25
=161 10449B A96B04D16+P3
=205 08019B A96D21
=905 16346W B04D16

SW 7809
#549 51801A D21E33

SW 7811
=200 72840W B02C02D16
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=316 36310Y C03D13J04+P4
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=410 59447Y D15J01+Q7
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=749 54569X A97D12E13
=772 02336B D22F04P2+P7
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US 4141
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=970 88782X B04C03D16
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US 4142
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CENTRAL PATENTS INDEX

CLASSIFIED ALERTING BULLETIN

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3 MAY 79
20011B - 22033B

ABSTRACTS

INDEXES

- II - PATENTEE
- V - BASIC NUMBER
- VII - PATENT NUMBER

Section D:

FOOD
DETERGENTS

COUNTRY	PUB DATE(S)	NUMBER RANGE
BELGIUM		
-Delayed	6 MAR - 12 MAR 79	870,240 - 870,413
-Non Delayed	1 MAR 79	871,724 - 871,897
BRAZIL	28 FEB 79	7,703,906 - 7,806,081
CANADA	27 FEB 79	1,049,201 - 1,049,700
DENMARK	19 FEB 79	7,703,341 - 7,803,373
W. GERMANY		
-DAS	8 MAR 79	1,468,529 - 2,832,476
-OLS	8 MAR 79	2,715,608 - 2.839,183
FRANCE*	5 JAN 79	2,393,519 - 2,394,232
	(BOPI 9 FEB 79)	
UNITED KINGDOM	14 MAR 79	1,541,861 - 1,542,370
		2,003,371 - 2,003,710
HUNGARY	28 FEB 79	H002,403 - H002,412
		T016,030 - T016,167
ITALY	20 DEC 78	1,027,501 - 1,028,000
JAPAN		
-Unexamined	—	47,023,350 - 53,066,855
	2 FEB - 9 FEB 79	54,014,501 - 54,018,200
-Examined	15 FEB - 21 FEB 79	79,002,881 - 79,003,360
NETHERLANDS	26 FEB - 4 MAR 79	7,709,231 - 7,811,521
NORWAY	19 FEB 79	7,702,580 - 7,802,564
PORTUGAL	1 MAR 79	63,226 - 67,719
SOVIET UNION	—	136,856 - 604,161
SWEDEN *	26 FEB 79	7,708,640 - 7,808,410
UNITED STATES		
-Reissues	22 AUG 78**	Re29,736 - Re29,741
	6 MAR 79	Re29,923 - Re29,927
-Defensives	6 MAR 79	T980,001 - T980,008
-Patents	22 AUG 78**	4,107,795 - 4,109,319
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*Printed patents actually published mid February - early March, 1979

**Printed patents actually published 14 November 1978

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Arrangement of Abstracts

See Appendix I for definition of 'Major' and 'Minor' Countries.

'MAJOR' COUNTRIES – An alerting abstract of every basic and examined equivalent document is provided except for equivalents from Canada, East Germany and Switzerland. The abstracts are arranged in CPI class order and within any one of the 135 classes are in country and patent number order.

'MINOR' COUNTRIES – Basic headings are included in sequence with the entries from the 'Major' countries.

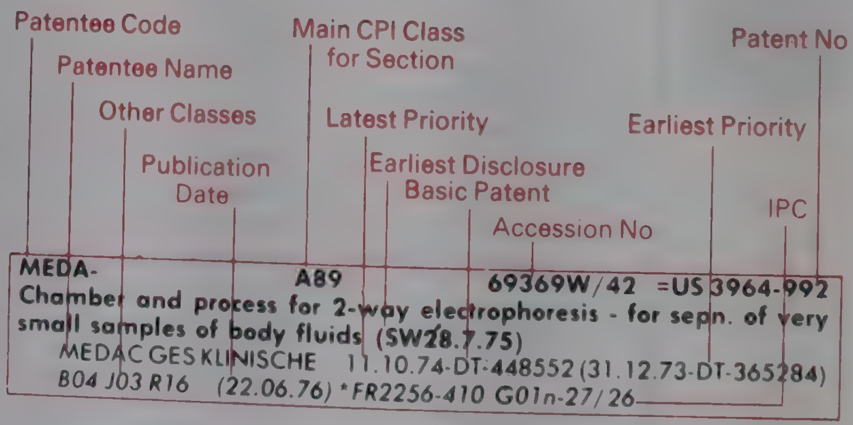
CPI Section Headings

See inside cover for further details.

A	Polymer Chemistry	F	Textiles, Paper, Cellulose
A+	Polymer Applns.	G	Printing, Coating, Photographic Chemistry
AE	Polymer & General Chemistry		
B	Pharmaceuticals	H	Petroleum
C	Agricultural Chemistry	J	Chemical Engineering
D	Food, Disinfectants, Detergents	K	Nucleonics, Explosives, Protection
E	General Chemistry	L	Refractories, Ceramics
E+	General Chemistry Applns.	M	Metallurgy

Typical Abstract Heading

See CPI/WPI Instruction Manual No. 1A for explanation of the various flagged descriptors.


Patentee Code
Patentee Name
Other Classes
Publication Date
Main CPI Class for Section
Latest Priority
Earliest Disclosure Basic Patent
Accession No
Patent No
Earliest Priority
IPC

MEDA- **A89** **69369W/42 =US 3964-992**
Chamber and process for 2-way electrophoresis - for sepn. of very small samples of body fluids (SW28.7.75)
MEDAC GES KLINISCHE 11.10.74-DT-448552 (31.12.73-DT-365284)
*B04 J03 R16 (22.06.76) *FR2256-410 G01n-27/26*

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D1: FOOD; FERMENTATION

D11: BAKING

BONG- ★ D11 20056B/11 ★BE -871-779
Bakery multi-tier electric oven of modular construction - is easily adapted for precise output and required power consumption
FILS BONGARD O CIE 18.05.78-FR-015659
Q74 (01.03.79) A21b F24d

An electric multitier oven is of modular construction, such that each cooking tier has corresp. heating elements. Pref. each modular element is provided on its surfaces against neighbouring elements, on the level with upper and lower sheets limiting the first and last cooking tiers, and with lateral sheets, with a folded sheet with holes for assembly bolts, a seal being inserted between adjacent modular elements. Pref. the intermediate sheets limiting the cooking area of each section are ribbed and identical, the troughs carrying heating elements and the summits supporting the piece to be cooked.

The oven is used for bakery prods., confectionery prods. etc. 6.11.78 as 871779 (10pp918)

GERD- D11 58932A/33 =DS 2704-432
Paste portioning device, esp. for pastry dough - having step-wise moving piston with pressing and locking means
GERDES & CO GMBH 03.02.77-DT-704432
*(08.03.79) *DT2704-432 A21c-05/02*

A hand press, for dispensing portions of dough and pasty material such as cream, has a piston indexing in a storage vessel. The piston has teeth with which a thruster and a locking device engage alternately. The thruster is coupled to an operating lever on a horizontal axis on the vessel and is spring-loaded.

The thruster is rigidly coupled to the lever, which is movable at right angles to the axis of the piston rod and spring-supported on it. 3.2.77. as 704432 (6pp160)

HAIN/ ★ D11 20096B/11 ★DS 2739-790
Stencilled dough shapes cutter - with stencil plate, parting plate and die plate
HAINLEIN K 03.09.77-DT-739790
(08.03.79) A21c-11/02

Pieces of starlike and other shapes are stencilled from a flat rolled dough by a stencil plate with cut-outs of the desired shape with turned-over cutting edges and by a parting plate. A die platen is used to remove the shapes from the stencil plate.

This deals even with very sticky types of dough and is suitable for use in small or medium as well as in mass-production establishments. 3.9.77. as 739790 (5pp39)

WERN ★ D11 20162B/11 ★DT 2738-737
Confectionery chamber in multistage baking oven - is adjustable in temperature independently of others in hot gas circuit (NL 1.3.79)
WERNER & PFLEIDERER 27.08.77-DT-738737
(08.03.79) A21b-01/40

The baking chambers arranged one above the other, for loading at the front side, in a multistage oven heated by circulating hot gases, have, superimposed, an additional baking chamber for use also for confectionery, which is loaded from the side. This additional chamber has a further loading opening at the front of the oven, and it can be connected by familiar means to the heat circulating system of the other chambers, to which it corresponds in plan and in height.

Permits the loading of both types of goods without the mutual interference of the personnel. The temp. of the additional chamber is completely controllable independently of the others, so that it can be used for baking bread also. This raises the output of a three-stage oven producing bread by $33^{1}/_{3}\%$. 27.8.77 as 738737 (8pp1045)

HAAG- ★ D11 20310B/11 ★DT 2838-430
Dough portion moulding machine - with piston proportioner and cowled belt conveyor moulding section (NL 7.3.79)
HAAGSE BAKKERIJMACH 05.09.77-NL-009766
(08.03.79) A21c-05/02

A dough portion dividing machine consists of a measuring section and a moulding section. In the former, a piston charges a cylinder which is lowered to discharge on a rising belt conveyor. The moulding element of the belt conveyor is an adjustable hood with an inverted Vee shape of increasing depth which has a self-centering effect on the dough portions.

The self-centring effect prevents premature smearing of the discharge box. The desired size of the portions can be easily adjusted. 2.9.78 as 838430 (13pp39)

HAAS/ D11 89069X/48 =GB 1542-066
Door for heat insulating cladding of waffle baker - is made from inorganic insulating plates requiring minimum opening space
HAAS F 30.04.75-OE-003337
*A88 Q43 Q47 +Q48 (14.03.79) *DT2616-511 A21b-03/02*

A chamber is heat-insulated using cladding of door assemblies, each door assembly having a door of a plate disposed on each side of a frame, the frame and plates being of heat insulating material. The door is mounted by two arms to the chamber. One end of each arm is pivotally attached to the door at an axis midway between two opposite edges, and the other ends carrying a pivot for mounting with respect to the chamber. The pivots can be aligned in a direction parallel to the door axis and are positioned near one of the two opposite edges such that adjacent doors are aligned.

Pref. the pivots are adjacent the abutting edge of two doors. A silicone resin sealing strip is pref. provided on one side of the doors. The chamber is e.g. the oven of an automatic wafer baking machine. 29.4.76 as 017513 (4pp)

BENI- D11 57528Y/33 =GB 1542-218
Forming dough into balls and kneading them - in a trough of which the sides move longitudinally and transversly
BENIER BV 19.02.76-NL-001680
*(14.03.79) *BE-851-215 +A21c-11*

Dough moulding machine comprises a kneading trough with an horizontal bottom and sidewall plates which diverge upwardly. A rotary device moves the plates in opposite directions longitudinally at rates which can be adjusted individually, the angle between the plates and the trough bottom is also adjustable to suit the particular application. The rotary drive members impart longitudinal movement to the sidewalls relative to the trough and simultaneously produce a transverse movement. A dough piece placed between the plates is thus rounded while being conveyed to the discharge end of the machine.

Superior results in comparison with conventional equipment are achieved in a machine which is easier to adjust and clean. 11.2.77 as 005671 (4pp1364)

BREA= ★ D11 21303B/11 ★SU -499-870
Dough blanks rolling out equipment - with continuous sheet extruder, knife to make individual lengths, rolling-out sections, and flour sifters
BREAD-BAKING RES 02.04.74-SU-012433
(09.06.78) A21c-03/02

Installation for rolling out dough blanks, for making thin Armenian 'lavash' type bread comprise a system of conveyors, rolling-out rollers arranged in pairs above the conveyors, and a flour-adder. Final quality is increased and a continuous process guaranteed by adding a dough-receiving hopper, screw extruder (with the exit pipe above the first conveyor), cutting knife mounted directly against the exit pipe, and a system of guiding and longitudinal slits between the rollers, plus a pressure frame above each of the guides. The exit pipe has an internal grating Kuzminskii R.V., Kazumyan Z.B., Badalyan G.A. et al Bul. 3/25.1.76 2.4.74 as 012433 (3pp29)

TAPP ★ D11 21551B/11 ★US 4108-139
Connection oven with recirculating heated gases - mixed with additional air in chamber enclosing gas flame
TAPPAN CO 12.04.76-US-675958
Q74 (22.08.78) A21b-01 A23c-03 F24c-01

The convection oven includes a blower which receives an outflow of the oven air to be recirculated and an inflow of heated room air, for charging the oven. The oven is vented. The recirculated air and room air are combined in an air mixing chamber which supplies the air to the inlet of the blower.

Pref. the flame of a gas burner extends into the air mixing chamber to combust volatiles contained in the oven outflow to be recirculated. Pref. the oven outflow to be recirculated and the air inflow are introduced to the mixing chamber along intersecting paths.

The heating process is used to heat an oven for cooking food. Grease and other volatiles are eliminated from the recirculating oven gases. 12.4.76 as 675958 (9pp295).

THOM/ D11 16358B/09 =US 4109-018
Low calorie diet bread - contg. added gluten, protein, alpha-cellulose flour and edible gum
THOMPSON J B 02.03.77-US-773499 (27.05.76-US-690501)
*A97 (22.08.78) *GB1538-360 A21d-02/36*

Dough compsn. is prepd. for bread prod. comprises wheat flour, water, salt, yeast, fermentable sugar contg. 3-9 wt. parts added vital wheat gluten, 5-12 wt. parts protein material, 10-20 wt. parts alpha cellulose flour and 0.5-6 wt. parts hydrophilic gum w.r.t. 100 wt. parts wheat flour.

Protein material is low fat soy flour, nonfat dry milk, dry yeast flour, cotton seed flour and their mixts. Hydrophilic gum is synthetic cellulose ether, gum guar, gum tragacanth and their mixts..

Bread prod. has superior nutritional characteristics regarding protein and roughage content, exhibiting a significant calorie reduction over standard white bread. 2.3.77 as 773499 (10pp931).

INTT ★ D11 21762B/11 ★US 4109-023
Porous yeast leavened dough prod. esp. muffin - contg. fumaric acid and rice flour to improve texture
INT TELEPH & TELEG CORP 25.04.77-US-790189
(22.08.78) A21d-02/14

Yeast leavened dough prod. esp. a muffin, contains 0.2-5.0 pts., esp. 0.25-3.0 pts. rice flour, and 0.06-1.0 (0.1-0.5) pts. fumaric acid per 100 pts. of flour.

The muffins have increased and uniform porosity, excellent flavour and a less gummy, more chewy eating quality. 25.4.77 as 790189 (5pp955).

STAU ★ D11 21763B/11 ★US 4109-02
Whey protein concentrate to replace shortening - in baked good esp. biscuits
STAUFFER CHEMICAL CO 15.12.76-US-750947
(22.08.78) A21d-02/34 A21d-13/08

A leavened dough mixt. for the prodn. of leavened baked goods normally contg. shortening is prepd. by replacing a part of the shortening requirement of the baked goods with a whey protein (I) concentrate contg. ⩾25% protein. The protein is undenatured and non-oxidised. Pref. ⩽90, esp. ⩽ 80% of shortening is replaced for the prodn. of biscuits. Pref. (I) is cottage cheese whey, conc. by ultrafiltration.

Replacement of some or all of the shortening by (I) in leavened baked goods (cakes, doughnuts, etc. esp. biscuits) gives low fat, high protein prods. of good structure. 15.12.76 as 750947 (5pp478).

PILL ★ D11 21813B/11 ★US 4142-4
Feed hopper with rotating cutter for comminuting dough - produce random sized pieces for baking into crunchy food toppi granules
PILLSBURY CO 31.10.77-US-846962
(06.03.79) A21b-03/07

Appts. for providing a crunchy food topping comprises a dough storage hopper having a bottom outlet and a rotata cutter shaft. The shaft mounts cutting wires on radial spokes for comminuting the dough in the hopper. The ou let includes a slidable gate for controlling the width of th outlet and the residence time in the hopper.

A conveyor is positioned below the outlet to receive th dough granules from the hopper and transport them to an oven for baking and provide baked, friable dough granule of random size.

The cutting wires separate the initial surface layer f the dough; subdivide the layer into random sized pieces also agitate the dough over the outlet to ensure that the -let is clear so that the pieces continue to move through the conveyer. The flow of prepd. granules can be contr ed using the slidable gate which determines the residenc time and hence the size of the pieces. 31.10.77 as 8469 (6pp1044)

D12: MEAT; FISH PROCESSING

TOWN ★ D12 20059B/11 ★BE-871-798
Machine to inject brine, etc. into meat - at automatically controlled delivery rate ensuring uniform distribution in meat
TOWNSEND ENG CO 06.11.78-BE-871798
(01.03.79) A22c A23b

Liq. is pumped through a receiver to a set of hollow needles which are reciprocated to be first inserted into and then withdrawn from the heat. The needle speed is varied w.r.t. the meat. During part of the time for which needles are inserted in the meat, fluid is injected by the pump via receiver and needles. The rate of discharge of fluid through the needles is directly proportional to the speed of displacement of needles w.r.t. the meat. For any speed of displacement the rate of delivery of fluid via the needles is adjustable.

Fluid injection should not start until the insertion of needles has started and injection should cease before needles are withdrawn. The speed of needle displacement is pref. max. at mid-displacement on the entry and withdrawal strokes.

Used for injecting brine, etc. into meat, ham, bacor uniform and controlled. distribution of brine, etc. into heat. The rate of fluid injection is made directly prop tional to the speed of needle displacement. 6.11.78 as 871798 (21pp448)

HAND/ ★ D12 B/11 ★BR 7704-
Sausage-making machine distribution calibrator - has electric sw key for controlling conveyor mechanism via operating instrumen
HANDTMANN A 06.07.77-BR-004436
(28.02.79) A22c-11

TERM/ D12 92755R/50 =DS 1939-
Industrial pistol with magazine
TERMET P (TER /) 05.08.68-FR-161953
*+P62 (08.03.79) *FR1600-417 +A22b-03/02 B25c-01/08*

A flexible strip-type support for delivering headed bolt into a setting tool is claimed. It has guide ring(s) enclosing each bolt shank, and joined to the adjacent guide r by a flexible plastic rib. There can be a further ring en closing the head and joined to the shank ring by a length wise member, and to the adjacent head ring by a further flexible rib.

The tool is e.g. a gun used for animal slaughter in abbatoirs. 5.8.69. as 939801 (4pp160)

VAES D12 45322V/25 =DS 2360-557
Stable meat preservative powders - contng. acids salts of alkaline amino, buffering agents and dialkali salts of glutamic acid
VAESSEN-SCHOEMAKER 06.12.72-NL-016508
*(08.03.79) *BE-808-239 A23b-04/14 +A23l-01/22*

Additive for fish or meat is a stable, free-flowing powder contg. solid di-alkali metal salts of glutamic acid, opt. with other usual additives. The powder forms an alkaline reacting soln. and has buffering and preserving action. 5.12.73. as 360557 (3pp068)

STEM- ★ D12 20172B/11 ★DT 2738-790
Coating meat and sausage prods. continuously - in enclosed installation with endless conveyor, dipping bath and drying fan
STEMMLER M & H GMBH 29.08.77-DT-738790
P42 Q31 (08.03.79) A22c-11 B05c-03/10 B65b-33

A soln. of a coating material in a bath is applied mechanically to sausages or other meat prods. The prods. are carried on a continuously moving conveyor which dips them into the bath. Both conveyor and bath are placed beneath an enclosing hood which has suction arrangements at each side. These set up, above the container, a zone of reduced pressure with an atmosphere of solvent which is practically at rest. A drying zone for the coating on the prods. is also provided.

Used for coating smoked or dried meats and sausage foodstuffs, without the interruptions of conventional machines. The process is continuous and the goods pass through without hold-ups, as they are delivered. 29.8.77 as 738790 (18pp1045)

UNIC D12 28775A/16 =GB 1539-483
Collagen compsns. for prepn. of tubular food wrappers - contain ester of fatty acid and poly:ol or mineral oil anti-blocking agent
UNION CARBIDE CORP 14.10.76-US-732482
*A97 (31.01.79) *BE-859-710 C07g-07*

Homogeneous formable aq. collagen compsn. contains, uniformly dispersed, 5-30 wt % based on solids content of an antiblock additive chosen from fully esterified fatty acid esters of $\geqslant 3$ polyhydric alcohols and mineral oil. The fatty acids are 8-22C aliphatic carboxylic acids which occur in fats and oils. Pref. the antiblocking agent is present at 10-25 wt % solids content of the collagen compsn. and the compsn. contains $\geqslant 6$ wt. % collagen solids and 5-30 wt % noncollagenous fibres.

The compsn. is readily converted to tubular food casing which does not show blocking tendancies. 13.10.77 as 042614 (7pp945)

MAYC D12 81264X/44 =GB 1542-080
Precooked bacon slices with low nitrite contents - prepd. by curing, smoking, slicing then cooking to reduce moisture content
MAYER O & CO INC 09.06.75-US-584935
*E34 (14.03.79) *BE-842-764 A23b-04/02*

Precooked sliced bacon is prepd. by introducing and uniformly dispersing into a bacon belly a cure compsn. contg. salt, sugar and sodium or potassium nitrite. The bacon belly is then smoked, chilled and slice. Slices are cooked the water content of sliced bacon being reduced during cooking to below the water content not supporting growth of Clostridium botulinum. A cure compsn. introducing 5-120 ppm sodium or potassium nitrile into back belly is used. The compsn. pref. contains sodium tripolyphosphate and sodium ascorbate.

Cure compsn. has reduced nitrite content which reduces formation of carcinogenic nitrosamines during cooking. 8.6.76 as 023664 (4pp931)

ELEL- ★ D12 B/11 ★HU T016-037
Fowl plucking machine
ELELMISZERIPARI TER 01.10.75-HU-EE2374
(28.02.79) A22c-21/02

KASS- ★ D12 20514B/11 ★J5 4014-559
Prepn. of seasoning soln. for use in spitchcocking - by extracting the fish to be spitchcocked, treating extract with enzyme, adding seasoning and heating
KASSEI SHOKUHIN KK (DAIT) 02.07.77-JA-078496
(02.02.79) A23l-01/22

The method comprises extracting the fish to be spitchcocked such as eel, roach, etc., treating the extract with enzyme, adding seasonings such as 'syoyu', sugar, 'sake', etc. and heating. Excellent seasoning solution of spitchcocking use can be obtd.

By the enzymic treatment with protease, lipase, etc., viscous mucin, myoproteid, elastin, collagen, etc. can be decomposed. As a result gelation and viscosity-increase of the seasoning can be prevented and the decomposed product forms desirable taste and flavour with seasoning at heating the mixture. By heat-treating the extract the formation of desirable taste and flavour can be accelerated. 2.7.77 as 078496 (2pp5)

KASS- ★ D12 20515B/11 ★J5 4014-560
Preparing seasoning soln. for spitchcocking - by adding fish extract and seasoning to mixt. of fatty acid glyceride and organic base and heating mixt.
KASSEI SHOKUHIN KK (DAIT) 02.07.77-JA-078497
(02.02.79) A23l-01/22

Process comprises (a) extracting the fish to be spitchcocked such as eel, loach, sea eel, etc.; (b) adding the extract and seasoning such as syoyu, sugar, sake, etc. to a mixt. of 14-18C fatty acid and organic base; and (c) heating the mixt.

Suitable bases include piperidine and trimethylamine. Prods. of good flavour and taste are obtd. 2.7.77 as 078497 (2pp5)

NIIG ★ D12 21000B/11 ★J5 4017-150
Proteinaceous marine animal meat grains prodn. - by extruding into hydrophilic solvent until non caking, and then repeating the extrusion
NIIGATA ENG KK 29.06.77-JA-077338
(08.02.79) A23j-01/04 A23l-01/32

The method comprises (1) mashing marine animal meat into a caking paste, (2) extruding it in stringy form in hydrophilic organic solvent, (3) retaining it in the solvent to make it partly non-caking, (4) putting the meat in an extruder for kneading, (5) re-extruding it into hydrophilic organic solvent and (6) retaining it in the solvent to make it wholly non-caking.

Marine animal meat (e.g. cod, mackerel, sardine, cuttlefish, octopus, etc.) can be easily formed into granic. In (4) and (5) the structure is made porous, and in (6) the aggregation and the defatting of the meat can be practiced uniformly. The obtd. granular meat has similar structure to animal meat, and food having an animal meat-like texture can be prepared by restoring it with water, adding seasoning and cooking.

Pref. hydrophilic solvent is ethanol or isopropanol. In (5) and (6), the meat is retained for 5-20 mins. each. 29.6.77 as 077338 (3pp5)

NIIG ★ D12 21002B/11 ★J5 4017-158
Colouring ham or sausage - by admixing with nitrite and/or nitrate and browned haemoglobin, and heat treating
NIIGATA ENG KK 06.07.77-JA-080736
(08.02.79) A22c-11 A23l-01/31

Ham or sausage is prepd. by combining nitrite and/or nitrate with the material for ham and sausage and heat-treating the mixt. Improvement comprises adding browned hemoglobin to the material prior to the heat-treatment.

By the heat-treatment hemoglobin is converted to nitrohemoglomogen through nitrosohemoglobin and nitrosohemoglomogen shows stable pink colour semi-permanently. 6.7.77 as 080736 (5pp5)

AZOV= ★ D12 21295B/11 ★SU -496-029
Brushes for cleaning abdominal cavities - have bristles grouped together in elliptical shape blades and mounted on revolving axle
AZOV-BLACK SEA FISH 08.02.74-SU-995437
(05.06.78) A22c-25 14

Brush cleaner comprises rotating brushes. Cleaning

quality is increased by grouping the bristles into "blades" having elliptical shape and distributed on mutually intersecting planes.
Zhilin N.I., Bul. 47/25.12.75 8.2.74 as 995437 (2pp29)

MIPR= ★ D12 21365B/11 ★SU -589-947
Pig carcass scalding installation - has inclined carcass conveyor located between two spray heads, and collector reservoir mounted below
MINSK PRODMASH ETP 15.07.76-SU-383151
(07.02.78) A22b-05/08

Scalding installation reduces the force needed to scrape away the bristles and hairs and comprise a container with hot-water sprayheads inside it and a conveyor made of transverse rods. Entry of impure water into light-weight carcases is prevented, by inclining the weight-supporting surfaces of the conveyor in a transverse direction, and providing stops at the lower ends of the [illegible]
Dubinskii L.R., Chaikovskii A.A., Soloveichik S.L.
Bul. 4/30.1.78 15.7.76 as 383151 (3pp29)

MEAT= ★ D12 21366B/11 ★SU -589-948
Meat cutter to produce lumps for stew-making - has horizontal reciprocating knife for cutting strips which are further cut up by disc saw, with wedge-shape teeth
MEAT DAIRY IND DES 04.04.75-SU-121308
(07.02.78) A22c-17

Meat cutter has loading hopper fixed knife, horizontal reciprocating knife with pusher, to cut the meat into strips and disc saws. The quality of cut is improved by adding an attachment to feed the meat strips to the disc saws. This is actuated by the pusher on the horizontal knife. The stationary and movable knives are set at an angle to one another e.g. 8-10°. Formation of fine meat particles during sawing is avoided by making the saw teeth wedge shaped.
Presnov A.A., Syayaro R.D., Layal Yu.Ya. Bul. 4/30.1.78 4.4.75 as 121308 (3pp29)

MOMD ★ D12 21509B/11 ★SU -603-901
Extruded meat deformation kinetics test apparatus - has dial gauge indicator with two rods, one having induction-transformer displacement sensor
MOSCOW MEAT DAIRY INST 21.12.76-SU-432764
R16 (03.04.78) G01n-30/12

The appts. includes a lever system with set of loads, an electrically driven pusher with a displacement sensor, and a test chamber with interchangeable dies. To study deformation kinetics on extrusion through orifices, there is a micron linear displacement clock-type indicator with two rods and an interchangeable feeler, and an induction-transformer sensor for displacement of one rod with windings and a core.

The core is coaxial with the pusher and rigidly attached to the rod. The pusher sensor includes differential-transformer windings located directly on the chamber. To facilitate operation, the lever system is pref. rotatable about the stand carrying the appts., and there is a screen to prevent contamination of the second indicator rod.
Ivashov V.I., Yurkov, S.G., Martynov G.A., et al.
Bul. 15/25.4.78 21.12.76 as 432764 (3pp1358)

SAIZ/ ★ D12 21520B/11 ★US 4107-819
Hand held electrically operated fish scaler - with circumferential rows of teeth forming oval cutting surface
SAIZON F S 03.01.77-US-755960
(22.08.78) A22c-25/02

Hand-held, electrically operated fish scaler comprises a motor located in a housing with a switch for actuating the motor. A descaling tool is rotated by the motor and comprises a shank and a member secured to the shank with teeth formed on it. The teeth are formed in circumferential rows.

One of the rows of teeth is positioned at the opposite end of the member to the shank and the other rows have different radii to provide an oval periphery of cutting edges. Adjacent teeth in the rows are separated by longitudinal slots, and adjacent rows separated by transverse grooves having bottoms shaped in the oval configuration. Adjacent grooves have their bottoms at different radii from the axis of the tool. Each tooth is formed by a front wall, a rear wall, an upper surface and a pair of side-walls. The front walls of the teeth lie in non-radial plane w.r.t. the axis to provide either negative or positive rake.

The tool is hand held and may be run over the surface of the fish to remove its scales. 3.1.77 as 755960 (8pp).

TRIO- . D12 04637A/03 =US 4107-9
Automatic fish box packing machine - has spacing and aligni conveyor meshing with batch releasing conveyor with space blades
TRIO ENGG LTD 24.06.76-NO-002182
*+Q31 (22.08.78) *DT2728-293 +B65b-05/08 B65b-25*

A machine for loading fish in boxes has a first conveyor supplying a series of transport containers and serving to transfer fish sideways so the heads of the fish in adjacen containers face in opposite directions and the bellies are directed upwardly. The fish are then transferred to a second conveyor having a series of catch devices each adapted to engage a respective fish and transfer it to an associated box. The conveyors are driven at uniform speeds in a continuous circular movement.

Cooperating, co-travelling check elements cause each fish to be retained on the second conveyor in gps. for subsequent transfer to a box. A third conveyor may be provided opposite the second conveyor and aligned with t first conveyor to convey boxes. 23.6.77 as 809400 (7pp).

RHEE ★ D12 21796B/11 ★US 4142-2
Stuffing horn assembly with separate horns - slidable and rotatab w.r.t. central manifold tube connected to sausage machine
RHEEM MFG CO 04.11.77-US-848633
(06.03.79) A22c-11/02

A stuffing horn assembly for transporting and dischargin comminuted food products into a casing comprises an in er manifold tube mounted on a support and slidably moun ing an outer tube which is also rotatable with repeat to th manifold tube.

At least two branch tubes project from the outer tube and provide product discharge openings. An annular gea is mounted on the inner tube and includes projecting lock ng pins for engaging the outer tube for rotating the tube the manifold tube. A yoke is attached to the outer tube and a drive cylinder is used to slidably posn. the outer tube on the manifold tube to any one of a no. of indexed posns.

The outer tube and connected branch tubes can be ind -ed both longitudinally and rotatably so as to sequentiall connect separate horns to a main sausage discharge tub The horn assembly has a min. no. of mechanical parts is therefore easy to service and maintain. 4.11.77 as 848633 (8pp1044)

See Also

D13 US 4143164

D13: OTHER FOODSTUFFS

STAL ★ D13 20013B/11 ★BE -870-250
Animal foodstuff block of good stability - containing 7 to 65 per cent of soluble condensed material from vegetable seeds
STALEY A E MFG CO 09.09.77-US-831835
C03 (06.03.79) A23k

Animal foodstuff block contg. $\leqslant$ 12% moisture and 7-65% $^{w}/w$ of soluble condensed material from plant seeds, the latter acting as a nutritive binding agent and also rendering the block more resistant to degradation.

The condensed soluble material is pref. from oil seeds, esp. soya. The pref. moisture content is 8-12%. 6.9.78 as 870250 (15pp288)

GRAC ★ D13 20080B/11 ★CA 1049-315
Chilling food prod. - by tumbling loosely packed prod. in flexible container in cold water
GRACE W R CO 28.01.75-US-544728
(27.02.79) A23l-03/02

Food prod. is packaged at $\geqslant$180°F in a flexible container so that the products are mobile within the container. The container is tumbled in a cooling medium which is $<$ 40°F. The food moves about within the container so that the interior temp. of the food is reduced to below 40°F in less than 30 mins. This restricts microbial growth within the package.

The food prod. may be precooked and packaged at its cooking temp. The cooling medium is pref. chilled water at 32-40°F. Method is used to package a food item for storage. The food may be casseroles, soups, stews, vegetables or meat.

The time for cooling the food prod. is shortened compared with prior art processes. This restricts the microbial growth. The food may be stored at 28-32°F for 30-45 days. 5.8.75 as 232880 (15pp295)

GENO ★ D13 20081B/11 ★CA 1049-320
Blistered cereal flakes prepd. from extruded dough - by cutting into pellets then drying before flaking and blistering
GENERAL FOODS CORP 22.11.74-US-526094 (28.05.74-US-473638)
(27.02.79) A23l-01/16

Dough is made from wholemeal flour with no free starch and 85% passing a USS 16 mesh screen. The dough is heated and cooked in an extruder which creates pellets extruded below the gelatinisation temperature of the dough. The pellets are dried to 12% moisture and are tempered to establish a uniform moisture distribution.

After flaking the pellets are heated in a gas at 250-350 °F to cause discrete, uniform blistering on both surfaces in a period of less $<$1 min. Finally the blistered flakes are heated to 300-370°F to a stable moisture content.

Breakfast cereal is produced for consumption with milk.

On the addition of milk the flakes rehydrate as a result of the fracture of the flake structure rather than conversion to a mush. This is promoted by a minimum of fine flour particles or oversized grit in the dough . 23.5.75 as 227702 (16pp295)

SPOF D13 40332V/22 =DS 2357-119
Animal fodder concentrate contg. essential biofactors - esp. lysine and vitamins, prepd. by thermolysis and evaporation of water from aq. substrate esp. non-filtered nutrient medium
SPOFA SPOFENE FARM NP 15.11.72-CS-007748
*C03 (08.03.79) *DT2357-119 A23l-01/30*

Prepn. of stable L-lysine concentrate with a high content of essential biofactors comprises propagation of micro-organisms which produce L-lysine, followed by autolysis of the fermented culture medium. In partic., the unfiltered liquors are mixed with vitamins, trace elements, etc., and then subjected to thermolysis in the presence of a proteolytic enzyme , (0.001-0.1 wt. %), at pH 6-8 (pref. 7.2-7.5), at 55-120° , with simultaneous or subsequent evapn. until the solids content is 20-100%.

The prods. are used as additives in nutrients and animal fodders. 15.11.73. as 357119 (4pp047)

DEGS D13 96279X/52 =DS 2526-750
Calcium salts of (bis) hydroxymethyl lysine - useful as feed additives for ruminants
DEUTSCHE GOLD & SILBER 14.06.75-DT-526750
*C01 (08.03.79) *BE-842-900 A23k-01/18 C07c-101/24*

Calcium salts of N-hydroxymethyl-L-lysine and N(α), N(ξ) -bis(hydroxymethyl)-L- lysine are new cpds. used as additives (about 0.01-5 wt. %) in cattle fodder.

Prepn. of these salts comprises reaction of HCHO (pref. 1-1.2 or 2-2.3 moles) with L-lysine (1 mole) in aq. soln. at pH 8 or more, in the presence of Ca^{2+} ions, at 0-60°. 14.6.75. as 526750 (4pp047)

CHCC D13 94635X/51 =DS 2623-682
Highly concentrated sorbic acid suspension and emulsions prepn. - by spraying hot sorbic acid solns. for direct use for addn. to foods
CHISSO CORP 03.06.75-JA-066688
*E17 (08.03.79) *DT2623-682 C07c-57/10*

An aq. dispersion contg. a high concn. of fine particles of sorbic acid is obtd. A hot soln. of sorbic acid in water, opt. with a water soluble, low-boiling organic solvent is converted to a spray, e.g. by a spray nozzle. The soln. is cooled rapidly to obtain a suspension of sorbic acid. Excess liquid is removed, e.g. by decantation or centrifugation. An emulsion may be obtd. by addn. of a surfactant with a hydrophilic-lipophilic equilibrium of $\geqslant$9.

The dispersion is stable, contains no additives and may be used as a food preservative. 26.5.76. as 623682 (6pp068)

TUNO/ D13 21474A/11 =DS 2700-791
Fine deodorised soybean powder - prepd. by coarse grinding beans, deodorising resulting particles and subsequently fine grinding
TUNODA T 09.09.76-JA-108241
*P41 (08.03.79) *US4076-851 A23l-01/20*

The process produces fine de-odourised soya bean powder, the previously-washed raw beans being pressed flat so far as not to remove the oil. They are then dried in a circulating atmosphere of 50-60°C to a moisture content of 5%, and coarse-ground, the seed husks and the embryo leaves being simultaneously separated from each other by air pressure and the husks removed from the system.

By steam jet at 110-120°C the coarse-ground leaves are steam-malted for 7-8 minutes, and dried to roughly 2% moisture content by brief evacuation. In successive stages the leaves are then subjected to intermediate and final grinding at constant temp. 11.1.77. as 700791 (4pp 160)

STAK- D13 55333A/31 =DS 2714-995
Lignocellulose material conversion to forage - by compression exposure to steam pressure in digester acid sudden pressure release
STAKE TECHNOLOGY 24.01.77-US-762095
*(08.03.79) *DT2714-995 A23k-01/12 A23k-01/18*

Cellulose-contg. material, e.g. aspen poplar wood, is made more digestible to ruminants. Lignocellulose material with a moisture content at or above the fibre satn. point is compressed, led into a pressure digester and there subjected to a sudden increase in pressure by addn. of satd. steam to a pressure of $\geqslant$14.1 atmos. for $>$15 seconds.

The material is compressed mechanically and its free moisture content adjusted or maintained at or above the fibre saturation point. Part of the material is subjected to rapid expansion to atmospheric pressure in $>$ 0.1 sec to effect cooling. 4.4.77. as 714995 (7pp068)

METG ★ D13 20108B/11 ★DT 2736-864
Feedstuff and sugars prodn. from vegetable waste - by acid hydrolysis under pressure and oxidn.
METALLGESELLSCHAFT AG 16.08.77-DT-736864
C03 (D17) (08.03.79) A23k-01

Prodn. of feedstuffs and sugar-contg. solns. comprises hydrolysing opt. comminuted vegetable material with acid under elevated pressure at >100°C. The obtd. soluble product is extracted and removed and processed. The insoluble residue is oxidised, opt. in presence of catalyst.

Pref. the volatile cpds. (e.g. furfurol, acetic acid, formic acid) formed in the hydrolysis are removed with steam during and/or after the extn. of the soluble product. The water content of the insoluble residue is pref. reduced by pressing before and/or after the extn.

The cellolignin of vegetable matter is converted in high yield into a carbohydrate feedstuff, esp. for ruminants, with a high fodder value (80-85%) typically 1 tonne of bagasse gives a feedstuff equivalent, to 560-595kg of maize. The obtd. aq. sugar soln. can be treated to recover sugars, esp. xylose, which can be hydrogenated to xylitol an anticariogenic agent and sugar substitute for diabetics. The sugar soln. can also be used as nutrient for growth of yeasts for use as protein for human and animal foods. Volatile components can be recovered. Agricultural wastes, e.g. straw, bagasse and maize cobs, can be utilised. 16.8.77 as 736864 (10pp941)

PETE/ ★ D13 20116B/11 ★DT 2737-793

Decaffeination of raw coffee - by selective extraction of caffeine with extractant and compressed gas at elevated temp. and pressure

PETER S 22.08.77-DT-737793

(08.03.79) A23f-01/10

Decaffeination of raw coffee is carried out by disintegrating raw coffee with water vapour at elevated temp. in such a way that the coffee contains 15-55 wt.% of moisture; then extracting caffeine with a compressed gas and an extractent in the gas state; partly condensing the extractant with caffeine; and then evaporating the extracted from the condensate and recycling; the residue is pure caffeine.

The mixt. of the compressed gas and the extractant, esp. in the hypercritical state, extracts caffeine from raw coffee selectively and very efficiently. The rechnology of th their process is simpler than in the known processes. 22.8.77 as 737793 (15pp70)

PETE/ ★ D13 20117B/11 ★DT 2737-794

Decaffeination of coffee - by selective extraction of caffeine with solvent under high pressure

PETER S 22.08.77-DT-737794

(08.03.79) A23f-01/10

Decaffeination of coffee by extraction with a solvent is improved by applying high pressure (50-1000, pref. 100-500 atmos); the temp. is 20-70 (pref. 35-50°C.

This method is suitable for the removed of caffeine from raw coffee (after disintegration with water vapour at elevated temp.), or from roasted coffee, or from aq. extracts of coffee. The application of high pressure increases the extraction rate and the solubility of caffeine in the solvent. Therefore, there is no need for applying high temps.; 45°C is enough. 22.8.77 as 737794 (10pp70)

SOLL- ★ D13 20177B/11 ★DT 2738-894

Applicator for coatings such as chocolate on confectionery - ensures uniform penetration of surfaces roughened by nuts, fruits etc.

SOLLICH SPEZIALMASC 29.08.77-DT-738894

P42 (08.03.79) A22c-11 B05c-05/02

A fluid mass such as chocolate is applied as a coating to sweets, baked articles, etc., as it falls from the bottom opening of a container, on to the articles moved on a conveyor. In the outlet from the container, a rotating cylinder is arranged and projects partly into the mass. The lowest point of the cylinder is relatively close to the moving goods, and immediately behind them, a scraper blade for the material on the cylinder is fitted.

Ensure a uniform coating esp. on goods the surface of which is roughened by trimmings such as nuts, without trapping air beneath. The operation is carried out correctly and at high speed, since the turbulence set up assists the penetration by the mass. 29.8.77 as 738894 (11pp1045)

MITN ★ D13 20271B/11 ★DT 2836-876

Two-component oxygen-absorbing compsn. for food preservation - contg. metal powder coated with metal halide, and water-contg. material impregnated with moisture regulating aq. soln.

MITSUBISHI GAS CHEM IND 24.08.77-JA-101452

A97 E36 G04 (08.03.79) B01d-53/16 B01j-01/22

Oxygen-absorbing compsn. for food preservation contains (A) a metal powder (Zn, Cu and esp. Fe or their mixts) coated with 0.001-10 pts.wt. (pref. 0.01-5 pts.wt.) of a metal(Li, Na, K, Mg, Ca or Ba) halide (Cl pref. or Br or I); the total water content of the metal plus metal halide being <1 wt.% (pref. <0.5 wt.%, esp. <0.2 wt.%); and (B) a water-contg. material, pref. a particulate (0.5-10 mins) material contg. >1 wt.% of water; the particles are impregnated with an aq. moisture-regulating soln. Components (B) is used in an amt. >0.1 wt.% w.r.t (A). Pref. the compsn. contains a binder e.g. CMC or PVA.

Components (A) and (B) are kept separately from the food, but in the same gas-impermeable bag or container. Component (A) starts absorbing oxygen only upon contact with component (B). The components must be contacted immediately before enclosure in the food-contg. bag or container, but (A) and (B) must be kept separately from the food in a gas-permeable bag or container. The oxygen absorption capacity of the compsn. is not affected by the quantity of the water vapour emitted by the food. 23.8.78 as 836876 (28pp70)

BLUE- ★ D13 20301B/11 ★DT 2837-822

Protein-contg. feed additive for ruminants - produced by drying protein-contg. solns. at pH 9-13.5

BLUE WING CORP 26.08.77-US-828152

C03 (08.03.79) A23k-01

In the prodn. of a feedstuff, a protein-contg. material is dissolved in an aq. medium, and the soln. is adjusted to pH 9-13.5 and dried to give a particulate compsn.

The prod. is a feed supplement for ruminants. The protein content passes through the first stomach of ruminants without being digested, but is digested in the fourth stomach and lower intestinal tract. This avoids the loss in nutritive value which normally occurs in ruminants due to decomposition of dietary protein by the microflora of the first stomach. 25.8.78 as 837822 Add to 2710554 (46pp280)

BPNU- ★ D13 20321B/11 ★FR 2393-536

Liq. fish protein food prod. for pigs - prepd. using liquefied protein, fish and accelerator additive (SW 8.1.79)

BP NUTRITION UK 09.06.77-GB-024071

C03 (09.02.79) A23j-01/04 A23k-01/10 A23k-03

The "silo fish" (i.e. fish liquefied by means of enzyme action naturally present and an accelerator additive) is prepd. by mixing the fish with previously liquefied protei and with an additive which initiates and accelerates the liquefaction process.

The prod. is used for pig food. The process avoids the need for finely cutting up the fish, the transport of the chopped up fish, the mixing of a solid mass and the need for high power mixing equipment. 8.6.78 as 017192 (9pp597)

PALM- ★ D13 20323B/11 ★FR 2393-540

Treating manioc or cassava to produce a semolina or flour - by continuously using machines for the different stages of cleaning, cutting, grinding, etc.

SOC PALMIER HUILE (BERT-) 07.06.77-FR-017318

(09.02.79) A23n-01/02 A23n-13

The manioc is treated by removing the earth and stones from the tubers, washing, topping, and then cutting the tubers into longitudinal pieces, cleaning them and cutting them up into small substantially cubic pieces. The pieces are then crushed and ground, followed by draining to recover the particles, which are then treated to remove lum followed by drying. The dried product is then ground and sieved. The process is continuous or semi-continuous.

The prod. used in food prepns. is prepd. as a semolina or a fine flour. The process enables semi-automation of the process, which is at present mostly manual, using machines at particular stages adapted for that purpose. 7.6.77 as 017318 (11pp597)

D13: OTHER FOODSTUFFS

STAL ★ D13 20013B/11 ★BE -870-250
Animal foodstuff block of good stability - containing 7 to 65 per cent of soluble condensed material from vegetable seeds
STALEY A E MFG CO 09.09.77-US-831835
C03 (06.03.79) A23k

Animal foodstuff block contg. $\leqslant$ 12% moisture and 7-65% $^{w}/w$ of soluble condensed material from plant seeds, the latter acting as a nutritive binding agent and also rendering the block more resistant to degradation.

The condensed soluble material is pref. from oil seeds, esp. soya. The pref. moisture content is 8-12%. 6.9.78 as 870250 (15pp288)

GRAC ★ D13 20080B/11 ★CA 1049-315
Chilling food prod. - by tumbling loosely packed prod. in flexible container in cold water
GRACE W R CO 28.01.75-US-544728
(27.02.79) A23l-03/02

Food prod. is packaged at $\geqslant$180°F in a flexible container so that the products are mobile within the container. The container is tumbled in a cooling medium which is $<$ 40°F. The food moves about within the container so that the interior temp. of the food is reduced to below 40°F in less than 30 mins. This restricts microbial growth within the package.

The food prod. may be precooked and packaged at its cooking temp. The cooling medium is pref. chilled water at 32-40°F. Method is used to package a food item for storage. The food may be casseroles, soups, stews, vegetables or meat.

The time for cooling the food prod. is shortened compared with prior art processes. This restricts the microbial growth. The food may be stored at 28-32°F for 30-45 days. 5. 8. 75 as 232880 (15pp295)

GENO ★ D13 20081B/11 ★CA 1049-320
Blistered cereal flakes prepd. from extruded dough - by cutting into pellets then drying before flaking and blistering
GENERAL FOODS CORP 22.11.74-US-526094 (28.05.74-US-473638)
(27.02.79) A23l-01/16

Dough is made from wholemeal flour with no free starch and 85% passing a USS 16 mesh screen. The dough is heated and cooked in an extruder which creates pellets extruded below the gelatinisation temperature of the dough. The pellets are dried to 12% moisture and are tempered to establish a uniform moisture distribution.

After flaking the pellets are heated in a gas at 250-350 °F to cause discrete, uniform blistering on both surfaces in a period of less $<$1 min. Finally the blistered flakes are heated to 300-370°F to a stable moisture content.

Breakfast cereal is produced for consumption with milk.

On the addition of milk the flakes rehydrate as a result of the fracture of the flake structure rather than conversion to a mush. This is promoted by a minimum of fine flour particles or oversized grit in the dough . 23. 5. 75 as 227702 (16pp295)

SPOF D13 40332V/22 =DS 2357-119
Animal fodder concentrate contg. essential biofactors - esp. lysine and vitamins, prepd. by thermolysis and evaporation of water from aq. substrate esp. non-filtered nutrient medium
SPOFA SPOFENE FARM NP 15.11.72-CS-007748
*C03 (08.03.79) *DT2357-119 A23l-01/30*

Prepn. of stable L-lysine concentrate with a high content of essential biofactors comprises propagation of micro-organisms which produce L-lysine, followed by autolysis of the fermented culture medium. In partic., the unfiltered liquors are mixed with vitamins, trace elements, etc., and then subjected to thermolysis in the presence of a proteolytic enzyme , (0.001-0.1 wt. %), at pH 6-8 (pref. 7.2-7.5), at 55-120° , with simultaneous or subsequent evapn. until the solids content is 20-100%.

The prods. are used as additives in nutrients and animal fodders. 15. 11. 73. as 357119 (4pp047)

DEGS D13 96279X/52 =DS 2526-750
Calcium salts of (bis) hydroxymethyl lysine - useful as feed additives for ruminants
DEUTSCHE GOLD & SILBER 14.06.75-DT-526750
*C01 (08.03.79) *BE-842-900 A23k-01/18 C07c-101/24*

Calcium salts of N-hydroxymethyl-L-lysine and N(α), N(ε) -bis(hydroxymethyl)-L- lysine are new cpds. used as additives (about 0.01-5 wt. %) in cattle fodder.

Prepn. of these salts comprises reaction of HCHO (pref. 1-1.2 or 2-2.3 moles) with L-lysine (1 mole) in aq. soln. at pH 8 or more, in the presence of Ca^{2+} ions, at 0-60°. 14.6.75. as 526750 (4pp047)

CHCC D13 94635X/51 =DS 2623-682
Highly concentrated sorbic acid suspension and emulsions prepn. - by spraying hot sorbic acid solns. for direct use for addn. to foods
CHISSO CORP 03.06.75-JA-066688
*E17 (08.03.79) *DT2623-682 C07c-57/10*

An aq. dispersion contg. a high concn. of fine particles of sorbic acid is obtd. A hot soln. of sorbic acid in water, opt. with a water soluble, low-boiling organic solvent is converted to a spray, e.g. by a spray nozzle. The soln. is cooled rapidly to obtain a suspension of sorbic acid. Excess liquid is removed, e.g. by decantation or centrifugation. An emulsion may be obtd. by addn. of a surfactant with a hydrophilic-lipophilic equilibrium of $\geqslant$9.

The dispersion is stable, contains no additives and may be used as a food preservative. 26.5.76. as 623682 (6pp068)

TUNO/ D13 21474A/11 =DS 2700-791
Fine deodorised soybean powder - prepd. by coarse grinding beans, deodorising resulting particles and subsequently fine grinding
TUNODA T 09.09.76-JA-108241
*P41 (08.03.79) *US4076-851 A23l-01/20*

The process produces fine de-odourised soya bean powder, the previously-washed raw beans being pressed flat so far as not to remove the oil. They are then dried in a circulating atmosphere of 50-60°C to a moisture content of 5%, and coarse-ground, the seed husks and the embryo leaves being simultaneously separated from each other by air pressure and the husks removed from the system.

By steam jet at 110-120°C the coarse-ground leaves are steam-malted for 7-8 minutes, and dried to roughly 2% moisture content by brief evacuation. In successive stages the leaves are then subjected to intermediate and final grinding at constant temp. 11.1.77. as 700791 (4pp 160)

STAK- D13 55333A/31 =DS 2714-995
Lignocellulose material conversion to forage - by compression exposure to steam pressure in digester acid sudden pressure release
STAKE TECHNOLOGY 24.01.77-US-762095
*(08.03.79) *DT2714-995 A23k-01/12 A23k-01/18*

Cellulose-contg. material, e.g. aspen poplar wood, is made more digestible to ruminants. Lignocellulose material with a moisture content at or above the fibre satn. point is compressed, led into a pressure digester and there subjected to a sudden increase in pressure by addn. of satd. steam to a pressure of $\geqslant$14.1 atmos. for $>$15 seconds.

The material is compressed mechanically and its free moisture content adjusted or maintained at or above the fibre saturation point. Part of the material is subjected to rapid expansion to atmospheric pressure in $\ngtr$ 0.1 sec to effect cooling. 4.4.77. as 714995 (7pp068)

METG ★ D13 20108B/11 ★DT 2736-864
Feedstuff and sugars prodn. from vegetable waste - by acid hydrolysis under pressure and oxidn.
METALLGESELLSCHAFT AG 16.08.77-DT-736864
C03 (D17) (08.03.79) A23k-01

Prodn. of feedstuffs and sugar-contg. solns. comprises hydrolysing opt. comminuted vegetable material with acid under elevated pressure at >100°C. The obtd. soluble product is extracted and removed and processed. The insoluble residue is oxidised, opt. in presence of catalyst.

Pref. the volatile cpds. (e.g. furfurol, acetic acid, formic acid) formed in the hydrolysis are removed with steam during and/or after the extn. of the soluble product. The water content of the insoluble residue is pref. reduced by pressing before and/or after the extn.

The cellolignin of vegetable matter is converted in high yield into a carbohydrate feedstuff, esp. for ruminants, with a high fodder value (80-85%) typically 1 tonne of bagasse gives a feedstuff equivalent, to 560-595kg of maize. The obtd. aq. sugar soln. can be treated to recover sugars, esp. xylose, which can be hydrogenated to xylitol an anticariogenic agent and sugar substitute for diabetics. The sugar soln. can also be used as nutrient for growth of yeasts for use as protein for human and animal foods. Volatile components can be recovered. Agricultural wastes, e.g. straw, bagasse and maize cobs, can be utilised. 16.8.77 as 736864 (10pp941)

PETE/ ★ D13 20116B/11 ★DT 2737-793
Decaffeination of raw coffee - by selective extraction of caffeine with extractant and compressed gas at elevated temp. and pressure
PETER S 22.08.77-DT-737793
(08.03.79) A23f-01/10

Decaffeination of raw coffee is carried out by disintegrating raw coffee with water vapour at elevated temp. in such a way that the coffee contains 15-55 wt.% of moisture; then extracting caffeine with a compressed gas and an extractent in the gas state; partly condensing the extractant with caffeine; and then evaporating the extracted from the condensate and recycling; the residue is pure caffeine.

The mixt. of the compressed gas and the extractant, esp. in the hypercritical state, extracts caffeine from raw coffee selectively and very efficiently. The rechnology of th their process is simpler than in the known processes. 22.8.77 as 737793 (15pp70)

PETE/ ★ D13 20117B/11 ★DT 2737-794
Decaffeination of coffee - by selective extraction of caffeine with solvent under high pressure
PETER S 22.08.77-DT-737794
(08.03.79) A23f-01/10

Decaffeination of coffee by extraction with a solvent is improved by applying high pressure (50-1000, pref. 100-500 atmos); the temp. is 20-70 (pref. 35-50°C.

This method is suitable for the removed of caffeine from raw coffee (after disintegration with water vapour at elevated temp.), or from roasted coffee, or from aq. extracts of coffee. The application of high pressure increases the extraction rate and the solubility of caffeine in the solvent. Therefore, there is no need for applying high temps.; 45°C is enough. 22.8.77 as 737794 (10pp70)

SOLL- ★ D13 20177B/11 ★DT 2738-894
Applicator for coatings such as chocolate on confectionery - ensures uniform penetration of surfaces roughened by nuts, fruits etc.
SOLLICH SPEZIALMASC 29.08.77-DT-738894
P42 (08.03.79) A22c-11 B05c-05/02

A fluid mass such as chocolate is applied as a coating to sweets, baked articles, etc., as it falls from the bottom opening of a container, on to the articles moved on a conveyor. In the outlet from the container, a rotating cylinder is arranged and projects partly into the mass. The lowest point of the cylinder is relatively close to the moving goods, and immediately behind them, a scraper blade for the material on the cylinder is fitted.

Ensure a uniform coating esp. on goods the surface of which is roughened by trimmings such as nuts, without trapping air beneath. The operation is carried out correctly and at high speed, since the turbulence set up assists the penetration by the mass. 29.8.77 as 738894 (11pp1045)

MITN ★ D13 20271B/11 ★DT 2836-876
Two-component oxygen-absorbing compsn. for food preservation - contg. metal powder coated with metal halide, and water-contg. material impregnated with moisture regulating aq. soln.
MITSUBISHI GAS CHEM IND 24.08.77-JA-101452
A97 E36 G04 (08.03.79) B01d-53/16 B01j-01/22

Oxygen-absorbing compsn. for food preservation contain (A) a metal powder (Zn, Cu and esp. Fe or their mixts) coated with 0.001-10 pts.wt. (pref. 0.01-5 pts.wt.) of a metal(Li, Na, K, Mg, Ca or Ba) halide (Cl pref. or Br or the total water content of the metal plus metal halide being < 1 wt.% (pref. < 0.5 wt.%, esp. < 0.2 wt.%); and (a water-contg. material, pref. a particulate (0.5-10 min material contg. > 1 wt.% of water; the particles are impregnated with an aq. moisture-regulating soln. Components (B) is used in an amt. > 0.1 wt.% w.r.t (A). Pref. the compsn. contains a binder e.g. CMC or PVA.

Components (A) and (B) are kept separately from the food, but in the same gas-impermeable bag or container. Component (A) starts absorbing oxygen only upon contact with component (B). The components must be contacted immediately before enclosure in the food-contg. bag or container, but (A) and (B) must be kept separately from the food in a gas-permeable bag or container. The oxyge absorption capacity of the compsn. is not affected by the quantity of the water vapour emitted by the food. 23.8.78 as 836876 (28pp70)

BLUE- ★ D13 20301B/11 ★DT 2837-82
Protein-contg. feed additive for ruminants - produced by dryin protein-contg. solns. at pH 9-13.5
BLUE WING CORP 26.08.77-US-828152
C03 (08.03.79) A23k-01

In the prodn. of a feedstuff, a protein-contg. material is dissolved in an aq. medium, and the soln. is adjusted to pH 9-13.5 and dried to give a particulate compsn.

The prod. is a feed supplement for ruminants. The pr -tein content passes through the first stomach of ruminants without being digested, but is digested in the fourth stomach and lower intestinal tract. This avoids the loss in nutritive value which normally occurs in ruminants due to decomposition of dietary protein by the microflora of the first stomach. 25.8.78 as 837822 Add to 2710554 (46pp280)

BPNU- ★ D13 20321B/11 ★FR 2393-5
Liq. fish protein food prod. for pigs - prepd. using liquefied protei fish and accelerator additive (SW 8.1.79)
BP NUTRITION UK 09.06.77-GB-024071
C03 (09.02.79) A23j-01/04 A23k-01/10 A23k-03

The "silo fish" (i.e. fish liquefied by means of enzyme action naturally present and an accelerator additive) is prepd. by mixing the fish with previously liquefied prote and with an additive which initiates and accelerates the liquefaction process.

The prod. is used for pig food. The process avoids th need for finely cutting up the fish, the transport of the chopped up fish, the mixing of a solid mass and the need for high power mixing equipment. 8.6.78 as 017192 (9pp597)

PALM- ★ D13 20323B/11 ★FR 2393-5
Treating manioc or cassava to produce a semolina or flour - continuously using machines for the different stages of cleanin cutting, grinding, etc.
SOC PALMIER HUILE (BERT-) 07.06.77-FR-017318
(09.02.79) A23n-01/02 A23n-13

The manioc is treated by removing the earth and stones from the tubers, washing, topping, and then cutting the tubers into longitudinal pieces, cleaning them and cuttin them up into small substantially cubic pieces. The piec are then crushed and ground, followed by draining to recover the particles, which are then treated to remove lu followed by drying. The dried product is then ground an sieved. The process is continuous or semi-continuous.

The prod. used in food prepns. is prepd. as a semoli or a fine flour. The process enables semi-automation o the process, which is at present mostly manual, using machines at particular stages adapted for that purpose. 7.6.77 as 017318 (11pp597)

ERIC/ D13 83461X/45 =GB 1541-876
Prodn. of protein contg. feedstuff additives from manure - by enzymatic hydrolysis and growing microorganisms forming biomass on intermediates
ERICKSON L G 16.04.75-US-568768
*C03 (D15 D16) (14.03.79) *DT2609-256 C02c-01 +C07g-07*

Broprotein animal feed supplements are mfd. from an aq. medium contg. organic waste (pref. farmyard manure) including a volatile component by (a) adding hydrolysing enzymes and keeping at 60-140°C to hydrolyze the protein to water-soluble lower mol. wt. inters. (b) sepg. the intermediate from the non-volatile solids, (c) combining the sepd. intermediates with cell synthesising microorganisms so that they produce a biomass of single cell organisms and (d) recovering the biomass. 15.3.76 as 010276 (7pp974)

GENO ★ D13 20383B/11 ★GB 1541-895
Prodn. of enriched instant coffee - by adding coffee solids to distillate from aq. extract, drying distillate and stripped extract and blending solids
GEN FOODS LTD 12.08.76-GB-033697
(14.03.79) A23f-01/08

An enriched instant coffee compsn. is prepd. by (i) aq. extn. of roast, ground coffee, (ii) stripping a portion of volatiles from the extract, (iii) adding water-soluble coffee solids to the distillate obtd. (iv) drying the distillate to form an enriched solid, (v) drying the stripped extract to give a de-aromatised soluble solid, and (vi) blending the solids.

Pref. the extract obtd. in (i) contains <30 wt % solids. The solids added in (iii) are pref. obtd. by drying the stripped extract, esp. added in amt. to give 33-50 wt % solids in the distillate. Pref. aroma oil is added to the distillate. The distillate may be freeze dried or spray dried, esp. at droplet size 100-300 µ, nozzle pressure 700-2500 psig, inlet air temp. 250-550°F, and outlet air temp. 180-230°F, the mixt. being at 27-200°F at dryer inlet.

Optimal flavour retention is obtd. by economical process. 11.8.77 (3pp949)

SATA- D13 18048A/10 =GB 1542-052
Rice polishing machine - using air blast on humidified grains in revolving drums for bran removal
SATAKE ENG CO LTD 09.08.76-JA-095190
*P41 (14.03.79) *DT2735-707 B02b-03*

Appts. for whitening rice comprises a perforated cylinder of hexagonal cross-section within which a roll with external axial ribs and slots in its periphery is mounted, the inner roll is driven by air supplied through its mounting shaft which exits through the peripheral slots.

Part-whitened rice is fed to the cylinder through a work device after being moistened by a spray, the grains are rubbed between the roll and the cylinder surface and exit axially from the cylinder end through a device which controls the pressure exerted on them within the whitening chamber. Bran is removed. Pref. cylinder length is 2-20 times its maximum dia.

Super-glossy white rice is produced without the use of a gloss additive. 8.8.77 as 033200 (5pp1362)

CUMB D13 42126A/23 =GB 1542-234
Neohesperidine or naringin di:hydro-chalcone sweetening compsns. - with vanilla flavour, cream of tartar and sugar, to eliminate after taste and delayed sweetness properties
CUMBERLAND PACKING 17.12.76-US-751269
*B03 E13 (B02) (14.03.79) *US4085-232 A23l-01/23*

A sweetening compsn. comprises (a) 0.25-4 wt % of ⩾1 dihydrochalcone deriv. selected from neohesperidine dihydrochalcone, narigin dihydrochalcone and salts of these (b) 0.25-3 wt % vanilla flavouring, (c) 0.5-4 wt % cream of tartar and (d) 89-99 wt % of a sugar.

Pref. the sugar is sucrose, dextrose, lactose and/or fructose. The compsns. do not have any of the undesired after taste or delayed sweetness characteristics of the dihydrochalcone alone. The compsns. can be used with all foods and beverages and can be used in low calorie diets. 21.11.77 as 048324 (3pp992)

CSAK- ★ D13 B/11 ★HU T016-038
Chlorine detoxification of feedstuffs - contg. zearalenone-Fz toxin produced by Fusarium
CSAKVARI ALLAMI GAZ 25.07.75-HU-CA0384
C03 (D16) (28.02.79) A23k-01 A23l-01/20

GUAL/ ★ D13 B/11 ★IT 1027-801
Confectionery dough kneader
GUALINO U 14.11.75-IT-069813
(20.12.78) A23g

MICH/ ★ D13 20447B/11 ★J5 3133-645
Oral deodorising compsn. - contg. extract of Yucca gloriosa, vegetable protein, sweetener, colourant, lubricant, vehicle and binder
MICHEL G H 22.04.77-US-790041
E12 (D21) (21.11.78) A23g-03 A23l-01/34 A61k-07/26

Compsn. comprises a mixt. which consists of 1.0-90.0 wt. % of solid material contg. 50% of an extract produced from species of Yucca gloriosa, having about 3 wt. % moisture content and 10.0-90.0 wt. % of vegetable edible protein and the balance wt. % of a sweetening agent, a vegetable, edible dye, a lubricating agent, an excipient vehicle and a binder. Pref. the sweetening agent is cane sugar or sodium saccharin, the vegetable, edible dye is water-soluble chlorophyll, the vegetable edible protein is soyabean protein or Indian corn protein, the excipient vehicle is ''Atmos 150'', the binder is ''Avicel'' and the lubricating agent is Mg stearate or Zn stearate.

Compsn. can remove tobacco odour or alcoholic liquor odour from the mouth. 13.9.77 as 109543 (3pp15)

KANE ★ D13 20508B/11 ★J5 4014-527
Water-in-oil cream or emulsion composition - contains sorbitol, di:glyceryl-mono or di-oleate, liq. oil and water
KANEBO KK 29.06.77-JA-078317
E17 (02.02.79) A61k-07

The compsn. contains (I) sorbitol, (II) diglyceryl-monooleate and/or diglyceryl-dioleate, (III) liq. oil and (IV) water.

The compsn. has excellent preservability, mechanical stability, appearance, homogeneity and affinity to skin, and gives a refreshing feeling application.

Pref. amt. of (I) is 6-16 w/w% and (II) is 2-6 w/w% (III) is ester oil and/or vegetable oil in an amt. of 10-40 w/w% and amt. of water is 50-70 w/w%. The compsn. may also contain wax, such as ceresin wax, microcrystalline wax, whale wax, vaseline or beeswax, and UV-absorbent, antiseptic, antioxidant and perfume. 29.6.77 as 078317(6pp5)

SUNN- ★ D13 20511B/11 ★J5 4014-539
Artificial rice prodn. for use as koji - by heating starch and/or grain under pressure to cause alpha-lysis and granulating
SUNNY MAIZE KK 04.07.77-JA-079104
(02.02.79) C12g-03/02

Artificial rice is prepd. by heating starch, grain powder or their mixt. under pressure so that α-lysation degree of starch becomes > 70% and granulating it through extruding it without swelling.

As starting material, powdery starch material such as corn starch, waxy corn starch, wheat starch, rice powder etc. can be applied singly or together. The α-lysation and granulation are practiced using the α-lysing equipment such as expansion pellet mill, puff machine, extruder, etc.

The artificial rice not only is less expensive c.f. the 'koji' materials applied conventionally, but also it can be processed to 'koji' by the simple process. The artificial rice is more easily saccharified with amylase than conventional 'koji' material such as crushed rice and obtd. 'koji' shows similar amylase activity and much higher protease activity c.f. the 'koji' prepd. from conventional 'koji' material. 4.7.77 as 079104 (4pp5)

AJIN ★ D13 20512B/11 ★J5 4014-545
Preventing deliquescence of salted sea tangle - by seasoning, drying and coating with powder contg. modified starch
AJINOMOTO KK 04.07.77-JA-079618
(02.02.79) A23l-01/33

The salted sea tangle prod. has excellent in taste, flavour, appearance and texture. Originally salted sea tangle is covered with white granules mainly of mannit, etc. which are oozed out naturally from sea tangle. When the sprinkling powder obtd. by mixing salt, sodium glutamate, nucleic acid-seasoning, glycine, etc. is applied on salted sea tangle, it deliquesces in a short time. By combining retrograded starch in the sprinkling powder the deliquescence can be prevented. 4. 7. 77 as 079618 (4pp5)

KANE ★ D13 20513B/11 ★J5 4014-556
Foamed chewing gum prepn. - by mixing hard candy material and gum base in molten state, stirring, moulding and expanding under reduced pressure
KANEBO KK 30.06.77-JA-078685
(02.02.79) A23g-03/30

The chewing gum showing tumbling property consists of foamed structure mainly of hard candy material and gum base. The apparent density is small at the top and large at the bottom of the moldings. The method comprises (a) mixing hard candy material and gum base which are miscible homogeneously at a prescribed temperature and have good visco-elasticity, under heat-melted state, (b) kneading or stirring the mixt. to form tissue including numerous fine bubbles, (c) molding the mixture, (d) expanding the moldings in a closed space under reduced pressure and (e) during the expansion, suppressing expansion partly by cooling the parts.

Excellent chewing gum can be prepd. inexpensively by the simple process. 30. 6. 77 as 078685 (10pp5)

KAMA- ★ D13 20516B/11 ★J5 4014-562
Sweetener compsn. contg. dried ahran fruit extract - also includes stevioside and glycyrrhizic acid salt) and/or citric acid (salt) to remove disagreeable taste and smell
KAMA MEDICINE KK 01.07.77-JA-079383
B04 (02.02.79) A23l-01/23

The compsn. is obtd. by combining (a) stevioside, opt. (b) moulding material and (c) glycyrrhizic acid or its salt and /or citric acid or its salt with the dry extract of arhan fruit.

Pref. (a) and (c) are used in amts. 10-30 w/w%, 0-30 w/w% and 0-75 w/w% on the dry extract of arhan fruit respectively. The compsn. contains 10-30 w/w% of the dry extract of arhan fruit. Citric acid improves the astringency of glycyrrhizic acid. The moulding material is pref. dextrin.

Arhan furit is obtd. from the plant Monoridica Grosvenori Swingle and in China has been used as cough medicine, phlegm remover and blood-making medicine (sic.) 1. 7. 77 as 079383 (4pp5)

MITP ★ D13 20517B/11 ★J5 4014-563
Natural food colourant prepn. - by immersing black soybean in water or aq. ethanol soln., concentrating the extract, opt. treating with acid and removing the insolubles
MITSUBISHI PETROCH KK 06.07.77-JA-079817
(02.02.79) A23l-01/27 A23l-02/38

Process comprises (a) immersing black soy bean (Glycine max (L) merril) in water or aq. ethanol soln.; (b) concentrating the extract; (c) opt. treating the conc. extract with acid; and (d) removing the insolubles from the extract.

Red or red-purple natural colourant is prepd. inexpensively, for colouring soft drinks, jelly, etc. The colourants do not cause turbidity and/or floc formation. 6. 7. 77 as 079817 (3pp5)

AKIY- ★ D13 20518B/11 ★J5 4014-564
Food with antihypertensive, antidiabetic activities etc. - contains onion extract prepd. by concentrating the pressed juice of the discoid stem of the onion
AKIYAMA JOZAI KK 01.07.77-JA-078710
B04 (02.02.79) A23l-01/34 A61k-35/78

Food contains the onion extract obtained by concentrating the pressed juice of the discoid stem of onion at 60-90°C. The onion extract is obtained by peeling the epidermis of the discoid stem of onions, washing the peeled discoid stem mashing it and pressing the juice. The extract is concentrated at 60-90 (70-80)°C under reduced pressure and the pasty residue is sterilised.

The onion extract shows not only nutritive and healthy effect, but also curing effect on high blood pressure, anteriosclerosis, thrombosis, diabetes, etc. 1. 7 77 as 078710 (3pp5)

MITU ★ D13 20520B/11 ★J5 4014-583
Culturing yeast having low odd-carbon fatty acid content - using yeast strain in which enzymic system for synthesising fat directly from fatty acid is deficient or almost inactivated
MITSUBISHI CHEM IND KK 06.07.77-JA-080785
(D16) (02.02.79) A23k-01 A23l-01/34 C12c-11/08 C12d-01/0
C12d-13/08 C12k-01/02

Process comprises culturing a yeast strain in which enzymic system for synthetising fat directly from fatty acid not through acetyl coenzyme A, is defficient or almost inactivated.

The yeast body having low odd-C fatty acid content can be obtd. by culturing the yeast strain even in the culture medium containing n-paraffin, higher alcohol or higher fatty acid having odd-C number as carbon source. 6. 7. 77 as 080785 (10pp5)

HONS ★ D13 20522B/11 ★J5 4014-585
Highly acid milk culture with high living bacteria content - contain
Bifido-bacterium and slow acid-forming lactic acid bacteria
YAKULT HONSHA KK 01.07.77-JA-077839
(D16) (02.02.79) A23c-09/12 A23l-01/34 C12k-03

The milk culture contains a Bifidobacterium bacteria (e. g Bifidobacterium bifidum, B. longum B. breve, etc.) and a slow acid-forming lactic acid bacteria (. e. g. Lactobacillu acidophilus, L. fermenti, etc.). It is prepd. by inoculating the Bifidobacterium bacteria and the slow acid-formin lactic acid bacteria in a culture consisting mainly of milk and aerobically cultivating it.

The milk culture can be obtd. in a short cultivation period without displacing the gaseous phase of the culture vessel with nitrogen or adding growth promoting substanc such as yeast extract and corn steep liquor. Even when those strains poor in oxygen-resistance are employed, th living bacteria in the culture, partic. Bifidobacterium bacteria, do not easily die out, and therefore the culture can easily be processed or preserved. Pref., 1-3 wt. % o a mixed starter comprising the Bifidobacterium strain an the slow acid-forming lactic acid bacterium, in a ratio of 0.5:1-3:1, is inoculated into the culture. 1. 7. 77 as 07783 (4pp140)

SEKI ★ D13 20523B/11 ★J5 4014-58
Prepn. of fungal body from pseudomonas wakayamaensis - th
protein-rich prod. being useful as foodstuff, feedstuff etc.
SEKISUI CHEMI IND KK 06.07.77-JA-080284
C03 (D16) (02.02.79) A23k-01 A23l-01/34 C12k-03

Prepn. of a fungal body from novel microorganisms belon -ging to Pseudomonas wakavamaensis comprises cultivating the microorganism in a culture medium containing methanol as a main carbon source and recovering the fungal body from the culture.

Pref. the microorganism is P. wakayamaensis DS-25 (Ferm. P. No. 4100). 6. 7. 77 as 080284 (5pp140)

SEKI ★ D13 20524B/11 ★J5 4014-58
Protein rich fungus body prepn. - from methanol assimilabl
microorganisms belonging to genus Flavobacterium
SEKISUI CHEMI IND KK 06.07.77-JA-080285
C03 (D16) (02.02.79) A23k-01 A23l-01/34 C12k-03

Prepn. of a fungal body from novel microorganisms belon ging to genus Flavobacterium and assimilating methanol comprises cultivating the microorganism in a medium contg. methanol as main carbon source and recovering the fungus body from the culture.

Specifically the microorganism is Flavobacterium methanolicola DS-16 (Ferm. P. No. 4098).

The recovered fungus body is rich in protein and usefu as feeds, foodstuffs and raw materials in industry. 6. 7. 77 as 080285 (5pp140)

SEKI ★ D13 20525B/11 ★J5 4014-58
Fungus body prepn. from new microorganism - which ca
assimilate methanol and belongs to the Pseudomonas kyotoens
genus
SEKISUI CHEMI IND KK 06.07.77-JA-080286
C03 (D16) (02.02.79) A23k-01 A23l-01/34 C12k-03

Prepn. of a fungus body from novel microorganisms belo -ging to Pseudomonas kyotoensis comprises cultivating the microorganism in a culture medium contg. methanol as a main carbon source and recovering the fungus body from the culture.

The microorganism is Pseudomonas kyotoensis DS-22 (Ferm. P. No. 4099). It has the following properties. Reduction of Nitrate: positive; Formation of H_2S: negative; Hydrolysis of Starch: positive; Utilisation of Citric Acid: positive in a Koser's medium; Urease: positive; Range of Growth (in a methanol contg. medium): growth at pH 5-9 and at 5-45°C; no growth at pH 4 or 10 or at 48°C; Formation of Acid and Gas From Saccharide: positive in various saccharides; Assimilability of Saccharide: positive for L-arabinose, inositol, glycerin, etc., negative for lactose.

The recovered fungus body is rich in protein and useful as feeds, foodstuffs and raw materials in industry. 6. 7 77 as 080286 (5pp140)

KIKK ★ D13 20529B/11 ★J5 4014-596

Improving the flavour of bean paste - by adding compsn. contg. syoyu oil distillates, one from steam distn. and one from ethanol distn.

KIKKOMAN SHOYU KK 04.07.77-JA-079106

(02.02.79) A23l-01/20

The improver contains the distillate (I) of syoyu oil by steam distn. and the distillate (II) of syoyu oil by ethanol distn. They are added to bean paste so that the proportion of the distillates is 1-3:9-7 and the sum of the distillates is 0.1-1 w/w% of the bean paste.

They are pref. added as powder in a proportion of 4-6: 6-4. 4. 7. 77 as 079106 (4pp5)

SANE ★ D13 20998B/11 ★J5 4017-142

Preserving food e.g. cereals, frozen prods. etc. - by adding poly:hydric alcohol ester of fatty acid, (in)organic acid (salt) and masking agent

SAN EI CHEM IND KK 12.05.75-JA-056877

E19 (08.02.79) A23l-03/34

The method comprises adding (1) polyhydric alcohol ester of $<$10C fatty acid and (2) inorganic acid, organic acid or their salt together with (3) the masking agent for metallic ion to foods or food materials.

The preservative does not give unpleasant taste or flavour, bitterness, sharp taste, etc. to food or food material. Component (1) is ester of polyhydric alcohol(e.g. sorbit, propyleneglycol, ethyleneglycol, glycerin, xylit, mannit, etc.) and $<$10C fatty acid (e.g. formic acid, acetic acid, etc.) Organic acid is acetic,lactic, propionic, citric, tartaric acid, etc. Inorganic acid is phosphoric acid or its alkali metal salt. The masking agent is polyphosphate, phytic acid, EDTA, etc. 12. 5. 75 as 056877 (5pp5)

SUGI- ★ D13 20999B/11 ★J5 4017-147

Rapid cooking enriched unpolished rice - obtd. by immersing prod. of specified polishing yield in saline soln., steaming, adding powdered egg etc.

SUGIYAMA SHOJI KK 05.07.77-JA-080288

(08.02.79) A23l-01/10

Method comprises washing the unpolished nonglutinous rice of polishing yield 98.5-99.5% with water, immersing it in 2-8% saline water, steaming it, adhering powdery egg, Ca cpd., etc. on the surface of the treated rice grains and drying them.

Prod. is more nutritious than polished rice and excellent boiled rice can be prepared easily by mixing obtd. unpolished rice ca. 30% in polished rice and boiling the mixt. as usual. 5. 7. 77 as 080288 (3pp5)

OSAG ★ D13 21001B/11 ★J5 4017-151

Calcium and phosphorus-rich food prodn. - by adding to a foodstuff, powdered bone, pref. from domestic animals and fowl

OSAKA GAS KK 09.07.77-JA-082384

(08.02.79) A23l-01/31

Food is combined with 1-30 w/w% powdered bone obtd. by pulverising bone at very low temp. Bone from domestic animals and fowls can be easily pulverised without denaturation of oil and fat and without formation of lumps. The bone does not reduce the taste and flavour of food, and the food can be served to infants and sick people.

... pulverised at below -100°C, pref. in low temp. N_2 gas. The obtd. bone powder can be preserved by vacuum freeze drying and packaging it in a vacuum or inactive gas. 9. 7. 77 as 082384(4pp5)

KIBU- ★ D13 21003B/11 ★J5 4017-159

High protein fibrous pastry food prepn. - by adding soybean protein emulsion or paste to minced fish meat, kneading moulding etc.

KIBUN KK 08.07.77-JA-081041

(08.02.79) A23l-01/32

The method comprises adding 10-185 pt. wt. of soybean protein emulsion or soy bean protein paste to 100 pts. wt. of minced fish meat, kneading the mixt., molding in, standing, cutting finely in a direction in fibrous or flat pieces, unifying the fine pieces and heating the unified prod

Pasty food which is similar in appearance to ordinary pasty food such as 'kamaboko', 'satsuma-age', 'chikuwa', etc. and shows peculiar fibrous texture can be prepared.

The soy bean protein emulsion or paste is obtd. by mixing 1-9 pts. wt. of edible oil, 1-9 pt. wt. of soybean protein and 3.2-54 pt. wt. of water. The mixt. of the starting material and the emulsion or the paste is kneaded for 6-12 mins. and after molding, the moldings are stood for maturing at 0-25°C for a day or at 25-40°C for 30-90 mins. favourably at 30-35°C for 40-70 mins. 8. 7. 77 as 081041 (4pp5)

LOTT ★ D13 21004B/11 ★J5 4017-163

Chewing gum base contg. natural or synthetic rubber - and vinyl acetate resin, ester, wax, emulsifier, calcium carbonate etc.

LOTTE KK 04.05.77-JA-050693

A97 (08.02.79) A23g-01 A23g-03/30

Chewing gum base is composed of 18-40% or rubbery component (e.g. $\geqslant 1$ rubbery substance selected from natural rubber, polyisobutylene, isoprene-isobutylene rubber and styrene-butadiene rubber) and 82-60% of basic material for chewing gum such as vinylacetate resin, ester rubber, wax, emulsifier, calcium carbonate, talc, etc. Chewing gum is prepd. by combining additives such as sugar, perfume, etc. with the chewing gum base, kneading the mixt. and mixing with oil and fat component (e.g. chocolate).

The chewing gum base is hardly melt-liquidified with oil and fat component. The chewing gum base and oil and fat component such as chocolate can be freely combined in proportion of 1:0.2-2.5 to form chewing gum ball covered with chocolate, chewing gum including chocolate, laminate of chewing gum and chocolate, etc. 4. 5. 77 as 050693(4pp5)

LOTT ★ D13 21005B/11 ★J5 4017-164

Low calorie chewing gum prodn. - by adding xylitol, mannitol, water, etc. to chewing gum base, kneading, rolling into sheets and cutting

LOTTE KK 24.06.77-JA-074508

E17 (08.02.79) A23g-03/30 A23l-01/23

Method comprises adding (a) xylitol, (b) mannitol, in amt. 10-30 w/w% of the xylitol, (c) water and (d) additives for chewing gum such as glycerin, perfume, etc. to (e) chewing gum base, kneading the mixt., rolling the mixt. and cutting the rolled sheet.

The use of xylitol and mannitol together gives a delicious sweetness with suppressing the astringency of xylitol. Hygroscopic resistance is greatly improved. 24. 6. 77 as 074508 (3pp5)

LOTT ★ D13 21006B/11 ★J5 4017-165

Porous chewing gum prepn. - by adding sugar, millet jelly, perfume etc. to gum, kneading, rolling, cutting and freeze-drying

LOTTE KK 01.07.77-JA-077815

(08.02.79) A23g-03/30

Process comprises (a) combining additives such as powdery sugar, millet jelly, perfume, etc. with conventionally prepd. chewing gum base; (b) kneading the mixt.; (c) rolling; (d) cutting the rolled sheet to obtain chewing gum of moisture content 3-15%; and (e) freeze-drying under a vacuum $<$1 mm Hg.

The specific gravity of the chewing gum can be decreased sufficiently without deteriorating texture, taste or flavour. Prod. has specific gravity $\sim$ 50% of that of conventional gum. 1. 7. 77 as 077815 (3pp5)

AJIN ★ D13 21007B/11 ★J5 4017-167

Yeast extract prepn. - by adding autolysis accelerator to yeast body suspension, autolysing, heating and reacting with nuclease

AJINOMOTO KK 07.07.77-JA-081156

(D16) (08.02.79) A23l-01/28

Process comprises (a) adding the accelerator for autolysis to a suspension of the yeast body; (b) autolysing; (c) heating (d) reacting with the nuclease obtd. by inactivating harmful enzymes in malt root; and opt. (e) adding lactic acid to the reaction mixt.

Prod. has good taste and texture and is free of malt odour, is prepd. using inexpensive malt extract and can be used as seasoning or the base for complex seasoning. 7.7.77 as 081156 (4pp5)

TANA ★ D13 21016B/11 ★J5 4017-192

Brewing syoyu using defatted soybean and wheat - by preparing syoyu koji, steeping in high concn. saline soln., and mixing with enzymatically decomposed steamed defatted soybean

TANABE PHARMACEUTICAL KK (UEDA-) 08.07.77-JA-082313

(D16) (08.02.79) A23l-01/23

Prepn. comprises (a) preparing 'syoyu koju' using 1/5-2/3 amt. on whole material with the ratio defatted soybean to wheat of 1:0.2-4; (b) steeping the 'syoyu koju' obtd. in cold saline soln. of high concn.; (c) separately mixing steamed defatted soybean opt. in admixture with crushed roast wheat, with the saline soln. in which the enzymes including protease and amylase are previously suspended; (d) laying the mixt. obtd. in (c) on the steeped mixt. obtd. in (b); (e) standing the whole compsn. at 20-55°C for > 5 hrs. to effect enzymic reactions of the mixt. obtd. in (a) and (f) mixing the steeped mixt. and the enzymically decomposed prod. for obtaining 'syoyu moromi'.

The amt. of 'koji' can be decreased and the loss of the materials due to the heat at preparing 'koji' is decreased. Thus the yield of 'syoyu' and the availability of materials can be increased. The proportion of defatted soybean and crushed roasted wheat can be varied widely and various 'syoyu' different in taste and flavour can be prepared. 8.7.77 as 082313 (5pp5)

NAGA- ★ D13 21017B/11 ★J5 4017-193

Barley tea prepn. - by roasting barley, crushing, adding roasted barley seed, glucose and caramel, and heating

NAGAKURA SEIBAKU KK (MEIJ) 18.03.77-JA-029228

(08.02.79) A23f-03

Process comprises (a) roasting barley; (b) crushing it roughly; (c) adding roasted embryo (I) of barley, glucose and caramel; (d) heating the mixt. to 90°C; and opt. (e) packaging the mixt. with water permeable thin film.

Barley tea drink with excellent flavour is obtd. from the instant tea by immersing it in water or warm water without boiling.

Specifically, (I) is roasted at 100-115°C for 30-35 mins and roasted (I) is added 0.5-7 w/w% on barley. Glucose is applied 5-40 times in weight on (I) embryo. Caramel is added 1/2-2 times in weight on roasted (I). 18.3.77 as 029228 (3pp5)

STRK ★ D13 21198B/11 ★NL 7709-303

Heat treatment process for liquid products - with means of recovering heat from finishing product and of varying direct-indirect steam in section temperature

STORK APP BV 23.08.77-NL-009303

P13 (27.02.79) A01j-11/16 A23l-03/22

A process is described whereby a fluid product such as milk undergoes heat treatment. The product is preheated in a regenerative heat exchanger, brought to a predetermined temp. in a hot water heater (indirect steam heater) and then passed through a steam injection point at which it is brought to the sterilisation temp. The temp. of the product is then maintained in a dwell loop before it is shock cooled in a flash vessel. The vapour from the flash vessel is drawn off via a water cooler by a vacuum/condensate pump and the product passes through the regenerative heat exchanger where a portion of its heat is recovered by the incoming cold product.

The system allows flexibility in the choice of the temp. at which the direct steam injection commences and permits more than 50% of the energy used to be recovered in the regenerative heat exchanger. By varying the flash vapour draw-off, the product may be concentrated or diluted. 23.8.77 as 009303 (9pp1370)

ANGU/ ★ D13 B/11 ★PT --67-717

Olive oil prodn. - by controlled dehydration and extraction of oil with solvent, pref. n-hexane

ANGULO E 03.03.77-ES-456455

*(01.03.79) C11b-00/**

MOFO= ★ D13 21412B/11 ★SU -603-659

Calcium 2-keto-D-gluconate food antioxidant prodn. - by Pseudomonas culturing using saccharified corn starch as carbon source and ammonium acetate as nitrogen source

MOSC FOOD IND TECHN 30.12.76-SU-437745

B05 E12 (D16) (13.04.78) C12d-01/02

Ca 2-keto-d-gluconate, used in the vitamins industry, in bakery and in food canning industries as an antioxidant, is obtd. in a quicker time and in better yields by culturing a Pseudomonas bacterium on a nutrient medium contg. saccharified carn starch (I) as C source in an amt. 8-10 % on d-glucose, and ammonium acetate (II) as N source in an amt. 0.10-0.12%. Culturing takes place at pH 6.0-6.5.

Agapova E.V., Goncharova L.A., Koptereva Yu.V. et al Bul. 15/25.4.78 30.12.76 as 437745 (3pp314)

SOLL- D13 09621Y/06 =US 4107-938

Boiled sugar mass cooling - by passing vertically as S shaped ribbon over cooling roll pairs

SOLLICH KG 31.07.75-DT-534131

*+Q75 (22.08.78) *DT2534-131 A23g-03/12 +F25c-01/14*

Method and appts. for cooling a cooked confectionery mass include depositing a thin sheet of hot confectionery mass onto the upper side of rotating cooling cylinders so that the mass travels in an S-shaped path to cool the mass required for further processing. 14.7.76 as 705131 (-pp).

HAIM D13 63605X/34 #US 4108-057

Curd cutter blade - with cutting edge starting as spiral followed by counter curve and straight line end

ALPMA MASCH HAIN 26.11.74-DT-455857 (28.01.76-US-652949)

*P13 +P62 (22.08.78) *DT2455-857 A01j-25/16 +A23c-19/02*

A device for continuous prodn. of cheese material through coagulation of milk comprises a longitudinal trough-shaped container having a flexible inner wall forming an endless band around the edges of the container. Milk is fed to an inlet end of the container and the flexible inner wall is urged forwardly by a drive mechanism to cause coagulation of the milk as it passes from the inlet end to an outlet end of the container where a cutter is provided.

The coagulated cheese curd is cut and removed by the inner wall on the outlet side. A rail guide and a lifting and lowering device enable partitions to be lowered into the container at the inlet end and permitting the partitions to be lifted from the container at the outlet end in front of the cutter. 28.1.76 as 652949 (9pp1363).

ALFA D13 83490X/45 =US 4108-058

Cylindrical cheese making machine - has horizonal revolving shaft with cutter framework and closable flaps for reverse stirring action NL201076)

ALFA-LAVAL AB 18.04.75-SW-004503

*P13 (22.08.78) *DT2615-164 A01j-25/06*

A cheese-making appts. comprises an immobile container in which rotates a cutting tool to cut and stir the cheese curd.

The container is disposed with its axis substantially horizontal and the tool is arranged to cut and stir the cheese curd situated above and below the axis of the container. 12.4.76 as 676070 (9pp1363).

OKAD- ★ D13 21617B/11 ★US 4108-625

Worm faeces fertiliser prodn. - by collecting the worm casts produced by earth worms living on a medium of fermented vegetable matter

OKADA SEIMEN YUGEN 26.11.75-JA-141878

B04 C04 (C03) (22.08.78) C05f-11/08

Fertiliser is produced by growing earthworms on a moist bed of fermented vegetable material and collecting the worm casts and either killing or removing any worm eggs present.

Casts are used as natural fertiliser and any excess worms may be used as fish food or chicken feed or dried and used as an antifebrile Chinese medicine. 24.11.76 as 744772 (6pp916)

CENS ★ D13 21632B/11 ★US 4108-678
Mechanically sprayable release agent for cooking and baking utensils - contg. lecithin tri:glycol ester(s) of lower fatty acids; and alcohol
CENTRAL SOYA KK 12.01.77-US-758716
E17 G04 (22.08.78) C08l-91

The release agent is prepd. by mixing lecithin with a triglycol ester of fatty acids of 6-12C chains, at a temp. high enough to form a soln., cooling the mixt. to about 90°F, adding an alcohol and placing the mixt. in a mechanical dispenser. The alcohol forms 20-25% of the mixt., the lecithin 5-30%, the remainder being the triglycol ester or a mixt. of this with a second triglycol ester contg. fatty acids of chain length 16-18C.

Compsn. is also useful as a mould release agent for rubber processing, and in cutting oils. The compsn. does not require a propellant, but is free of the soapy taste associated with aq. lecithin compsns. 12.1.77 as 758716 (3pp955).

BRIM D13 49994X/27 =US 4108-725
Novel antibiotic Bu-2183 - prepd. by cultivating Pseudomonas sp D 946-B83 ATCC No 31086
BRISTOL MYERS CO 30.10.75-US-627391 (12.12.74-US-532137)
*B03 C02 (22.08.78) *BE-836-588 C12d-09/20*

An antibiotic complex Bu-2183 is produced by cultivating Pseudomonas sp. strain D946-B83, A.T.C.C. 31086, in an aq. nutrient medium contg. assimilable N and C sources undersubmerged aerobic conditions until a substantial amount of By-2183 is produced in the medium.

The antibiotic has a broad spectrum of antibacterial activity and is esp. useful in inhibiting aminoglycoside-resistant organisms including Pseudomonas species. 13.8.76 as 714202 Div.ex. 4102576 (15pp910).

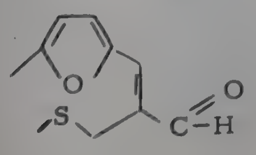
MILE ★ D13 21698B/11 ★US 4108-847
Bland protein enriched prods. from grain gluten - prepd. by slurrying crude gluten with water to give oil-water emulsion and purified gluten solids
MILES LABORATORIES INC 09.09.77-US-831777
(22.08.78) A23j-01/12

Prepn. of bland, protein-enriched prod. comprises (a) forming an aq. slurry of a crude grain gluten (I) which contains oil and H_2O-soluble constituents formed at $\nless$ 70°C/pH 6.5-10.0 so that ratio H_2O · (I) is $\nless$ 15 : 1 on dry wt. basis; (b) agitating the slurry to form an oil and H_2O emulsion; (c) sepg. (I) from the emulsion contg. oil and H_2O-soluble constits., and (d) drying sepd. (I).

Simple, efficient, inexpensive process readily removes characteristic oils, flavours, odours, colours, and carbohydrates, etc. from (I) to give a bland prod. rich in S-contg. amino acids, and suitable for combination with soybean protein etc. in textured vegetable prod. and meat analogues, etc.. 9.9.77 as 831777 (4pp478).

INFL D13 01929A/01 =US 4108-876
Augmenting or enhancing aroma or taste of foodstuff - by adding methyl-(methylthio)methyl furan acrolein cpd.
INT FLAVORS & FRAGR INC 22.12.76-US-753462 (24.08.77-US-827211)
*E13 (22.08.78) *US4064-279 C07d-307/46*

5-Methyl- α[(methylthio)methyl]-2-furan acrolein of formula (I) is new.



(I)

(I) is used to augment or enhance the aroma or taste of a foodstuff, by addn. of 0.02-50 ppm based on total wt. foodstuff, of (I), as claimed in the parent patent. (I) has a flavour described as potato; metallic sulphury - green; cabbage-like; chicken and mushroom-like. 24.8.77 as 827211 Div.ex. 4064279 (15pp936).

ASAE D13 55334A/31 =US 4108-879
Hardened vegetable fat compsn. - having improved compatibility with cacao butter, mouth-feel and shrinkage (NL 24.7.78)
ASAHI ELECTROCHEM IND KK 20.01.77-GB-002225
*(22.08.78) *DT2717-602 C11c-03/14 + C09f-07/08*

Hard butter contains 10-90 wt.% first hardened oil obtd. by hydrogenating and isomerising palm olein with iodine value ⩾55 free of tri-saturated glycerides, a first oil fraction obtd. from hardened oil; 90-10 wt.% second hardened oil obtd. by hydrogenating and isomerising a vegetable oil or fat (not palmoil) free of tri-saturated glycerides having linoleic acid content of 30-55 wt.%, and second oil fraction obtd. from second hardened oil.

Iodine value is 50-75, trans-isomer content ⩾ 25 wt.%, palmitic acid content 15-40 wt.%, stearic acid content 2-10 wt.% and oleic acid content 55-75 wt.% w.r.t. total fatty acids.

Prod. has sharp mouth-melting property having good compatability with cacao butter. 22.4.77 as 789770 (6pp).

PROC ★ D13 21759B/11 ★US 4109-012
Prepn. of chips from potato dough - prepared from potatoes baked in their jackets and then peeled
PROCTER & GAMBLE CO 19.02.76-US-659437 (26.12.73-US-428513)
(22.08.78) A23l-01

A mealy textured workable coherent potato dough is used to form chips. The dough is prepd. by baking whole unpeeled potatoes until they are completely cooked after which they are peeled. The peeled potatoes are comminuted using a min. amt. of work to avoid break-up of individual potato cells and a corresp. increase in free starch.

Pref. the baked potato material is dehydrated and rehydrated subsequent to comminution but prior to the formation of the dough. Using a dough as opposed to raw potatoes there is less waste of material. 19.2.76 as 659437 (+ 19.5.75 - US - 578970) (6pp295).

ROHG D13 63226Y/36 =US 4109-017
Rapidly clarifying fruit juice, esp. that of apples - by a first enzymatic reaction and a second, sedimentation stage
ROHM GMBH 25.02.76-DT-607532
*(22.08.78) *DT2607-532 A23l-02/30*

Fruit juice is clarified by treatment with pectinase at 35-55°C and subsequent settling in the presence of gelatin and silica sol at same temp..

Pref. a glucamylase is added to juice with pectinase, clarification being at 45-55°C and bentonite is added during settling. Juice is de-aromatised prior to pectinase treatment.

Esp. useful for clarification of apple juice initially freed in a separator of coarse materials causing turbidity. Pear or quince juices may be similarly treated. 28.12.76 as 755085 (2pp931).

MOOR/ ★ D13 21760B/11 ★US 4109-019
Ruminant feed having increased protein content prepn. - by reacting fermented proteinaceous agricultural products with carbamide(s)
MOORE W P 08.02.77-US-766758 (18.11.75-US-633029)
C03 (22.08.78) A23k-01/06

Prepn. of highly palatable ruminant feed having increased protein content which has improved properties of delayed release, comprises reacting 1-10 pts. fermented proteinaceous agricultural prods. milk 1 pt. Carbamide soln. contg. 0.05-5% of a 4-6C aliphatic dicarboxylic acid in a reactor which is maintained at 70-105°C. Then 10-30% heated stripping gases are injected into the liquid to remove low boiling impurities, the gases are then vented and the homogeneous liquid reactants are retained for 1-10 mins..

The liquid effluent is then fed to a second reactor by spraying it as discrete, finely divided droplets, and the reaction is completed by fluidising the carbamide and fermented products in an upwardly flowing stream of heated gases at 85-160°C, the retention time being 15-300 secs. The solid adduct prod. is then removed and cooled to 40°-70°C. 8.2.77 as 766758 (12pp957).

USSA ★ D13 21761B/11 ★US 4109-020
Prodn. of crisp reheated french fried potatoes - by partial dehydration prior to deep frying prior to freezing
US SEC OF THE ARMY 01.07.77-US-812080
(22.08.78) A23l-01/21

Reheated french fried potatoes (I) are prepd. by (a) par-frying fresh (I) pieces in deep fat until the surface has a light cream-coloured appearance; (b) heating sepd. (I) pieces until the wt. is reduced by 10-23% by wt.; (c) frying the (I) again in deep fat for 1-3 min. at $\sim$ 375°F; (d) freezing the sepd. (I) pieces and storing; and (e), for consumption heating (I) with microwave radiation.

Method affords reheated french fried (I) which have the same crispness and non-rubbery characteristics as the freshly prepd. articles. 1.7.77 as 812080 (4pp478).

POLA D13 34570V/19 =US 4109-022
1-Crotonyl 2,2,6-trimethylcyclohexene stereoisomers - for use in perfumery and flavouring compsns. e.g. for fruit-flavoured drinks
P F W BEHEER BV (BEHE-) 26.10.72-GB-049368
*E15 (D23) (22.08.78) *BE-806-536 A23l-01/23*

Fruit flavouring compsn. contains E-1-crotonyl, 2,2,6-trimethylcyclohexane in amt. effective to impart a fresh fruity flavour. Amt. of active cpd. is 0.001-1 wt.% w.r.t. compsn..

Pref. flavouring compsn. comprises raspberry further contg. α-termineol, p-hydroxyphenylbutanone, isoamyl acetate, isobutyl acetate, α-Ionone, bachu oil 10% in propylene glycol, dimethylsulphide 10% in propylene glycol, benzyl alcohol and propylene glycol. Alternative flavouring compsns. contain rhubarb or red currant juice concentrate.

Stereoisomers of active ingredient have interesting organoleptic properties rendering it useful in a great variety of perfume and flavouring compsns. 28.4.76 as 681202 (5pp931).

STAL D13 82930X/44 =US 4109-024
French fried potatoes of good quality and freeze thaw stability - are prepd. using a specific starch binder compsn.
STALEY A E MFG CO 11.01.74-US-432777 (04.11.69-US-874037)
*(22.08.78) *US3987-210 A23l-01/10*

Dry prod. for producing French fries comprises (A) 50-92 wt.% dehydrated potatoes of particle size $<$ 5 mesh sieve, (B) 5-45 wt.% high-amylose starch contg. $>$ 35 wt.% amylose, (C) 1-30 wt.% cold water-dispersible starch having a starch pasting temp. $<$ 120°F to act as a binder when the dry prod. is mixed with water at 120°F, and (D) $<$ 15 wt.% taste and texture modifying components.

US 3987210 claims prepn. of the French fries by mixing the dry prod. with water to form a dough, shaping the dough, then frying it at $>$ 250°F until golden brown. The prod. is oil-free and the fried prods. have good freeze-thaw properties and mechanical strength. 28.6.76 as 700628 Div.ex. 3987210 (5pp945).

USSA ★ D13 21764B/11 ★US 4109-026
Compacted, dehydrated, uncooked cabbage - prepd. by aq. sodium metabisulphite treatment, hot air blanching, dehydration, rehydration, compression and drying
US SEC OF THE ARMY 25.07.77-US-818701
A97 (A25) (22.08.78) A23b-07/02

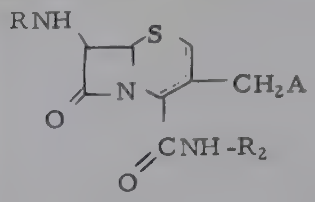
Compacted, dehydrated, uncooked cabbage (I) prepn. comprises (a) covering sub-divided leaves of fresh (I) with aq. $Na_2S_2O_5$, and removing excess soln.; (b) blanching (I) with air the temp. of which is reduced linearly from 90-95°C to 50-60°C over 15-25 min.; (c) drying (I) with air at 50-75°C to H_2O content 5-8 wt.%; (d) rehydrating to H_2O content 10-20% by treatment with an aq. soln. of a food grade surface active agent (II); (e) equilibrating the aq. soln. throughout (I); (f) compressing (I) to a compression ratio 7-15 : 1; and (g) drying compressed (I) with hot air to H_2O content $\leqslant$ 5%.

(II) is polyoxyethylene sorbitan monooleate or polyoxyethylene sorbitan monostearate.

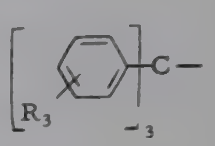
Method affords a dehydrated, uncooked (I) which has excellent storage stability in sealed containers, and which is rapidly reconstituted by cold H_2O to afford a raw (I) which has the same turgidity etc. as fresh (I), and which is suitable for use in salads and cole slaw, etc. 25.7.77 as 818701 (4pp478).

PFIZ D13 57368Y/32 =US 4109-08
(4)-Substd. benzylcarbamoyl-cephem derivs. - useful a
intermediates for antibacterial (4) tetrazolyl-(3)-cephems
PFIZER INC 17.02.76-US-658292 (17.10.73-US-407097)
*B02 C02 E13 (D22) (22.08.78) *US4039-532 C07d-501/36*

New cpds. are of formula (I)



(I)



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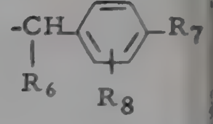
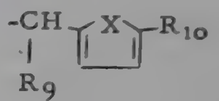


(III)



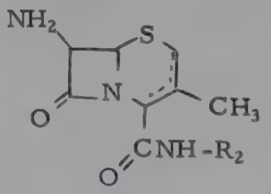
(IV)

(where R is 2,2,2-tri(chloro or bromo)ethoxycarbonyl, benzyloxycarbonyl or (II); each R_3 is H, chloro, bromo, fluoro, Me, methoxy or Ph; A is 1-methyl-5-tetrazolyl-thio or 2-methyl-1,3,4-thiadiazolyl-5-thio; R_2 is (III) or (IV); R_6 is 1-3C alkyl or Ph; R_7 is H, methoxy, 2-4C alkanoyloxy or benzyloxy; R_8 is H, OH, fluoro, chloro, iodo, Me, methoxy, 2-4C alkanoyloxy, Ph or benzyloxy; R_9 and R_{10} are each H or Me; and X is O or S).

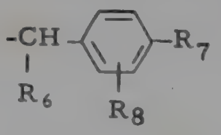
(I) are intermediates for antibacterial Δ^3-cephems. A specific (I) is 7-benzyloxycarboxamido-3-(1-methyl-tetrazol-5-ylmethyl)-4-[N-(p-methoxybenzyl)carbamyl]-Δ^3-cephem. The parent patent (573687/32) claimed simil-ar cpds. 27.4.77 as 791214 Div.ex. 4039532, 396671 (+ 17.2.76 - US - 658292) (38pp976).

PFIZ D13 57368Y/32 =US 4109-08
(4)-Substd. benzylcarbamoyl-cephem derivs. - useful a
intermediates for antibacterial (4) tetrazolyl-(3)-cephems
PFIZER INC 17.02.76-US-658292 (17.10.73-US-407097)
*B02 C02 E13 (D22) (22.08.78) *US4039-532 C07d-501/16*

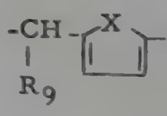
New cpds. are of formula (I)



(I)



(II)



(III)

(where R_2 is (II) or (III); R_6 is 1-3C alkyl or Ph; R_7 is H, methoxy, 2-4C alkanoyloxy or benzyloxy; R_8 is H, OH, fluoro, chloro, bromo, iodo, Me, methoxy, 2-4C alkanoyloxy, Ph or benzyloxy, R_9 and R_{10} are each H or Me; and X is O or S).

(I) are intermediates for antibacterial Δ^3-cephems. A specific cpd. is 7-amino-3-methyl-4-[N-(p-methoxy-benzyl)carbamoyl]-Δ^3-cephem. The parent patent (573687/32) claimed similar cpds.. 27.4.77 as 791215 Div ex. 4039532, 3966719 (+ 17.2.76 - US - 658292) (38pp).

TOLE ★ D13 21792B/11 ★US 4109-314
Automatic analysis of fruit and juice - measuring soluble solids content and pH
RELIANCE ELECTRIC CO 08.12.76-US-748850
J04 R16 R27 (22.08.78) G01n-33/02 G06f-15/46

Liq. is anlaysed to determine its soluble solids content by feeding the liq. into a vessel with a plummet suspended from a weight transducer. The change in weight detected by the transducer on introducing the liq. is used together with a temp. reading to determine the soluble solids content. The pH of the sample is then determined by feeding the sample into a titration vessel where it is weighed. Alkali is added until a predetermined pH is measured by a probe at which time the vessel is reweighed to calculate the weight of alkali added, allowing the pH of the sample to be calculated.

Appts. includes a weighing scale for recording the weight of a whole fruit placed on it and a computer stores this reading together with the pH and solids measurements of the liq. sample. Appts. analyses the juice of a fruit and together with the weight measurements of the fruit allows a statement to be produced concerning the soluble solids and pH of a batch of fruit. 8.12.76 as 748850 (16pp)

DAIK ★ D13 21806B/11 ★US 4142-372
Controlled atmosphere storage of fruit and vegetables - including continuously feeding low oxygen content air via adsorber into refrigerator
DAIKIN KOGYO CO 22.10.76-JA-127698
Q74 (06.03.79) B01d-53/02 F24f-03/16

The method comprises feeding air and refrigerator atmosphere to an adsorbent, e.g. zeolite, which adsorbs more N_2 than O_2. The high O_2 content air of the adsorber is expelled followed by part of the remaining high O_2 content air. The N_2 is desorbed with the remaining air to obtain the desired O_2 content air which is fed to the refrigerator.

The recycling of the refrigerator atmosphere is carried out in order that the time for expelling the high O_2 content air of the adsorber is gradually shortened while the time for feeding the desired O_2 content air into the refrigerator is gradually lengthened.

The amt. of desired O_2 content air obtd. from a definite amt. of atmospheric air and the refrigerator atmos. is gradually increased to rapidly lower the O_2 content of the refrigerator to the desired O_2 content. 19.10.77 as 843736 (16pp1044)

CARL- D13 57578Y/33 #US 4142-847
Automatic prod. wt. control for e.g. chocolate moulding machine - eliminates manual check-weighing and mould filling head adjustment
CARLE & MONTANARI 17.03.77-IT-021337 (11.04.77-US-786662)
*R13 (06.03.79) *BE-853-529 A23g-01/20 +G01g-13/24*

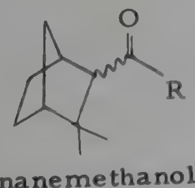
In a mould filling appts., e.g. for chocolate, the conveyor belt carrying the filled moulds is provided with a balance for weighing each single mould, the balance also having a device for comparing the weight with a standard. The comparator is connected to a regulator on the filling device to increase or decrease the amount fed to the moulds accordingly. To compensate for variation of mould weight, an extra balance is pref. arranged to weigh the empty moulds and feed the result to the comparator.

The appts. allows continuous and automatic control of the weight of the moulded product, thus saving on material. 11.4.77 as 786662 (6pp1379)

INFL D13 21476A/11 =US 4143-074
Alpha-substd.-3,3-di:methyl-2-norbornane-methanol cpds. - used for enhancing drug and food flavours etc.
INT FLAVORS & FRAGR INC 04.02.77-US-765847
*B05 E15 +P15 (B07) (06.03.79) *US4076-853 C07c-49/43*

Carbocyclic ketone cpds. of formula (I) are claimed, where R is ethyl, n-propyl or n-butyl. Cpds. (I) have organoleptic properties and are suitable for use in foodstuffs, medicinal prods., toothpastes, tobacco, perfume compsns. etc.

(I)



The Parent Patent claimed a method for enhancing the flavour of foodstuffs, etc., by addn. of 0.5-500 ppm of α-allyl-3,3-dimethyl-2-norbornanemethanol; α-methallyl-3,3-dimethyl-2-norbornanemethanol; or α-allyl-α,3,3-trimethyl-2-norbornanemethanol. 13.12.77 as 860138 Div. ex 4076853 (79pp927)

CIUL/ ★ D13 21989B/11 ★US 4143-161
Coating fishing bait worms - with hardwood flour to facilitate handling and gripping
CIULLA S B 12.06.78-US-914335
C03 P14 (06.03.79) A01k-01

Bait, partic. earthworms or seaworms, is coated to facilitate handling by applying powdered wood flour to the bait to enhance gripping. The flour is pref. a hardwood flour and may be applied by shaking on the flour or by dipping the bait in the flour.

The flour may also be used to coat e.g. clams, minnows or fish eggs. When using multi-hook lines, the flour allows lines to be baited up to 5 times faster. 12.6.78 as 914335 (3pp1358)

TANA/ D13 22156Y/13 =US 4143-162
Encapsulated foodstuff - comprises chlorella algae, powdered aq. extracts of garlic oil and American aloes, and a vegetable oil in an edible capsule
TANAKA Y 13.09.75-JA-110485
*(06.03.79) *DT2639-130 A23l-01/22*

Encapsulated foodstuff contains (a) a powdered, freeze-dried water-extract of Chlorella algae; (b) $\geqslant 1$ of garlic oil, powdered extract of garlic, powdered water extract of ginseng, or powdered extract of aloe; and (c) $\geqslant 1$ vegetable oil. The mixt. is encapsulated in a water-soluble digestible capsule. Wt. ratio (a):(b)=0.67-3.5:1, and wt. ratio (c):(b) = 3.3-23.5:1.

The encapsulated foodstuff is useful not only as a seasoning for a variety of other foods, but also as a foodstuff per se, when it is nutritious but does not have the strong smell and unpleasant taste normally associated with the ingredients. 14.9.76 as 723299 (4pp478)

MAXF- D13 04723A/03 =US 4143-163
Edible fibrous cellulose coated with edible gum - as low calorie filler for foods and pharmaceuticals
MAXFIBE INC (DOUG/) 25.02.77-US-772101 (30.06.76-US-701147)
*A97 B07 (06.03.79) *DT2729-370 A23l-01/04*

A low calorie edible fibrous cellulose prod. for human consumption consists of (a) particulate fibrous cellulose of average particle length $< 75\ \mu$; and (b) a soluble coating of edible gum and polyhydric alcohol stuck to the surfaces of the cellulose to provide a soluble, smooth, and palatable surface texture to the prod. The amount of gum is 2-15% of the cellulose. The ratio of alcohol to gum is 2:1-12:1. The coated fibrous cellulose is dispersible in water to form a stable, gel-like suspn. of uniform viscosity.

Prod. is used as a bulking agent, for mfd. foods and pharmaceuticals. 25.2.77 as 772101 (9pp910)

GENO D13 32122A/18 =US 4143-164
Simulated bacon prodn. with fat and lean phases - contg. heat coagulable protein, fats and gelatin etc.
GENERAL FOODS CORP 30.12.76-US-755537
*(D12) (06.03.79) *BE-862-342 A23d-05 A23j-03*

Bacon analog consists of a fat phase and a lean phase. The fat phase is based on a heat coagulable component chosen from egg albumen, blood albumin and their mixts., and water-soluble, film-forming component e.g. gelatin, and a fat component. The lean phase is based on a loose oil-in-water dispersion of a heat coagulable protein component e.g. egg albumen and a fat component which comprises a blend of palm oil with a partially hydrogenated soy bean oil.

The analog has a chewier, more meat-like red portion and an overall bacon-like response to frying, texture and mouthfeel. 30.12.76 as 755537 (5pp910)

BLAN/ D13 07271V/05 =US 4143-167
Mushroom preservation plant - for prevention of wt and flavour loss
BLANCHAUD M 04.09.72-FR-031308
*(06.03.79) *BE-804-433 +A23b-01*

Mushrooms treatment process comprises subjecting the mushrooms to a predetermined vacuum for a limited period, after which they are contacted with a treatment liq., for a given period. During the vacuum treatment, air and/or other gases, within the interstices of the mushroom, is evacuated and the evacuated space is then filled within the treatment liq. The mushrooms are then washed and blanched to coagulate a colloidal substance within the interior of the mushrooms. The treatment liq. consists of boiled mushroom water and egg white, casein, milk albumin or carrageenan as the colloidal substance.

Canned mushrooms thus treated have improved taste and do not blacken on opening the can. 14.12.76 as 750451 (+4.9.73; 27.8.75-US-394275; 608272) (6pp910)

QUAK ★ D13 21990B/11 ★US 4143-168

Stabilised blood chunks contg. gum - e.g. carboxymethyl-cellulose, for use in moist pet feeds

QUAKER OATS CO 15.03.77-US-777585 (08.12.75-US-638685)
A97 C03 (06.03.79) A23k-01/04

Solidified blood chunks comprises $\not>$1 of fresh, frozen, citrated or nitrated blood with 0.1-3 wt.%, on the blood, of gum (I) sufficient to give a solid chunk stable under moist pet food canning conditions.

(I) is pref. xanthan gum, locust bean gum, carboxy methylcellulose or a carrageenan prod., e.g. 0.3-1 wt.% carrageenan; 0.25-3% Na CMC; up to 1.4% xanthan gum (plus 1 wt. pt. Ca citrate per 7 wt. pts. gum); or 0.2-0.6% locust bean gum plus 0.2-0.6% xanthan gum.

Used in moist pet foods to improve flavour, odour and nutritional value. Large amts. of blood can now be incorporated. 15.3.77 as 777585 (6pp1251)

RALS ★ D13 21991B/11 ★US 4143-169

Prodn. of high fat dry feed for mink - by extruding mixt. of protein and starchy materials then coating with fat

RALSTON PURINA CO 26.05.77-US-800982
C03 (06.03.79) A23k-01/18

Prodn. of a feed for mink comprises first mixing a blend of farinaceous (F) and proteinaceous (P) ingredients of fat content 3-5% with 3-6 wt.% added fat. The blend is plasticised at high temp. and pressure, then extruded through an orifice to lower temp. and pressure. The resulting expanded, porous prod. is dried to stable moisture content of 5-9 wt.%, then coated with 10-16 wt.% fat to give a final total fat content of about 24%.

(P) is pref. $\not<$ 50% and is esp. vegetable or microbial protein, or by-prod. meals. (F) is pref. 10-18% and is esp. maize, wheat, barley, oats (grain or milled components), corn meal or wheat germ.

The compsn. has excellent structural integrity despite its high fat content and no fat-binding agent is required during extrusion. The feed is suitable for carnivorous animals generally. 26.5.77 as 800982 (5pp1251)

GENO ★ D13 21992B/11 ★US 4143-170

Non-foaming low calorie sweetener compsn. - obtd. by blending prods. formed by co-spray drying with defoaming agent, useful in food and beverages etc.

GENERAL FOODS CORP 21.06.76-US-699011 (23.12.74-US-535471)
A97 B05 E19 (06.03.79) A23l-01/22

Sweetener compsn. is prepd. by first forming a soln. contg. a minor amt. of a bulking agent (I) and a defoaming agent (II) and a sweetener selected from saccharin, cyclamates or L-aspartic acid derivs. The soln. is spray dried. A second similar soln. is prepd. but with a major amt. of (I) and opt. without (II), and this soln. is also spray dried. The two solids are blended to give the compsn.

Compsn. is a readily dispersible, non-foaming, low calorie prod. having a minimal change in density and flowability compared with the usual bulked compsns. Useful in foods and beverages. 21.6.76 as 699011 (4pp1248)

MRSC D13 58763W/36 =US 4143-171

Meat like substitute comprising protein in jelly - using polysaccharide gelling agent with humectant etc for animal food

MARS LTD 11.04.74-GB-016237
*C03 (06.03.79) *BE-827-848 A23l-01/04*

A gelatinized animal food prod., esp. a pet food, comprises edible solids contg. subdivided edible protein material which constitutes $\geqslant$10 wt.% of the prod; 0-25% fat; 0-3% antimycotic; 5-40% humectant; and 0.2-5% matrix bonding the material together consisting of thermoreversible gelatable gum gelating agent.

The prod. is solid, bacterially stabilized, has elastic chewing props, is fluidizable with heat and sets to a gelatinous solid upon cooling. 22.8.77 as 826827 (+9.4.75-US-566415) (4pp910)

MRSC D13 60378W/37 =US 4143-172

Pectate thickener or gelifying agent for foods - in hermetically sealed containers, e.g. meats, pet-foods etc

MARS LTD 08.10.74-GB-043500
*C03 (06.03.79) *BE-828-047 A23c-23 A23g-09 A23l-01/04*

Food prods. comprise a comminuted meaty or vegetable protein bonded in a gel. The gel is formed of an acidic aq. phase of low pH $\geqslant$2.5 gelled by a crude pectinaceous material at 0.1-20 wt.% (w.r.t. total) and de-esterified to below 20%. The prod. has 0-5% of a Ca salt to effect bonding and 0-5% sequestrant both by wt.

Prods. are e.g. ice creams, desserts, or other milk prods. 3.10.75 as 619179 (9pp974)

BEAF ★ D13 21993B/11 ★US 4143-174

Stabiliser, thickening agent etc. for food - consists of non-proteinaceous colloidal whey ppte. prepd. by increasing pH of whey and heating

BEATRICE FOODS CO 24.07.75-US-598873
(06.03.79) A23c-21 A23d-05 A23l-01/04 A23l-02

Food compsn. consists of a food (I), and 0.01-25% of a nor -protein colloidal ppt. of whey (II) (as modifier), and H_2O. (II) is prepd. by adjusting whey to pH $\not<$ 5.8 and/or heatin whey to $\not<$ 80°; is a complex ppte. which has average particle size < 10 µ in aq. suspension; is white in colour, has no disagreeable taste in aq. suspension up to ca. 30%; can be freeze-dried to a free-flowing powder; is capable o gelling H_2O and petroleum ether; and has been deproteinate -ed so that 5 wt.% CCl_3CO_2H gives $\not>$5 wt.% ppte. protein.

Inexpensive (II) is non-toxic, has a bland taste, and is effective in modifying the physical props. of a variety of vegetable, animal, and dairy foodstuffs over a very wide pH range. Thus (II) may be added to synthetic orange juice as a clouding agent, to cereals as a stabiliser, as a thickening agent for cheese, and as an emulsifier. 24.7.75 as 598873 (7pp478)

CORP D13 00426B/01 =US 4143-175

Acid-stable cheese-like gel, e.g. for pizzas - contg. an acidification agent, locust bean resin and xanthan resin to stabilise the gel

CPC INTERNATIONAL INC 09.06.77-US-804952
*(06.03.79) *GB2000-010 A23c-19/12*

An acid stable cheese contg. gel consists of an aq. dispersion of natural cheese consisting of 55-45% mozzarella cheese, 0-15% provolone cheese, and 0-15% romano chees and an acidulant so as to provide a pH of 4.1-4.4. The ge also contains 1.5-0.8% locust bean gum and 0.8-1.5% xanthan gum so that the moisture content of the gel is in a range sufficient to prevent the emulsion from breaking while permitting the emulsion to be shredded at about -2.2°C. 9.6.77 as 804952 (5pp910)

CORP D13 00271B/01 =US 4143-176

Peanut butter additive giving darker colour and roast flavour - comprises a mixt. of finely milled peanut skins in edible oil (NL 12.12.78)

CPC INTERNATIONAL INC 08.06.77-US-804823
*(06.03.79) *DT2823-906 A23d-05 A23l-01/20*

Peanut skin-oil emulsion free of bitter off-flavours, usefu for adjusting peanut butter flavour and colour, is obtd. by grinding peanut skins until 100% ground skins can pass through < 100 mesh screen; mixing skins with food grad oil at wt. ratio skins to oil of 1:1-3; and blending skins-oi mixt. to obtain a uniform, homogeneous blend.

Pref. oil is peanut oil, cottonseed oil, palm oil, palm kernel oil, coconut oil, corn oil, soybean oil or their mixts. Particle size of ground skins is pref. $\leqslant$ 20 microns. Skins added to peanut butter prod. form a speck free colouring and flavouring agent. 8.6.77 as 804823 (2pp931)

See Also

D16 DT 2809759	D16 GB 1539494	D16 SU 603660
D17 US 4108891	D23 US 4143173	

D14: FOODSTUFF MACHINERY

GOLD- ★ D14 20158B/11 ★DT 2738-698
Refrigerator and fan for preserving granular foodstuffs - works efficiently and is quickly changed over from suction to blowing
GOLDSAA F DORING 27.08.77-DT-738698
Q75 Q78 (08.03.79) F25d-17/06 F28c-03/10

The air cooled by a refrigerator which can be loaded alternatively with suction or pressure by a fan, is used for preserving material in the form of grains, such as wheat, m maize, oil seeds, etc. To guide the fresh and cooling air, a chamber arrangement consisting of ≥1 chamber is positioned on each side of the refrigerator.

At their outer ends the chambers have an opening which can be used either as an inlet for fresh air fitted with a filter or as an outlet for cooled air. A changeover mechanism is provided so that either the suction connection or the pressure connection of the fan can be connected to a chamber arrangement at one side of the refrigerator.

Each chamber arrangement is pref. formed by a single chamber. The pressure connection or the suction connection of the fan can be joined to the end opening of the one chamber by a sliding coupling which can be locked to make a seal or be unlocked for releasing it. When the fan works with suction directly a filter is fitted to its inlet. 27.8.77 as 738698 (15pp1045)

MEDK ★ D14 20322B/11 ★FR 2393-539
Cold chamber esp. meat store, sterilised by negative ions - from corona discharge electrodes in wall mounted holders (SW 25.5.77)
MEDICOR MUVEK 06.06.77-FR-017221
+P34 (D22) (09.02.79) A23l-03/36 A61l-09

The system uses corona discharge, which produces negative ions from electrodes inside the chamber. The discharging tip cf the electrode is fixed in a tubular tip-holder of which the exterior is formed as a directional electrode. The tip-holder, which is mounted to project from the internal wall of the cold chamber, contains a protective, electrical resistance connected between the discharge tip and a metal plate in contact with a conductor bar.

Used for sterilising the atmos. of a cold chamber to prevent deterioration of the prod. Bacteria in atmos. reduced by 60-80%. Ozone is produced simultaneously and this keeps atmos. deodorised. 6.6.77 as 017221 (10pp448)

PALM- ★ D14 20324B/11 ★FR 2393-541
Fluidised bed to dry coconut kernel for copra - has preheating mesh conveyor to filter entrained particles from exhaust gas
SOC PALMIER HUILE 06.06.77-FR-017194
(09.02.79) A23l-03/18 A23n-09

In a tunnel, the particles advance in a fluidised bed along a horizontal, perforated bed plate through which hot gas is blown upwards through the bed. A filter unit is installed above the bed to prevent loss of particles entrained in the exhaust gas, all of which must pass through the filter unit.

The filter unit takes the form of a horizontal conveyor band of mesh belt material on which incoming, fresh particles pre pre-dried prior to being transferred to the fluidised bed. The conveyor band provides two filter sheets, i.e. the conveying and return runs, through both of which the exhaust gases must pass.

Drying food prod. particles, esp. drying grated coconut kernel for mfg. copra. No loss of prod. by entrainment in exhaust gas occurs. 6.6.77 as 017194 (7pp448)

FMCC D14 28857A/16 =GB 1542-059
Pressure vessel steriliser for batches of canned food prods. - recycles limited quantity of heat transfer water to immerse batch
FMC CORP 16.12.76-US-751923
*+P28 P43 Q31 (14.03.79) *BE-861-779 A23l-03/10*

A retort system for heat treating containers under pressure comprises a vessel in the form of a tunnel into which containers on carts can be fed at one end and discharged from the other. Above the pressure vessel is a water tank from which water at about 250°F may be fed to the tunnel after it has been charged with containers and subjected to about 20 psig from high pressure air or steam/air. The hot water is collected in a shallow pool in the lower part of the tunnel and re-heated by steam. The water is recycled by an external pump until the treatment of the containers is complete when it is diverted by valves to the tank above the vessel and stored during the cooling cycle. The tunnel is kept full of heat treatment liq. throughout the operation and the storage tank may be dispensed with if initial cost is to be minimised.

Minimum amt. of heat treatment liq. in excess of that required to fill the tunnal is used, and the treatment liquid may be re-used if required. 30.11.77 as 049822 (9pp1364)

SIMC ★ D14 20392B/11 ★GB 1542-214
Press with two eccentrically mounted perforated drums - telescopically received to create pressing nip
SIMON-ROSEDOWNS LTD 29.01.77-GB-003718
P71 (14.03.79) B30b-09/20

A press comprises an outer perforated drum mounted freely on a horizontal axis, An inner perforated drum of smaller dia. is mounted eccentrically within the outer drum and is driven about a horizontal axis lying vertically beneath the axis of the outer drum.

Material is introduced into the chamber formed between the inner and outer drums and is carried through the nip at the bottom of the drums where they approach each other with a min. distance. Pref. a baffle is mounted at the twelve o'clock position and separates the material inlet and outlet augers.

The appts. presses liquid from comminuted vegetables. 5.1.78 (3pp295)

NATR ★ D14 20396B/11 ★GB 1542-257
Cylindrical press with perforated walls and pressing piston - with second piston discharging compressed residue
NATIONAL RES DEV CORP 03.09.75-GB-036300
P71 (14.03.79) B30b-09/02

A press comprises a perforated cylinder closed at one end by a wall with an axial aperture. This aperture accepts the rod of a free piston which fits against the interior of the end wall. Material is loaded into the open end of the cylinder and is compressed by a pressing piston which is advanced towards the free piston against which the material is compressed. Juice is discharged through the perforated cylinder wall.

After compression the pressing piston is retracted and the cylinder is moved axially away from it until the piston rod of the free piston engages a stop. Further movement of the cylinder causes the free piston to sweep the cylinder of residue which is discharged through the open end of the cylinder.

The appts. expresses a protein rich juice from vegetable fibre e.g. grass. The use of the free piston avoids the need to have a removable end wall at the closed end of the cylinder to discharge residue. 2.12.76 (3pp295)

PROC- ★ D14 21202B/11 ★NL 7709-474
Steriliser for cylindrical containers - comprises horizontal steamer drum with radial compartments and with dished ends
PROCHEM-ENG BV (NTBI-) 26.08.77-NL-009474
(28.02.79) A23l-03/02

Tin cans, bottles and similar cylindrical containers are sterilised in a horizontal steamer drum with dished ends. The inside of the drum consists of radial compartments open at the outer end and mounted on a rotating shaft which may be driven in either sence by a motor external to the drum.

A casing on the outside of the drum is equipped with two openings, one for charging the drum with tins and the other for emptying it. The openings are sealed by means of slide valves which prevent the egress of steam. The outer end of each radial compartment is pref. equipped with a tumble lever stop which is normally closed but may be opened by means of a piston operated trigger in the wall of the drum.

The arrangement is such that the drum is filled by rotating it in a clockwise direction and emptied by rotating it anticlockwise. The drum provides an economic, semi-continuous sterilisation unit for cans. 26.8.77 as 009474 (16pp)

KLEI/ ★ D04 21217B/11 ★SU -136-856
Antifungal, antibiotic nystatin prodn. - by culturing streptomyces noursei strain in maize and glucose based medium using specified aeration
KLEINER G I 14.02.59-SU-619374
B03 C02 (04.08.78) A61k-35/66 C12d-09/02

Antifungal antibiotic rystatin (RTM) is obtd. by submerged culturing of streptonyces noursei strain in maize extract and glucose contg. nutrient medium.

The yield and the activity of the final prod. are increased if a fresh spore culture after ⩽ 3 passages is used for the inoculation of the medium. The inoculum is cultured in a medium contg. > 4% hydrocarbons and 40-60 mg/l phosphorus with subsequent aeration giving ⩾ 10% oxygen saturation of the nutrient.

To improve prod. purity the bromass is extd. with methyl alcohol followed by the evapn. of the solvent and vacuum drying.
Kleiner G.I., Gordina Z.Kh., Zavileiskaya G.F., Bul. 34/15.9.78 14.2.59 as 619374 (2pp938)

ORCH= ★ D14 21337B/11 ★SU -545-324
Fruit and vegetable sorting conveyor - has spaced rollers through which undersized fruit fall, and extra rollers which lift fruit from between main rollers
ORCHARD VINE EQUIP 14.10.74-SU-067049
P43 (08.04.77) A23n-15 B07b-13/04

Sorting conveyor comprise endless chains with working rollers linked to them, and an ejector. Pinching of the fruit as they leave the conveyor is avoided by making the ejector as a 3-link rotating bracket with rollers, freely sitting on its axes. The dia. of the rollers of the ejector is less than the dia. of the working rollers. The distance from the ejector roller axes to the rotating bracket axes is at least equal to the distance from them to the axes of the working rollers.
Voldman V.I., Romanyugo I.A., Bruter I.M. et al. Bul. 5/5.2.77 14.10.74 as 067049 (2pp29)

EXTR= ★ D14 21387B/11 ★SU -601-510
Constant pressure controller for conserves sterilisation - has movable shut/off attachment connected by ropes to counterweights to match pressure changes
EXTRAMURAL FOOD IND 18.06.76-SU-376225
Q66 (17.03.78) A23l-03 F16k-21/04

Device to maintain constant pressure in conserves sterilising equipment, comprises a body, locking element, saddle and counterweight. A constant predetermined pressure is held by making the counterweight as clutches freely movable on the body. The clutch connects with the locking element by a block system with rigid guides.
Lemarine K.P., Dobryakova I.A., Bul. 13/5.4.78 18.6.76 as 376225 (3pp29)

ATLA- D14 45752A/25 =US 4108-059
Pineapple peeling device - which moves pineapple axially from peeling shaft alignable with core hole drill (BR 25.4.78)
ATLAS PACIFIC ENG 21.06.76-US-697779
*(22.08.78) *ZA7703-678 A23n-07 +A23n-04/20*

A machine for peeling pineapples comprises a rotatable turret movable in steps through a series of stations and a series of core drills carried by and extending vertically and equally spaced about the turret. A pineapple is centred axially of its core for delivery at a first station of the turret and indexing means permits alignment a core drill mounted on the turret with a centering head permits the pineapple to be delivered fromthe centering head onto the core drill to cut a hole axially through the core of the pineapple. The core cut by the drill is ejected at a second station for the turret.

A finned peeling spindle at another station is arranged to be aligned with the core drill and the pineapple is transferred to the finned peeling spindle for engaging the core hole cut in the pineapple. 21.6.76 as 697779 (35pp1363).

ATLA- D14 45752A/25 =US 4108-060
Pineapple peeling device - which moves pineapple axially from peeling shaft alignable with core hole drill (BR 25.4.78)
ATLAS PACIFIC ENG 21.06.76-US-697779 (11.04.77-US-786615)
*(22.08.78) *ZA7703-678 A23n-07/08*

A rotary cutter for peeling pineapples includes a movable mounting head and a circular disc supported centrally on a shaft which is mounted on the mounting head. The disc has a series of peripheral teeth which cuts on ovoid path through the outer layer of the pineapple.

A pair of gauge shoes is connected to the mounting head, one gauge shoe being disposed on each side of the cutter periphery for limiting the depth of penetration of the cutter teeth into the fruit surface as the pineapple is indexed into a cutter station to move the mounting head and the cutter in accordance with the size and shape of the incoming fruit so that the cutter peels the fruit at a desired depth and attitude. 11.4.77 as 786615 (33pp1363).

PETI/ ★ D14 21550B/11 ★US 4108-138
Oven with base supporting food and fuel - covered by dome made of sectors of fire-resistant material
PETIN C 01.07.76-US-701564
(22.08.78) A21b-01/28

The oven comprises a flat base which acts as both the cooking surface and a support for burning solid fuel. The top of the oven is formed of a dome made of separate fire-resistant sectors. The dome has a single opening around which walls are built to crrate an entrance.

A flue extends upwardly from these walls in front of the opening so that combustion prods. from the burning fuel travel horizontally within the dome and then escape through the flue. Doors cover the entrance and act as dampers to control the quantity of combustion prods. which escape.

The oven is used to cook food on the same surface that carries burning logs. 1.7.76 as 701564 (6pp295).

WEIL- ★ D14 21586B/11 ★US 4108-387
Food grinder with external adjuster - for changing bias of rotating knife against upstream face of extrusion plate
WEILER & CO 25.03.77-US-781240
P41 (22.08.78) B02c-18/36

The grinder comprises an auger with a perforated plate at its downstream end. A rotating knife is biased against the upstream face of the plate. The bias of the knife against the plate may be adjusted without disassembling any part of the grinder.

The adjuster comprises an inner screw threaded pin and an outer screw threaded pin concentrically threaded onto the inner pin. The upstream end of the inner pinis biased by a compression spring and its downstream end as accessible from outside of the grinder. The outer pin is non-rotatable w.r.t. the auger and the knife and has a downstream facing shoulder bearing against the knife. Rotation of the inner pin advances it against the compression spring to increase the bias of the shoulder against the knife. The spring and upstream ends of both pins lie within a cavity in the downstream end of the auger.

The appts. provides an adjustment for the bias of a knife against the extrusion plate of a food grinder. The adjustment can be made without disassembly of the grinder. 25.3.77 as 781240 (4pp295).

JANS/ ★ D14 21593B/11 ★US 4108-56
Appts. for forming spherical potatoes - comprises rotating tabl carrying potatoes in sockets and advanced in synchronism wit operation of processing station
JANSSEN J W 21.07.77-US-817918
P54 (22.08.78) B23b-39/22 B23g-01/20

A potato processing appts. includes a rotatable table with sockets. A potato processing station includes potato compressing, cutting and removing devices. The table rotation is synchronised with the operation of the processing station.

A potato is located in a socket and the compressing device firmly lodges it in position. The cutting device then cuts the potato into an approximately spherical shape, and finally the removing device removes the potato from its socket. Pref. the sockets are formed from square section tubes which are mounted near the periphery of a circular table which is rotated about a vertical axis.

The resultant potatoes all have the same size and shape. 21.7.77 as 817918 (10pp295).

ATLA- D14 45752A/25 =US 4109-021
Pineapple peeling device - which moves pineapple axially from peeling shaft alignable with core hole drill (BR 25.4.78)
ATLAS PACIFIC ENG 21.06.76-US-697779 (11.04.77-US-786614)
*(22.08.78) *ZA7703-678 A23n-07 +A23l-01/21 A23p-01*

Method for processing pineapples includes forming a central hole through the fibrous core, cutting off the upper end and transferring the pineapple to an indexable turret. The pineapple is then rotated about its core axis and the turret is advanced to a first peeling where an array of stationary cutters remove spaced circumferential bands from the outer surface of the pineapple to a predetermined depth to maintain an ovoid profile.

The pineapple is then advanced to a second peeling station and rotated to remove the remaining outer surface between the first peeled surface to a depth sufficient to remove any remaining eyes. Further peeling stations may be provided before the pineapple is transferred from the spindle. 11.4.77 as 786614 (34pp1363).

BOSS/ D14 23815Y/14 =US 4142-541
Food surface cleaning appliance - with revolving horizontal drum in water tank and sector inserts with adjustable sides
BOSSERT E 30.09.75-DT-543550
*P28 +P43 (06.03.79) *DT2543-550 +B08b-03/06*

Apparatus for cleaning the surface of foods comprises a watertight housing with a movable wall for entry, a perforated drum for entry into the housing and rotation, and a sector-shaped cross-section basket within the drum consisting of a pair of radial walls, one pivotable for movement to or away from the other.

The movable wall can be locked in a number of positions to immobilise material in the basket independently of the amount of material, when the drum rotates and wash fluid moves through drum and basket perforations. The drum is pref. carried on trunnions. 29.9.76 as 727656 (6pp1358)

D15: WATER TREATMENT

STER ★ D15 20019B/11 ★BE -870-285
Treating aq. effluent contg. organic matter with oxygen - mixed with pure water to avoid fire hazards
STERLING DRUG INC 19.09.77-US-834232
(07.03.79) C02c

The process, in which the liquor is oxidn. used in a reactor with oxygen or a gas rich in oxygen, comprises mixing the gas with pure water before adding it to the liquor. The oxygen gas/water mixt. is pref. either mixed with the waste liquor before introducing it to the reactor or mixed in the reactor. The amt. of pure water used is pref. 10g-10kg/kg oxygen.

The process avoids any possiblity of forming any dry deposits of combustible material which can come into direct contact with the oxygen with the consequent fire hazard. 7.9.78 as 870285 (5pp597)

VARI D15 94176R/51 =DS 2022-958
Detection of organic traces in liquids
VARIAN ASSOCIATES 16.06.69-US-833517
*J04 R16 (08.03.79) *DT2022-958 G01n-31 G01n-33/18*

A process is described for detecting traces of organic material in an aq. fluid. To separate the material from the fluid, the latter is brought into contact with a membrane, and the sepd. material is admitted in vapour form into a permanent carrier gas atmosphere. The vapourised material is sepd. from this atmosphere and detected. 12.5.70. as 022958 (5pp160)

KEEN D15 22053X/12 =DS 2457-289
Disposable, elongated cylindrical separator of polyester material - for removing-collecting oil from effluents and ships ballast water
KEENE CORP 03.09.74-US-502648
*A88 J01 (08.03.79) *NL7415-733 +B01d-31*

Appts. for sepg. a mixt. of oil and water has a mixt. inlet and separate water and oil outlets. An oblong separator element, permeable to fluid, for the mixt. is mounted in a pressure housing. The element is of non-woven polyester felt, being fully saturable by water and impermeable to oil up to a predetermined pressure difference. The entire mixt. to be sepd. flows through the element inlet. 4.12.74. as 457289 (7pp160)

RHEH ★ D15 20153B/11 ★DT 2738-528
Removal of oil from contaminated surfaces - by adsorption on solids, pref. mineral fibres (PT 15.2.79)
VKI-RHEINHOLD & MAH 26.08.77-DT-738528
H03 J01 +Q42 (08.03.79) C02b-00/ C09k-03/32 E02b-15/04*

Oil or oily substances are eliminated from surfaces, e.g. ground or water, by adsorption on a solid material, pref. mineral fibres. The mineral fibres are used in the form of mats, slabs or flock and have bulk density 30-120 (30-50)kg/m^3. They pref. consists of rock fibres and/or wool, which are cheaper than asbestos.

Used for cleaning of oil spills, etc. on land or sea. The process is simple, requires no special equipment and can be used on solid surfaces or water. The oil can subsequently be squeezed out of the absorbent and the latter re-used. Mineral fibres are very light, easily compressed for transport and non-combustible. 26.8.77 as 738528 (9pp195)

DERO- ★ D15 20194B/11 ★DT 2739-335
High purity sterile water production - in reverse osmosis cells with overflow and surplus permeate recycled to desalination section
DEUT ROTEN KREUZ 01.09.77-DT-739335
(08.03.79) C02b-01/82

High-purity water, free from germs or particles, for medicinal injection preparations and technical purposes is made from fully desalinated water by reverse osmosis. The overflow part of the reverse osmosis is circulated and cooled, if necessary. If the permeate is not discharged, it is also circulated.

This prevents bacterial damage to the membranes in case of stoppages when there is no demand for high-purity water, and saves the necessity for reservoirs for the permeate. 1.9.77 as 739335 (20pp39)

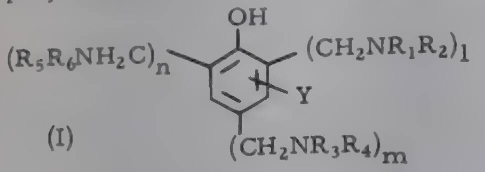
PALM/ ★ D15 20214B/11 ★DT 2739-690
Communal and industrial wastes treatment - in series of filter columns with aerated packed risers
PALMER W F 02.09.77-DT-739690
A88 (08.03.79) C02c-01

A system for the purification of communal and/or industrial wastes includes a first filter column which receives the effluent on top from a riser. The wiser is filled with a packing for neutralisation, biological cleaning filtration and/or absorption and is aerated at the bottom elbow. The filter and the subsequent filters, joined by similar risers, contain strainers, filtering and biological cleaning materials.

This combines mechanical, chemical and biological systems in one continuously operating plant. The pass-through time and the time required to digest all contaminations are not longer than required by a simple mechanical filter although it can deal even with intensively laden effluents. The filters can contain a packing of plastic rings or porous plastic foam, e.g. of polyurethane, polyolefin or polystyrene. 2.9.77 as 739690 (40pp39)

MITU ★ D15 20258B/11 ★DT 2835-876
Cationic flocculant esp. for treating effluents - consists of water-soluble polycondensate of epihalohydrin and phenol, formaldehyde and amine reaction prod.
MITSUBISHI CHEM IND KK (KYOY) 24.08.77-JA-101208
A91 (A21) (08.03.79) C08g-59/10 C09k-03

Cationic polymeric flocculant consists of a water-sol. polycondensn. prod. of an epihalohydrin and an amine (a) of formula (I) (where Y is H or lower alkyl; R_{1-6} are opt. identical lower alkyl and l, m and n=0 or 1, provided l, m and n do not all denote 0) or a mixt. of (a) with ≥1 cpd. (b), e.g. NH_3, monoalkylamines, dialkylamines, alkylene diamines, aromatic amines, polyalkylene-polyamides and cyclic amines, provided amt. of (a) is 50 mol. % of (a)+(b).


(I)

The flocculants are used for treating industrial effluents, e.g. from paper, dye or food industry, for purifying river water, accelerating the settling of sludge, treating oil-contg. streams, accelerating clay filtration in cement mfr., for concn. and filtration of clay sludges in porcelain or ceramic industry, for dehydrating concentrates and for clearing streams contg. (anionic) surfactants. The flocculants may be combined with other inorganic and/or organic flocculants, e.g polyacrylamide. 16.8.78 as 835876 (29pp200)

COAF ★ D15 20287B/11 ★DT 2837-491
Treatment for effluent with emulsified hydrocarbon(s) - in combined filtering and coalescence tank
CREUSOT-LOIRE 07.09.77-FR-027147
H03 J01 Q24 Q42 (08.03.79) B01d B63j-05 C02c-01/38 C02c-05 E03f-05/16

Compact device for the continuous processing of waste fluids containing emulsified hydrocarbons, e.g. wastes from flushing the bunkers of ships, includes inside a vertical tank a central chamber, open at the top, containing the oleophilic coalescent agent. The chamber rests on and is surrounded by a granular filtering material. The hydrocarbons are decanted from the top of the tank by a float valve.

Appts. combines the normal two stages (gravity sepn. and coalescence filter) into one integrated process. The result is very compact plant for continuous operation. 28.8.78 as 837491 (17pp39)

GESL ★ D15 20342B/11 ★FR 2393-765
Treating waste water using aluminium oxide - doped or surface treated with cations or anions SW 8.1.79)
KERNFORSCH KARLSRUH 05.05.78-DT-819573 (10.06.77-DT-726192)
E33 (09.02.79) C02c-05/02

The process comprises using either (a) an Al oxide doped during its prepn. with cations or anions which can be incorporated into the crystalline network and which retard crystallisation of the Y phase of the Al_2O_3 or (b) an Al_2O_3 the surface of which is treated after its prepn. with ≥1 salt of these ions.

The process may be applied to the elimination of difficulty biodegradable organic substances. It overcomes a previous difficulty that Al_2O_3 had a very weak absorption power for neutral and basic substances. It enables wide application of the process and results in a large interior surface (e.g. 230 m^2/gm cf 80 m^2/gm) with stabilisation resulting in better absorption properties. It is cheaper than active carbon. 9.6.78 as 017362 (+ 5.5.78 - DT - 819572)(14pp597)

UNIT- ★ D15 20362B/11 ★FR 2393-955
Submersible positive pump for sewage sludge etc. - hydraulically driven via pipe from powered unit in dry accessible location
UNITEC 09.06.77-FR-017768
Q42 Q56 (09.02.79) C02c-01/36 E03f-05/22 F04b-43/06

A liq. pumping installation includes a service pump unit remote from its drive unit to which it is connected by a flexible transmission, pref. a pipe contg. hydraulic fluid.

In the drive unit of this hydraulic transmission system, a motor or engine is pref. directly coupled to drive an hydraulic pump, e.g. of the piston or diaphragm type. Th hydrualic pump reciprocates hydraulic fluid in a transmission pipe connected to a service pump unit, pref. comprising a diaphragm or free piston pump. The drive unit can be installed in a dry, accessible location while the service pump unit is totally immersed in liq. to be pumpe

Used for pumping liq., partic. sewage sludge and mineral ore slurry etc., where it is convenient to use a submerged pump.

The service pump unit can be totally immersed in liq. to be pumped while the drive unit operates in more favourable, dry conditions and is readily accessible for maintenance and adjustment. 9.6.77 as 017768 (7pp448)

RITP D15 18533Y/11 =GB 1541-89
Distribution system for sand bed filters - for uniform introduction o
purging air and water
SYBRON CORP 04.08.76-US-710473 (08.09.75-US-611585)
*J01 (14.03.79) *DT2640-472 B01d-23/20 +B01j-01/06*

Appts. for distributing gas or liq. uniformly throughout a bed of granular medium comprises a filter bottom of bloc assembled in parallel adjacent rows, water ot other liqui passes downward through the sand and gravel which form the bed into the filter bottom and from there into a flume to discharge through an outlet pipe. The outlet pipe supplies backwashing fluid to the filter, the flume also contains a gas manifold to supply gas during backwashing.

The filter blocks are each divided by inclined planar walls into primary and secondary lateral conduits of triangular cross-section, the ends of these blocks are open an they can thus be assembled in rows. The block walls contain gas-metering orifices and each row pref. contains one block with a port positioned over the flume.

Uniform gas or liquid distribution is provided with a facility for air backwashing. 2.9.76 as 036416 (+8.9.75-US-611597) (11pp1364)

RIGA- D15 81092Y/45 =GB 1541-95
Liq. clarifying appts. - with baffles and inclined vanes for sep
settling and floating substances
RIGA INC 21.06.76-US-697929
*J01 +P41 (14.03.79) *US4056-477 +B03b-05/60 C02c-01/28*

Appts. for sepg. settlable and floatable substances from liquid comprises a tank of rectangular top section and funnel-shaped lower section. Water enters the upper tank through a horizontal pipe and distribution chamber to traverse a separator consisting of vanes the vanes of each row are mutually parallel with every other row inclined i one direction and with intervening rows inclined in the opposite direction.

Water flow between the vanes is laminar and floatable substances rise between the vanes to be sepd. in a chann downstream of a discharge weir, settlable substances ar discharged from the tank bottom. Pref. the vanes are mounted in a removable cartridge.

Economical, low cost appts. for effective sepn. which i faster and easier to clean than conventional equipment is provided. 15.6.77 as 025072 (8pp1364)

SNAM D15 39853Y/23 =GB 1542-1
Biological treatment of oil pollution in sea water etc. - usin
floatable lipophilic agent contg. phosphorus and slow releas
nitrogen to promote growth of hydrocarbon-assimilatin
microorganisms
SNAMPROGETTI SPA 03.12.75-IT-029959
*H03 (14.03.79) *BE-849-067 C02b-09/02*

Oil pollution reductant compsn. comprises particles whic float on fresh water, a body contg. ≥ 1 water-soluble cpd contg. nitrogen or phosphorus capable of microbial assim -ation by hydrocarbon-metabolisers, and on the surface regions of the body, a film of paraffin solid at room tem

Compsn. also contains ≥ 1 lypophilic material contg. a cpd. having poor solubility in water and contains nitrogen assimilable by aq. microbes, being capable itself of floating on fresh water or being treated with a paraffin solid room temp. to make that cpd. floatable on fresh water.

Oil pollution is reduced on both fresh water or sea water. 2.12.76 as 050375 (4pp931)

CSIR D15 17794B/09 =GB 1542-155
Appts. for analysis of water - used to detect substances which are oxidised by ozone with emission of visible light (SW 4.7.77)
COMMONWEALTH SCIENT ORG 10.12.75-AU-004243
*J04 R16 +R14 (14.03.79) *US4140-487 G01n-33/18 +G01j-01/48*

Appts. for detecting the presence in water of substances which are rapidly oxidisable in water by ozone with the emission of quanta of visble light comprises a cylindrical vessel of optical quality glass with a fixed lid. The vessel is provided with an overflow tube, a gas entry tube to admit ozone, a water supply tube and a sample dispenser. Above the lid, is mounted a water-cooled photo-multiplier tube.

Automatic operation of the system is provided and the photo-multiplier read-out is recorded. The system is then flushed with distilled water and the cycle recommended.

Field work or in situ monitoring on a continuous, automatic and unattended basis is provided. 8.12.76 as 051262 (11pp1364)

BROV D15 30267A/17 =GB 1542-240
Oxygen demand of water determn. using oxygen probe - to measure oxygen content of organic substances evaporated and sepd. from the water
BROWN BOVERI & CIE 18.12.76-DT-657577
*J04 R16 (14.03.79) *BE-861-946 G01n-33/18*

Determn. of the content in aq. media of substances oxidisable with oxygen esp. the content of organic impurities in watercourses or sewage, comprises evaporating a sample aq. medium and feeding vapour alone, without mixing with oxygen, to an oxygen measuring probe.

A probe determines the partial pressure of the free oxygen contained in sample stream as given in the thermal dissociation equilibrium:- $2H_{2o} = 2H_2 + O_2$ at a predetermined high oxidation temp. The pressure is influenced by the content of oxidisable substances and is correlated with the chemical oxygen demand (COD).

Method provides ready estimation of dissolved oxygen without expensive equipement. 19.12.77 as 052790 (4pp)

NIKN D15 87292X/47 =GB 1542-301
Distribution of gases in liquid - using rotating horizontal disc with vertical pins below which gas is released
NIPPON KOKAN KK 08.05.75-JA-055111
*F09 J02 (14.03.79) *DT2620-310 +B01f-07/18*

Appts. for gas-liq. contact reaction comprises a vessel with an horizontal disc which can be rotated about its vertical axis on a drive shaft through the bottom of the vessel. The disc is positioned below the centre of the vessel and stirring bars extend vertically downwards from its underside. A reaction gas inlet pipe enters through the bottom of the vessel to supply gas into the region of the stirring bars. a liq. inlet pipe is positioned in the top of the vessel Waste gas leaves through a second pipe in the top of the vessel and liq. is discharged through a second pipe in the bottom.

Prodn. of fine bubbles in the gas-liq. contact vessel is provided. 4.5.76 as 018241 (9pp1364)

ANDC- D15 50060X/27 =GB 1542-331
Electrochemical purificn of industrial effluent - esp from cooling towers with acid soln cleaning of electrodes and flow passages
ANDCO IND INC 07.02.75-US-547940
*J03 (J01) (14.03.79) *BE-838-339 C02c-05/12*

Method for electrochemical removal of contaminant ion from an ionising medium which is capable of forming an insoluble iron complex comprises passing the medium through cells arranged in series. Each cell has an anode of iron which forms an insol. complex with the contaminant ion. The insol. material is removed continuously from the medium flowing through the cells. The electrodes are washed and insol. material lodged between the electrodes removed by passing acid (pref. HCl 3-5% aq) at appropriate intervals. Acid treatment time is pref. 5-10 mins. and current density is $<$ 500 amps/foot^2.

Contaminant and substance lodged on, or between electrodes is removed from the electrochemical cell. 5.2.76 as 004595 (12pp1364)

ANDC- D15 50060X/27 =GB 1542-332
Electrochemical purificn of industrial effluent - esp from cooling towers with acid soln cleaning of electrodes and flow passages
ANDCO IND INC 07.02.75-US-547940
*J03 (J01) (14.03.79) *BE-838-339 C02c-05/12*

Appts. for the removal of contaminants from liquids undergoing electrochemical treatment comprises an electrochemical cell with additional electrodes arranged between the main outer electrodes. The additional electrodes are closely spaced apart and the cell is provided with inlet and outlet pipes for ionising medium flow. One additional electrode near each of the outer main electrodes extends beyond the main electrode and thus protects it from flux field effects which cause excessive current density.

Appts. is effective and economical and achieves relatively even dissolution or wear of the electrode parts. 5.2.76 as 031085 Div. ex. 1542331 (7pp1364)

SCHR- D15 65175Y/37 =GB 1542-338
Cleaning rake arrangement for a drain channel grid - is of low, stable construction and suitable for grids with straight bars
SCHREIBER-KLARANLAG 03.03.76-DT-608774
*+Q42 (14.03.79) *DT2608-774 B01d-35/16*

Device for removing accumulated debris from a grating of upwardly extending bars mounted in a water conduit comprises a rake comb with tines which engage between the bars and are moved upwards by a roller chain system. The rake is normally positioned above water level on the downstream side of the bars and is moved downward when the accumulated debris reaches a certain height. The tines engage the bars and move upward to discharge into the rubble bin at the top of the frame, the rake then continues along the chain path until it reaches the normal rest position.

A low cost, robust device which is less susceptible to disturbance than existing equipment and does not require the attention of skilled personnel, is provided. 8.11.76 as 046453 (8pp1364)

ASKO- ★ D15 20411B/11 ★GB 2003-460
Combined biological dry toilet and waste water purifier - composts sludge for fertiliser and discharges clean water into soil from bio:filter
ASKO-UPO OY 02.09.77-SF-002613
(14.03.79) C02c-01

A combined waste treatment plant comprises a biological dry toilet and a biological waste water purifying plant. The tiolet includes a composting tank and a filter for sepg. sludge from waste water. The purifying plant includes a sedimentation tank and a biological filter. A suction fan is provided for changing the air in the composting tank and the biofilter. A common pump is used for alternately removing sludge and circulating the water to be purified.

Used in sewerless houses, for treating tioilet and kitchen waste. The heat contained in the grey water is recovered by a heat exchanger and used to heat the composting waste. Purified water from the biofilter may be discharged into the soil. The compost may be used on residential lots as fertiliser. 31.8.78 as 035199 (5pp1044)

SSIC ★ D15 B/11 ★IT 1027-503
Converting salt water into potable water
STRUTHERS SCI & INT CORP 29.01.63-IT-001872
(20.12.78) C02b

JAPG ★ D15 20624B/11 ★J5 4015-030
Hollow filaments for ultrafiltration and reverse osmosis - by injecting solvent and/or swelling agent into the filaments to retard gelation and increase spinning speed
JAPAN GEON KK 30.06.77-JA-078083
A32 F01 J01 (A18) (03.02.79) D01d-05/24

The filaments are produced from cellulose esters, acrylonitrile (co)polymer, PMMA and PVC, by (1) extruding a soln. of the material through circular slits, with simultaneous introduction of (a) a solvent for the material and/or (b) a liq. capable of effecting swelling of the material, into the hollow filaments; and (2) passing the extruded filaments into the coagulating bath, opt. through a space above the bath surface. 30. 6. 77 as 078083 (9pp173)

MITO ★ D15 20676B/11 ★J5 4015-352
Biologically treating poly:thionic acid-contg. waste water - using activated sludge in presence of gradually reducing amts. of thio:cyanogen and thiosulphuric acid
MITSUBISHI HEAVY IND KK 06.07.77-JA-079937
E36 J01 (05.02.79) C02c-01/02

Method of biologically treating polythionic acid-contg. waste water, e.g. wet desulphurisation waste water, comprises pouring the waste water and thiocyanogen and thiosulphuric acid which are nutrient sources for activated sludge, into activated sludge produced using the nutrient sources aerobically to biologically oxidise the polythionic acid to sulphuric acid, and then, after treatment of the polythionic acid has been confirmed, the inflow of thiocyanogen and thiosulphuric acid is gradually reduced.

The activated sludge used includes thiocyanogen decomposition sludge, thiosulphuric acid decomposition sludge, phenol decomposition sludge, etc.

The complete conversion of the polythionic acid into sulphuric acid obviated the need for post-treatment as in the case of ion exchange resin treatment. This method is also applicable to the wet type stack gas desulphursation-denitrification waste water. 6. 7. 77 as 079937 (4pp117)

MITO ★ D15 20677B/11 ★J5 4015-353
Denitrification of waste water - contg. inorganic cpd. contg. nitrogen and sulphur and having a sulphone gp.
MITSUBISHI HEAVY IND KK 06.07.77-JA-079938
(05.02.79) C02c-01/02

The waste water is contacted with activated sludge under aerobic conditions in the presence of an organic matter to oxidise the N and S contg. cpd. (I) present to nitric acid by means of microorganisms.

The method is capable of treating waste water of various types contg. cpds. (I) with a denitrification rate of 82-95%. Cpds. (I) include sulphamic acid, imidesulphonic acid, nitridosulphonic acid, hydrazinemonosulphonic acid, hydrazinesulphonic acid, azosulphonic acid, hydroxylaminosulphonic acid, hydroxylaminodisulphonic acid, etc., and the activated sludge used includes various activated sludges which grow on organics, as well as general nitrifying bacteria. 6. 7. 77 as 079938 (3pp117)

NISA- ★ D15 20678B/11 ★J5 4015-354
Appts. for purificn. of cyanide contg. waste water - comprises an oxygen or air bubbler, a quartz tube sheathed UV ray irradiator and cooling equipment
NIPPON SANGYO GIJUT 07.07.77-JA-080448
(05.02.79) C02c-05/04

The appts. comprises oxygen or air bubbler provided at the lower part of the tank, a quartz tube-sheathed UV rays irradiator provided up the central part of the tank, and a cooling equipment inside the tank. Cynide-contg. waste water is oxidised at pH 11 to 12 by an oxidising agent or finely bubbled air or oxygen under UV ray irradiation while removing insuluble substances formed during oxidation. Part of the effluent discharged after the completion of oxidn. is recycled into the waste water feed pipe.

This method is capable of decomposing cyanides present in waste water with a simplified appts. in a very short time, and thus is applicable to the treatment of plating waste water, etc.

Specifically the oxidising agent includes H_2O_2, hypochlorite, etc., and the UV rays used is pref. of $>$ 300 mm wavelengths. 7. 7. 77 as 080448 (7pp117)

KANA/ ★ D15 20679B/11 ★J5 4015-355
Removal of ammonium ions from waste water - using mixt. of sand, diatomaceous earth and sewage sludge as adsorbent
KANAI M 06.07.77-JA-081173
E35 (05.02.79) C02c-01/40 C02c-05/02

Waste water is mixed with sand in addition to the sewage excess sludge, together with diatomaneous earth, and then the mixt. is allowed to stand to obtain supernatant liquid or filtered.

The method is capable of removing 40-50% NH_4 content and the used sewage excess sludge can be repeatedly employed. In an example 1 l of water contg. 201 ppm NH_4 was mixed with 3 l of excess sludge with stirring and then filtered, to give 95-130 ppm NH_4-contg. water. The removal rate of NH_4 was approx. 50%. 6. 7. 77 as 081173 (1pp117)

KUBI ★ D15 20680B/11 ★J5 4015-35
Waste water treatment by coagulation - in which water from conventional treatment is treated with coagulant, the particle sepd. and supernatant treated with further coagulant
KUBOTA KK 05.07.77-JA-081855
(05.02.79) B01d-21/ C02c-05/02*

In the treatment of sewage, human waste and industrial effluents, the water from the conventional coagulating se imentation treatment is treated with a coagulant, e.g. aluminium sulphate, slaked lime, etc. with stirring, the treated water is allowed to stand in a first sedimentation basin where comparatively coarser particles composed of $>$ 10000 mol. wt. components are pptd. and then discha -ged, and then the supernatant from the first sedimentati basin is again treated with a coagulant in a second sedime -ation basin where comparatively finer particles compose of $<$ 10000 mol. wt. components are pptd. and then remo -ed.

Method removes COD components and coloured materi at a removal rate $>$ 90% without the aid of ozone, activat carbon, etc. after coagulating sedimentation treatment. Method also simplifies treatment, so reduces cost, maint enance, etc. 5. 7. 77 as 081855 (3pp117)

HITA ★ D15 20681B/11 ★J5 4015-36
Appts. for removing ammonium cpds. from water - comprise adsorption tower packed with cation exchange adsorben electrode chambers, water supply and a chloride supply
HITACHI KK 06.07.77-JA-079905
E35 (05.02.79) C02b-01/23 C02c-05/02

Appts. for removing ammonium present in service water sewage, and waste water, comprises an adsorption tower packed with an adsorbent having a cationic exchange capa ility in a space between a cation-exchange membrane and an anion-exchange membrane, two electrode rooms, eac of which has both positive and negative electrodes, provi ed at the outside of each of the cation-exchange membran and the anion-exchange membrane, a means to supply water to be treated to the adsorption tower, a means to supply the chloride of an alkali metal, e.g. NaCl or KCl to the electrode rooms, a reaction tower in which the gas and liquid from the both electrodes are reacted by mixing and a circulation path through which the liquid obtd. from the reaction tower is sent back to the electrode rooms, with a pH regulation means on its circulation path.

The method effectively and continuously treats ammonium-contg. water with small scale treatment facilities in a closed system without causing secondary pollution. 6. 7. 77 as 079905 (5pp117)

NIPE ★ D15 20712B/11 ★J5 4015-4
Neutralising acidic and alkali effluents - formed on regeneration cation and anion exchange resins
NIPPON PETROCHEM KK 06.07.77-JA-080709
(05.02.79) B01j-01/09 C02c-05/02

Acidic and alkali effluents formed by regenerating cation and anion exchange resins packed in an ion exchange app are neutralised without any formation of turbidity due to pptn of $Mg(OH)_2$, $Ca(OH)_2$ and coprecipitation of SiO_2 etc. by dividing the alkali effluent into $>$ 2 portions and adding each of the portions to a stream of the acidic effluent at different positions, agitating the blended liquor by means of a flowing mixer at least at the downstream of the lowe adding position, and adjusting the pH of the blended liquo to $<$ 8. 6 at the outlet of appts.

The neutralising appts. is described. 6. 7. 77 as 0807 (6pp34)

JAPC ★ D15 20715B/11 ★J5 4015-4
Semipermeable composite membrane for reverse osmosis - is obt by forming thin membrane of polyfunctional crosslinking agent support and treating with polyethyleneimine
NIPPON SHOKUBAI KAGAKU 06.07.77-JA-080006
A91 J01 (05.02.79) B01d-13

The membrane is produced by forming a thin membrane of polyfunctional cross-linking agent having $>$ 2 of functi -al radicals which react with amino radical imine in one molecule, e.g. divinylsulphone, methylenebisacylamide, dimethylol uea, dimethylolmelamine, hexamethylolmelamine, acetic anhydride, epichlorohydrin, amineimides, etc., on a porous support, e.g. made of cellulose nitrate, cellulose acetate, polysulphone, polystyrene, PVC, polycarbonate, polyacrylonitrile and polyester, etc., and subsequently treating the thin membrane thus formed with a soln. (0.2-5 wt.%) of polyethyleneimine having the M.W. of from 1,000 to 100,000.

The polyethyleneimine treatment if pref. carried-out at 70-130°C for 5-60 mins. The heat treatment may be carried-out in the polyethyleneimine soln. but pref. carried-out in a thermostat. Membrane is suitable for use as reverse osmosis membrane. 67.77 as 080006 (5pp34)

MIUR- ★ D15 20717B/11 ★J5 4015-484

Compsn. for removing dissolved oxygen - comprises hydrazine hydrate, divalent cobalt salt and EDTA or salt thereof

MIURA KOGYO KK 01.07.77-JA-079231

E36 J01 (E12 E37) (05.02.79) C02b-01/23

The compsn. comprises hydrazine hydrate cpd. a divalent Co salt, e.g. $CoCl_2$, $Co(NO_3)_2$, $CoSO_4$, $Co_3(PO_4)_2$, Co acetate, Co formate, Co oxalate, Co malate, Co acetylacetonate, Co benzenesulphonate, Co p-nitrobenzoate, Co 2-naphthalenesulphonate, Co 1-naphthalenesulphonate, Co phthalate and Co benzoate etc., the amt. of which is 0.05 to 2 wt.% w.r.t. hydrazine hydrate, and EDTA or ammonium or alkali metal salt thereof, the amt. of which is 0.1 to 3 wt.% hydrazine hydrates.

The ammonium or alkali metal salts of EDTA are, e.g. EDTA-2-Na, EDTA-3-Na, EDTA-4-Na, EDTA-2-K, EDTA-3-K, EDTA-4-K, EDTA-2-NH_4, EDTA-3-NH_4 and EDTA-4-Na etc.

In an example, the compsn. was added to 15%-aq. hydrazine hydrate soln. such that 0.5 wt.% of Co acetate and 0.8 wt.% of EDTA-2-Na was added to hydrazine hydrates, after which the soln. mixture was charged into a 500 ml-polyethylene bottle and stood for 20 hrs. at 30°C. The dissolved oxygen content became 0.1 ppm after 23 mins. and the innerpressure became 5 mm H_2O. 1.7.77 as 079231 (2pp34)

CHIY ★ D15 20722B/11 ★J5 4015-496

Hydrogen chloride and metal oxide(s) recovery - from, e.g. pickling effluent, by an efficient process utilising waste heat in the process and less water

CHIYODA CHEM ENG CO 06.07.77-JA-080004

E36 M12 (E37) (05.02.79) C01b-07/08 C01g-49/02

HCl and metal oxides are recovered from waste HCl soln. contg. Fe chloride, $MgCl_2$ and $AlCl_3$ etc., e.g. pickling effluent etc., by (a) contacting the waste HCl soln. with waste gas from a subsequent HCl-absorbing step (c) to carry-out heat exchange; (b) passing the heated waste HCl soln. to a roasting step where it is sepd. by roasting into HCl gas and metal oxides which are recovered; and (c) contacting the HCl gas with effluent recovered in washing the waste gas resulting in the heat exchange with water to recover HCl, the waste gas being returned to (a).

No discharge of waste liquor contg. HCl and metal oxides from the final waste gas-washing tower occurs. 6.7.77 as 080004 (3pp34)

TOYJ ★ D15 20723B/11 ★J5 4015-497

Concentrating dil. aq. aluminium sulphate - by adding sodium (bi)carbonate , calcium carbonate or calcium hydroxide, and adding sulphuric acid to the ppte.

TOYO SODA KK 00.00.78-JA-079743 (05.08.75-JA-094756)

E33 (05.02.79) C01f-07/74

The dil.aq. aluminum sulphate soln., resulting e.g. from the treatment of an $Al(OH)_3$-bearing sludge (in the treatment of industrial waste waters, sewage, etc. with an Al-bearing coagulant) with H_2SO_4 to dissolve $Al(OH)_3$ and to improve the treatability of the remaining portion of the sludge. The soln. is concd. by adding Na_2CO_3, $NaHCO_3$, $CaCO_3$ or $Ca(OH)_2$ such that the pH is 6 after neutralisation, to ppte crystals of Al cpd., separating the ppte from the soln., and adding H_2SO_4 to the ppte such that the final pH is 1.5-3.5, to dissolve it.

When using $CaCO_3$ or $Ca(OH)_2$ as neutralising agent, the pptn. of gypsum occurs simultaneously, but its sepn. is the fact that gypsum is hardly dissolved in H_2SO_4 and remains as a solid in the conc. aluminum sulphate soln. when the ppte is treated with H_2SO_4. 5.8.75 as 079743 Div.ex 94756/75 (3pp34)

NIKS ★ D15 20853B/11 ★J5 4016-368

Deodorisation appts. for treating e.g. human waste - comprises three deodorisation towers packed with ion exchange resins and a tower packed with active carbon

NIPPON KASEI KK 06.07.77-JA-081331

A91 J01 (06.02.79) B01d-53/34 B01j-01/06

Deodorisation appts. comprises appropriately arranged three deodorisation towers each of which is packed with an ion-exchange resin (a porous high polymer having a hydrophilic functional gp., e.g., -COOH, $-NH_2$, $-SO_3H$, -OH, etc.). The first tower is designed to absorb basic odorous substances with an acid soln. supplied from the upper side. The second tower is designed to absorb acid odorous substances with an alkaline soln. supplied from the upper side The third tower is designed to effect adsorption capability of the ion-exchange resin packed without use of chemical solns. The second and third towers are functionally exchanged with each other at specified times during operation. The air passed through the three deodorisation towers is then passed through an activated carbon-packed tower.

The appts. can treat high concns. of offensive odours, e.g. NH_3, H_2S, mercaptan, etc. emitting from human wastes treatment facilities, etc. with high efficiency continuous operation while keeping the ion-exchange resin going at capacity-plus. 6.7.77 as 081331 (5pp117)

HITG ★ D15 20854B/11 ★J5 4016-369

Treating waste sulphuric acid - by mixing with alkali contg. powder e.g. burned coal ash, coagulation and solidification

BABCOCK-HITACHI KK 07.07.77-JA-080466

(06.02.79) C02c-05/02

Waste sulphuric acid is mixed with an alkali-containing powder, e.g. burned coal ash, etc. to form a slurry etc. while effecting neutralisation. The slurry etc. is subsequently introduced into a certain mixing reactor to bring it to coagulation and then solidification. The neutralisation reaction is rapidly brought about, and thus the reaction products are formed in a fine crystal state. The reaction products form double salts with latent hydraulic components contained in the alkali-containing powder, which lend themselves to the formation of good solidified granules. This method, also, is much more economical than the conventional methods. 7.7.77 as 080466 (3pp117)

FJIE ★ D15 20856B/11 ★J5 4016-372

Producing water by condensing atmospheric moisture - by cooling wet air to below dew point using refrigerator evaporator, and using cooled air for air conditioning or as condenser cooling air

FUJI ELECTRIC MFG KK 07.07.77-JA-081344

J08 Q42 (06.02.79) B01d-05 E03b-03/28

Process comprises cooling wet air to below the dew point by means of the evaporator of a refrigerator comprising a compressor, a condenser, and an expansion valve, and using the cooled air for air conditioning as cooling air for the condenser.

The need for large appts. e.g. sea water still, reverse osmosis appts., pipeline, etc. is obviated. Process is suitable for producing water in deserts. 7.7.77 as 081344 (3pp117)

HITG ★ D15 20859B/11 ★J5 4016-376

Waste water treatment tower - contg. activated charcoal layers sepd. by meshes to prevent mixing of fresh with spent charcoal

BABCOCK-HITACHI KK 07.07.77-JA-080461

J01 (06.02.79) B01d-15 C02c-05/02

Activated charcoal filling tower comprises an activated charcoal filling container having treating liquid inlet and outlet respectively in upper and lower parts. The filling container is vertically divided to ⩾ 2 blocks by meshes which are held by frames.

When the capacities of the activated charcoal contg. layers are reduced, the layers are reverse washed with treated water. 7.7.77 as 080461 (3pp35)

HITA ★ D15 20860B/11 ★J5 4016-377
Regeneration appts. for ammonium ion absorbent - includes absorbent chamber contg. a cation exchange membrane and an anion exchange membrane, and two electrode chambers
HITACHI KK 08.07.77-JA-081065
E36 J03 (06.02.79) B01d-15/04 B01j-01/09

Regenerating apparatus for absorbent which absorbs ammonium ions from domestic water, sewage, or waste water comprises an absorbent chamber composed of a space lying between a cation-exchange resin membrane and an anion-exchange resin membrane, two electrode chambers each of which have both a cathode and anode which are provided on the outside of each of the cation-exchange resin membrane and the anion-exchange resin membrane, and a water supply leading to each of the absorbent and the two electrode chamber. Pref. the absorbent used includes inorganic zeolite or organic cationic exchange resins.

Method is capable of not only regenerating the absorbent but also concentrates the ammonium ions to a high concn. in a short time, thus preventing occurrence of secondary pollution, and also performs regeneration with a very high efficiency because the by-produced hydrogen gas and oxygen gas, emitted during regeneration can constitute a fuel cell which serves as power source for applying voltage via the electrodes. 8. 7. 77 as 081065 (4pp117)

HITA ★ D15 20862B/11 ★J5 4016-380
Ultrafiltration appts. - prepd. by packing granular material of density greater than liq. to be filtered, in ultrafiltration membrane cylinder
HITACHI KK 08.07.77-JA-081060
J01 (06.02.79) B01d-13

Ultrafiltration appts. is prepd. by packing granules of density greater than the liq. to be filtered, in a cylinder of an ultrafiltration membrane.

Granulater material is pref. active carbon or ion exchange resin and removal of impurities by desalting, ion exchange and/or adsorption can be effected simultaneously. Reinforcement of the cylinder is not required. 8. 7. 77 as 081060 (2pp42)

KANF ★ D15 20863B/11 ★J5 4016-381
Ultrafiltration membrane prodn. - from di:chloro-di:phenyl sulphone and bisphenol using involatile solvent, poly:ol and/or water as solvent
KANEGAFUCHI CHEM KK 06.07.77-JA-081472
A97 J01 (06.02.79) B01d-13

An ultrafiltration-membrane (I) is produced using the condensation product (II) from dichlorodiphenyl sulphone and bisphenol, using a mixture of (i) hardly volatile solvent (III), being able to dissolve (II) well, (ii) polyaclohol (IV) of 2-4C and/or (iii) water (V), as solvent.

(III) is pref. $\geqslant$ 1 of m-cresol, chlorobenzene, N,N-dimethyl acetamide, N,N-dimethyl formamide, DMSO and others, and (IV) is $\geqslant$1 of ethylene glycol, propylene glycol glycerin, butane diol etc.

(I) produced has unsymmetrical structure, the skin-layer of which has uniform pores and high water-permeability. The production of (I) is easy. 6. 7. 77 as 081472 (4pp42)

SAIT/ ★ D15 20967B/11 ★J5 4016-840
Removing iron from water - by irradiating with UV and treating with manganese-zeolite
SAITO S 06.06.77-JA-066887
E31 (07.02.79) C02b-01/26

Fe content in water, e.g., service water, well water, etc. is effected by first irradiating water flowing at a flow rate of 50-5000 cc/sec with UV at wavelength 1000-3700 (2500-3700) Å, and then treating with a manganese-zeolite catalyst.

Fe is removed almost completely in a short time, i.e. within 5 min. when one ton of water is subjected to a mercury lamp (2537 Å) irradiation. 6. 6. 77 as 066887 (4pp117)

ASAH ★ D15 20968B/11 ★J5 4016-8
Treating waste water by activated sludge and electrolytic oxidn
the water contg. at least one of ammonium sulphate, phen
cyanogen, thio:cyanogen and organic nitrogen
ASAHI CHEMICAL IND KK 08.07.77-JA-081039
(07.02.79) C02c-01/02

The waste water is, after being treated with activated sludge, subjected to an electrolytic oxidn. at a voltage of 2 to 10 V and a current density of 1 to 100 A/dm^2 by means of platinum or graphite electrodes in the presence of a salt, e.g. chlorides of alkali(ne earth)metal.

The method is applicable to the treatment of the waste waters discharged from ammoxidation process, coke furnace ammonia water process, etc.

Specifically, the insol. electrodes include Pt, Pt-plat Ti, graphite, lead dioxide, etc. for anode and stainless steel, Al, Fe, Cu, Pt, Ti, graphite, Hg, etc. for catho 8. 7. 77 as 081039 (4pp117)

EBAI ★ D15 20969B/11 ★J5 4016-8
Coagulation of treated aq. organic waste sludge - by consecutiv treatment with bentonite and anionic or non-ionic high polym coagulant
EBARA INFILCO KK 07.07.77-JA-081442
A97 (07.02.79) C02c-03 C02c-05/02

The coagulating treatment is used for organic waste wate sludge, e.g. primary sedimentation sludge, excess activated sludge, or their mixture, which is discharged from organic waste water treatment plants, e.g., sewage trea ment plants, industrial effluents treatment plants, etc. The organic sludge is treated with bentonite added in an amt. 10-300 kg/t(SS) with stirring, and then the treated sludge is further treated with anionic high polymer coagulant or a nonionic high polymer coagulant, or a combina ion of them, in amt. 0.5-6 kg/t (SS).

The anionic high polymer surfactant includes sodium polyacrylate, partly hydrolysed polyacrylamide-maleic acid copolymer, etc., and the nonionic polymer includes polyacrylamide, polyoxyethylene, etc.

This method can be used for large quantities of treate waste sludge at lower cost and with higher efficiency, wi -out causing secondary pollution. High speed sedimentat is obtd. 7. 7. 77 as 081442 (6pp117)

EBAI ★ D15 20970B/11 ★J5 4016-8
Denitrification of aq. human waste - includes utilising part of t waste as an organic carbon source for the process
EBARA INFILCO KK 08.07.77-JA-081612
(07.02.79) C02c-01/02

An improved biological denitrification method for aq. hu -an waste contg. large quantities of ammonia nitrogen (NH_4-N) has been developed. Part of the aq. waste bein treated is deprived of its ammonia content by evaporatio and the ammonia is absorbed in water. The ammonia-a sorbed water is introduced into the digestion process. T remaining aq. waste deprived of ammonia is subjected t solid-liquid separation and then it is supplied to the deni rification process as an organic carbon source.

The removal of ammonia is carried out at pH $>$ 10 by the addition of $Ca(OH)_2$, etc. It does not require use of chemicals such as methanol, ethanol, acetic acid, etc. addition, air pollution due to ammonia is avoided. This process can be applied to activated sludge method, rota disc method, granular solid suspension method, etc. 8. 7. 77 as 081612 (4pp117)

SUMO ★ D15 20991B/11 ★J5 4017-
Analysis of ammonium ion in water - by adding formalin to wa sample, adding alkali and determining hexa:methylene:tetram produced
SUMITOMO CHEMICAL KK 07.07.77-JA-081832
E35 J04 R16 (08.02.79) G01n-31/08 G01n-33/18

The method comprises adding formalin liq. to a sample water contg. ammonium ion, making the liq. alkaline to convert the ammonium ion into hexamethylenetetramine and determining (I) by gas chromatography.

Ammonium ion of few ppm. to several thousand ppm. in water can be simply and rapidly determined. Blank t can be very simply carried out. 7. 7. 77 as 081832(3pp50

DAUC ★ D15 21049B/11 ★J5 4017-367

Dripping liq. from e.g. pasteuriser into water tank for flush toilets - without using moving components, such as valves

DAICHI PHARM KK 11.07.77-JA-082713
(08.02.79) B01j-04 C02c-05/02

A drip tank having a small hole through the bottom is disposed above the water tank. An upper space formed in an upper section of the tank filled with liq. such as pasteurising liq., until closed on the hole, is communicated with the liq. in the water tank through a pipe. Since the drip tank is closed, no liq. flows through the hole, so long as the water level in the pipe goes up. The liq. is dripped at a specified rate. 11. 7. 77 as 082713 (3pp26)

OTAN/ ★ D15 21053B/11 ★J5 4017-371

Forming hollow ice block e.g. for addn. to whisky - by cooling water to freezing temp. such that liq. closest to tank freezes first

OTANI T 11.07.77-JA-081997
(08.02.79) B01d-09/04 C02b-01/12

Prodn. of pure water from a raw liq. such as natural water, raw beer or raw wine, in the form of ice block to drink or for diluting whisky with respect to its alcohol content, is claimed.

The raw liq. contained in a freezer tank is cooled down to its freezing point so that the portion of the liq. contacting the tank is first frozen gradually up to a specified thickness toward the interior, thus forming an ice surface layer; impurities in the liq. are pptd. in the interior liq. not yet frozen. The impurities are drained through the ice layer. 11. 7. 77 as 081997 (4pp26)

BEND- ★ D15 B/11 ★J5 4017-381

Removal of ions from aq. soln. using separating film

BEND RES INC 27.03.78-US-890149 (20.06.77-US-808138)
(08.02.79)

16. 6. 78 as 073138

KAJI- ★ D15 21138B/11 ★J5 4018-151

Removing iron and manganese from water e.g. for paper mills - by contacting with a filter medium e.g. coral fossil limestone then passing through calcium carbonate filter

KAJIYAMA KANKYO GIJ (TAKI-) 08.07.77-JA-082456
F09 (09.02.79) C02b-01/26

The water is contacted with a filter medium, e.g. coral fossil limestone, etc. to adsorb and oxidise Fe and Mn, and then is passed through a filter medium composed mainly of $CaCO_3$ with growing iron-bacteria to completely oxidise the Fe and Mn while aeration. The water passed through the filter medium is discharged to the outside.

This method easily removes iron and manganese dissolved in water in the form of ferric carbonate and calcium salt-contg. precipitate of a high filterability by simple operation and cheap maintenance. Large quantities of water can be treated using small scale apparatus. This method is effective for the treatment of water for construction work, water to be used for agricultural purpose, or water for use in paper mill. 8. 7. 77 as 082456(5pp117)

TEIJ ★ D15 21139B/11 ★J5 4018-152

Treating agent for waste water contg. emulsified oil - comprises a metal (hydr)oxide and a higher hydrocarbon gp.-contg. amine which is solid at ambient temp.

TEIJIN KK 12.07.77-JA-082492
J01 (09.02.79) B01d-15 C02c-05/02

A treating agent esp. for waste water contg. nonionic surfactant-emulsified oil, is a composite comprising an (in) organic support material, e.g. fibre, clay, etc. and a mixt. of a 6-60C-hydrocarbon group-contg. amine cpd. and/or its derivative (I) and metal oxide and/or metal hydroxide (II). Molar ratio of (I) : (II) is 0.01-0.5 : 1.

The agent is particularly suited to treat and separate emulsified mineral and animal oil, e.g., compressor drain, cutting oil-contg. waste water, rolled steel plate washing waste water, car washing waste water, etc., exhibiting the power to reduce the oil content to less than the effluent standard level simply by passing water to be treated through a column packed with the agent. 12. 7 77 as 082492 (7pp117)

NITT D15 15837X/09 =J7 9002-914

Treating waste liquor contg. organic cpds. and ammonium sulphate - by wet oxidn. of organic cpds. and crystallisation of ammonium sulphate

NITTO CHEM IND KK 04.07.74-JA-075800
*A41 C04 E16 (E35) (15.02.79) *J51005-267 C02c-05/04*

Process for treatment of waste liquor contg. organic substances and ammonium sulphate (e.g. waste liquors from acrylonitrile mfg. process based upon ammoxidation of propylene, or from acrylamide mfg. process wherein acrylonitrile is hydrolysed in the presence of sulphuric acid) comprises (a) wet oxidation of the organic substances and (b) separation of ammonium sulphate by crystallisation. The waste liquor contg. organic substances and ammonium sulphate is treated with air or oxygen-contg. gas at high temp. and pressure under which the system is maintained in liq. state, to convert the organic substances to gaseous products by oxidation. The treated liquor is then evaporated to separate ammonium sulphate by crystallisation. After the the sepn. of ammonium sulphate, the mother liquor is recycled to the wet-oxidation process. In the wet-oxidation process conversion of the organic substances must be 75%.

Process allows a closed-system treatment of ammonium sulphate waste liquor, by which substantially 100% of NH_4SO_4 is recovered as a high-quality product. In contrast to dry burning process, this process does not cause generation of NO_X and/or SO_X. 4. 7. 74 as 075800 C02c-5/04 (15. 2. 79) NITTO CHEM IND KK (6pp) (J5 1005267)

CHIY D15 37402X/20 =J7 9002-915

Continuous countercurrent fluidised bed - with inverted cone shaped pipes below the trays for periodically transferring solid

CHIYODA KAKO KENSET 26.10.74-JA-123028
*J04 (15.02.79) *NL7512-429 B01j-08/08*

A fluidised bed contactor has one or more trays each of which has a number of openings connected to truncated cones pointing downwards. Used for countercurrent contact of aqs. effluent with activated charcoal or gas solid contacting.

All the surface of the solid is in contact with fluid. The solid residence time is fixed and no short circuiting of solid occurs. No deadspots occur where solid settles. The height of each bed can be chosen and is not dependent on the height of a downcomer. Agglomerates of solid do not remain on the trays and are broken up as they fall to the next tray. 26. 10. 74 as 123028 B01j-8/08 (15. 2. 79) CHIYODA KAKO KENSET (5pp) (J5 1049174)

KINK- D15 87716X/47 =J7 9002-985

Treating sea water contaminated with mercury - for simultaneous removal of mercury and calcium pptfg. agent

KINKAI KAISUI KOGYO 31.03.75-JA-037911
*E32 (16.02.79) *J51113-353 C02b-01/23 +C02c-05/02*

Sea water contaminated with Hg is treated with agent (pptd as $CaCO_3$) and Na_2S (or NaHS) or a mixt. to form a ppt. The amt. of the Na_2S (or NaHS) added is pref. an equiv. on the Hg contained. Formation of the pptn. is accelerated under elevated temp., pref. 50-80°C, esp. 65-65°C. 31. 3. 75 as 037911 C02b-1/23, C02c-5/02 (16. 2. 79) KINKAI KAISUI KOGYO (2pp) .(J5 1113353)

TAKG D15 18763Y/11 =J7 9002-987

Water-purifying agent esp. for fluorine and phosphoric acid removal - consists of ppte. obtd. by decomposing urea in the presence of aluminium and sulphate ions

TAKI CHEMICAL KK 21.07.75-JA-089452
*(16.02.79) *J52012-753 C02b-01/14 C02c-05/02 +B01d-15*

Pref. a soln. of (basic) $Al_2(SO_4)_3$ is used as the soln. contg Al ion and SO_4 ion, or a mixt. of an Al salt (e.g. (basic) Al_2Cl_6 and $Al(NO_3)_3$ etc.) and H_2SO_4 or a sulphate (e.g. Na_2SO_4, $(NH_4)_2SO_4$, K_2SO_4 and $MgSO_4$, etc.).

The purifying agent exhibits excellent effect when the pH of the water to be treated is 5-9. It is also suitable for treatment of water contg. inorganic anions, a heavy metal ions and an organic acids, etc. 21. 7. 75 as 089452 C02b-1/14, B01d-15/00, C02c-5/02 (16. 2. 79) TAKI CHEMICAL KK (4pp) (J5 2012753)

MATU ★ D15 21151B/11 ★J7 9002-988
Drinking water sterilisation - using silver or silver chloride together with chlorhexidine
MATSUSHITA ELEC IND KK 12.07.74-JA-080381
(16.02.79) C02b-03

Drinking water is effectively sterilised with high certainty in a water-purifying appts. by using a sterilising agent comprising Ag or AgCl, in combination with chlorhexidine, the amt. of which is 200-10 ppm when water is not passed. 12. 7. 74 as 080381 C02b-3/00 (16. 2. 79) MATSUSHITA ELEC IND KK (2pp34) (J5 1008751)

HITK D15 35527Y/20 =J7 9002-989
Barium ferrite treating agent for waste water - does not give an excess of barium ions in the water and generates no sec. pollution
HITACHI METAL KK 08.10.75-JA-120589
*(16.02.79) *J52045-154 C02c-05/02 +B01d-15 C02b-01/14*

The agent is composed mainly of a ferrite of formula $BaO.nFe_2O_3$ (where n is not specified). The agent may be used in form of granules, powder or pellets. 8. 10. 75 as 120589 C02c-5/02, C02b-1/14, B01d-15/00 (16. 2. 79) HITACHI METAL KK (2pp) (J5 2045154)

HASH/ D15 38625X/21 =J7 9002-990
Heavy metals removal from waste water - by passing through a layer of carbonaceous matl and a carbonate to ppt metals as hydroxide
HASHIMOTO S 01.10.74-JA-113054
*J01 (16.02.79) *J51039-960 C02c-05/02*

The acidic heavy metals-contg. waste water is passed through a layer of a carbonaceous material, such as a coal and an activated charcoal etc., and a carbonate, such as $CaCO_3$, $MgCO_3$, the amt. of which is 1-80%, so that its pH becomes neutral to weakly alkaline and the heavy metal components are pptd. as hydroxide, the ppt. being kept in the inner part of the layer.

The process is applicable to acidic waste water contg. e.g. Cr, Zn, Cu, Ni, Pb and Fe in ions form. The pH of the waste water is adjusted to the neutral range only by passing through the layer without use of an alkali. 1. 10. 74 as 113054 C02c-5/02 (16. 2. 79) HASHIMOTO, S (2pp) (J5 1039960)

SNLE D15 64111X/34 =J7 9002-991
Treatment of waste water contg. heavy metals - by aeration and pptn. following addn. of thioglycollate
STANLEY ELEC KK 28.00.75-JA-000236
*(16.02.79) *J51078-064 C02c-05/02*

The waste water contg. the thioglycolate and the heavy metal salt (such as Zn, Cd, Cu, Pb, Hg, Fe, Co, Mn) is aerated under neutral or alkaline conditions to form a ppte. which is separated (e.g. by adjusting pH 7-11, cohesion pptn. and flotation). The process is economical and the appts. simple. The liquor following pptn., is decolourised and purified to avoid environmental pollution. 28. 00. 75 as 000236 C02c-5/02 (16. 2. 79) STANLEY ELEC CO LTD (2pp) (J5 1078064)

SANN D15 76704X/41 =J7 9002-992
Treatment of waste water contg. cationic polymer coagulant - using anionic surfactant to form aq insoluble cpd
SANYO KK 24.02.75-JA-023192
*A35 E19 (16.02.79) *J51097-254 C02c-05/02 +B01d-21/**

The waste water contg. 0.01-100 ppm. of a cationic polymeric coagulant is treated by adding an anionic surfactant which forms a water-insoluble cpd. with the coagulant. The anionic surfactants are, for example, salt of carboxylic acid, ester of higher carboxylic, etc., and sulphuric acids higher alkylether-ester salt, and alkylbenzene sulphonate, etc. It is possible to rapidly render harmless waste water contg. a very small amt. of coagulants so as to lower its toxicity esp. for fishes. 24. 2. 75 as 023192 B01d-21/01 C02c-5/02 (16. 2. 79) SANYO CHEM IND KK (5pp) (J5 1097254)

YAHI/ D15 87720X/47 =J7 9002-993
Chromium sepn. from waste liquor - by adding calcium polysulphide, which decomposes to ppte. the chromium component
YAHIKOZAWA K 31.03.75-JA-039563
*E31 (16.02.79) *J51113-357 C02b-01/23 C02c-05/02*

The Cr-contg. waste liquor is subjected to a treatment involving adding a Ca polysulphide which decomposes to form nascant S, Ca thiosulphate, H_2S and $Ca(OH)_2$, by the action of which to reduce and hydrolyse the Cr componen which is adsorption and cohesion pptd. Cr hydroxide res -ts on the action of a decompsn. prod. of the Ca polysulphide, and at the same time the Cr component suffers ad adsorption and cohesion pptn. by the action of the nascen S and the Ca salt, thereby its removal becomes easy. It i not necessary to carry out pH control of the treated liquo 31. 3. 75 as 039563 C02c-5/02, C02b-1/23 (16. 2. 79) YAHIKOZAWA, K (4pp) (J5 1113357)

CENG D15 10007Y/06 =J7 9002-99
Turbid industrial waste water clarification - by adding anioni sodium polyacrylate, partially hydrolysed anionic poly.acrylamid and polyaluminium chloride
CENTRAL GLASS KK 16.06.75-JA-072055
*A97 (16.02.79) *J51148-967 B01d-21/* C02c-05/02*

Turbid industrial waste waters contg. inorganics such as clays, silica sand and gypsum, etc. are treated to ppte. the suspended inorganics and accelerate its clarification. The improvement comprises adding in succession an org -ic cohesion agent e.g. anionic sodium polyacrylate and partially hydrolysed anionic polyacrylamide etc., an inorganic cohesion agent e.g. poly aluminium chloride.

This process is used for almost all of suspended liquor contg. solid granules. The suspended liquors referred to are those from waterworks, sewerage, mining, metal-processing, chemical plant, ceramics, plant and engineering work, etc., but the present process is esp. applicable for an inorganic matter-contg. waste water resulting from a pottery plant, ceramics plant, quarries, mining, engine ering work, pigment plant and paper-producing plant, etc. 16. 6. 75 as 072055 C02c-5/02, B01d-21/01 (16. 2. 79) CENTRAL GLASS KK (6pp) (J5 1148967)

HITA D15 24298Y/14 =J7 9002-995
Waste water treatment contg. fluoride ion - by adjusting pH with calcium hydroxide, adding calcium chloride and neutralising with sodium hydroxide
HITACHI KK 15.08.75-JA-098602
*(16.02.79) *J52023-851 C02c-05/02*

Method comprises adding $Ca(OH)_2$ to adjust the pH to 3.5-5% adding 0.5 to one equiv. of $CaCl_2$ as Ca ion based on th amt. of fluoride ion; and neutralising the water with an aq. NaOH soln. to form a fluoride and a hydroxide, followed b sepn. by settling or filtration.

The water is treated to a lower cost, (2/3 of that in a conventional arc) and in lower sludge amt., (<1/2 than that in the conventional art). 15. 8. 75 as 098692 C02c-5/02 (16. 2. 79) HITACHI KK (2pp) (J5 2023851)

NISH- D15 30158Y/17 =J7 9002-996
Waste water cleaning agent - comprising aluminium surface dross formed by purificn. of aluminium melting
NIPPON SHORYOKUKI 17.09.75-JA-112851
*M25 (16.02.79) *J52035-768 C02c-05/02*

An aq. cleaning agent is formed by adding 0.1-8% of calcium fluoride and magnesium chloride to crude Al, heating the mixt. to 700-1000°C to melt the Al and to float dross on the upper face, cooling the dross, and pulverising the latter to 50-320 mesh. The dross is impurities consisting of Al 28-54%, Al_2O_3 69-41% and Cu, Cr, Pb, Fe, Ca, Mg and chlorides in certain amts.

The cleaning agent is active in aq. soln. and is effective in cleaning pulp exhaust water, dye waste water and suspended oil-water. The agents used can be regenerated by heating. 17. 9. 75 as 112851 C02c-5/02, B01d-15/00 (16. 2. 79) NIPPON SHORYOKUKI (2pp) (J5 2035768)

HIEJ D15 33513Y/19 =J7 9002-997
Purification of waste water contg. soluble salts and heavy metals - by neutralising, desalting, acidifying and then oxidising
HITACHI PLANT ENG CONST (HITJ) 25.09.75-JA-116039
*(16.02.79) *J52039-965 C02c-05*

Waste water contg. soluble salts, reductive polluting matters and heavy metals, discharged from a combustion gas and waste gas-desulphurisation appts. and an industrial wastes incineration station etc., is

This is carried out by adjusting its pH to 7 by use of a mineral acid or an alkali metter if necessary followed by removal of the suspended matters. It is then aubjected to a desalting treatment to remove the soluble-salts and heavy metals. Its pH is adjusted to 2-6; and then subjected to oxidn.

It is essneital to remove a large amt. of the soluble salts etc. from the waste water by the desalting treatment prior to subjecting it to oxidn. 25.9.75 as 116039 C02c-5/00 (16.2.79) HITACHI PLANT & ENG (3pp) (J5 2039965)

TOYJ D15 53286Y/30 = J7 9002-998

Removing iron from acid-washed waste water - contg. ferrous ions and sulphuric acid, by adding magnesium oxide or hydroxide and contacting with air

TOYO SODA KK 07.11.75-JA-133016
*M12 (16.02.79) *J52071-858 C02c-05/04 +C01g-49/02*

An acid-washed waste water contg. ferrous ions and H_2SO_4 e.g. produced in a metal article-producing factory, a steel-pickling treatment, and a pre-plating treatment etc. is subjected to a treatment by adding MgO or $Mg(OH)_2$, and contacting with air (e.g. vigorous agitation or aeration etc) while maintaining its pH at 4.5-7 to form rapidly an iron ppte. (a sludge) followed by sepn. thereof. A clarified treated water hardly contg. iron component obtd. having a decreased vol. ($^1/_4$-$^1/7$ that obtd. according to conventional art) of the sludge.

The iron ppte. is ppted. within a short period to form a solids having small vol., and easily dehydrated. The dehydrated iron ppte. is suitable for use in land reclamation etc. 7.11.75 as 133016 C02c-5/04, C01g-49/02 (16.2.79) TOYO SODA KK (4pp) (J5 2071858)

ASAG D15 31953Y/18 = J7 9003-035

Reducing brine turbidity - using small amt. of coagulating agent to prevent clogging of sand filter bed

ASAHI GLASS KK 23.09.75-JA-114336
*(16.02.79) *J52038-466 B01d-21/* +C01d-03/14*

Method of cleaning brine precisely contg. floating suspended matter comprises passing brine contg. floating suspen-ded matter in amt. < 5ppm. in turbidity through a sand filter bed in the presence of coagulating agent in amt. in-insufficient to form flock, and thus clean the brine to <0.1 ppm in turbidity.

When the turbidity of brine is <5ppm, it is pref. lowered to <5ppm., esp. 0.2-2 ppm., by other suitable filtering means. Rise in pressure loss is small and continuous operation of sand filter bed is possible with easy maintenance. 23.9.75 as 114336 B01d-21/01, C01d-3/14 (16.2.79) ASHAI GLASS KK (4pp) (J5 2038466)

KUBI D15 44476Y/25 = J7 9003-036

Wet-type waste gas-treating water neutraliser - including addn. of caustic soda to water reservoir with desulphurising slag

KUBOTA KK 07.11.75-JA-134329
*(16.02.79) *J52058-069 +B01d-53/34 C02c-05/02*

Device contains a spray nozzle for the treatment of water. A large number of throttle passages for the waste gas are disposed below the spray nozzles. Other spray nozzles are in the throttle passage.

The water reservoir is beneath the main body of device, and a mixer is provided to mix the acidic water with a neutralising agent such as caustic soda and desulphurising slag by turning rotary blades coupled with a drive motor. 7.11.75 as 134329 C02c-5/02, B01d-53/34 (16.2.79) KUBOTA, KK (2pp26) (J5 2058069)

GOLD D15 47888W/29 = J7 9003-037

Salts recovery from spent salt hardening baths - by treating combustion prods of nitrate -nitrite and cyanide-cyanate wastes

GOLDSCHMIDT TH AG 04.01.74-DT-400318
*E37 M13 P35 (16.02.79) *DT2400-318 +B01j-01 C02c-05/02*

The prod. formed by combustion of dry nitrate-nitrite and cyanide-cyabate wastes formed in Ba removal, is converted into an aq. alkaline suspension, which is either (a) neutralised with concd. HNO_3 to pH 6, keeping the acid feed and agitation of the soln. under such control that soln. remains above pH 6 at all times.

The suspension is then filtered to remove Ba carbonate filtration and neutralising the filtrate with concd. HNO_3 to pH 7.2, keeping the acid feed and agitation under such control such that pH 7.2 is maintained. The Na carbonate hydrogen ppte. is then extra-cted. The clear soln. from either (a) or (b) is concd. to 10-20 wt.% H_2O. NaCl is sepd. at 70-100°C and the residual soln. concnd. by evapn. 27.12.74 as 003015 (clg. 4.1.74-DT-400318) B01j-1/00, C02c-5/02 (16.2.79) GOLDSCHMIDT TH AG (3pp) (J5 0101277)

GOLD D15 47889W/29 = J7 9003-038

Working up waste hardening bath salts - by pptg. carbonate ions with barium or calcium ions and isolating remaining sodium chloride

GOLDSCHMIDT TH AG 04.01.74-DT-400319
*E37 M13 P35 (16.02.79) *DT2400-319 +B01j-01 C02c-05/02*

A reaction mass obtd. from nitrate/nitrite and cyanide/cyanate wastes contg. Ba by ignition is suspended in water and either (a) treated with an aq. barium salt soln. in a quantity selected w.r.t. carbonate ion concn. to ppt. $BaCO_3$ which is separated off or (b) filtered to remove $BaCO_3$ and a water-soluble calcium salt added to ppt. $CaCO_3$ which is separated from the soln. The clear soln. resulting from (a) or (b) is concd. to 15-20% water content to crystallise out NaCl which is removed. The remaining soln. is evaporated to dryness.

The water soluble salts used is pref. $Ba(NO_3)_2$ or $Ca(NO_3)_2$ and the NaCl separation pref. takes place at 70-100°C. The evaporated residue consists of alkali metal nitrates/nitrites which may be reused as hardening bath salts; c.f. prior art in which the soln. resulting from dissolving the reaction mass was neutralised with sulphuric acid which formed alkali metal sulphates which were lost when discharged as effluent. 27.12.74 as 003016 (clg. 4.1.74-DT-400319) B01j-1/00, C02c-5/02 (16.2.79) GOLDSCHMIDT TH AG (3pp) (J5 0101278)

TOSY D15 62113Y/35 = J7 9003-073

Treating waste emulsion to obtain clear liquid - by adding activated carbon and filtering through medium having fine pore size

TOSHIN SCIENCE KK (NIRA) 13.01.76-JA-003564
*(17.02.79) *J52086-971 C02c-05/02 +B01d-15*

A predetermined amt. of (fine) powdery activated carbon is mixed with the waste liq. The mixt. is stirred to adsorb dispersing agent existing at the surface of each fine particle or emulsion. Thus dispersed particles are agglomerated around the active carbon fine grains and filtered through a medium having very fine pores to produce a clear liq.

The stirrer is disposed in a reservoir of the waste emulsified liq., and the bottom of the reservoir is connected to the filter pipe through a circulating pump. The filter pipe contains a porous filter medium support and filter medium itself, which is made of an ultrafiltration membrane such as polymer membrane. 13.1.76 as 003564 C02c-5/02, B01d-15/00 (17.2.79) TOSHIN SCIENCE KK (4pp) (J5 2086971)

HITA D15 67602Y/38 = J7 9003-074

Powdering radioactive liq. waste - by adding powdered resin to waste from ion exchange resin regeneration plant

HITACHI KK 06.02.76-JA-011408
*K07 (17.02.79) *J52094-866 C02c-05 +G21f-09/04*

In a method for powdered waste liq. in a centrifugal thin film evaporator, insoluble material is added to the waste liq. when the latter is fed into the evaporator.

Radioactive waste liq. contg. ca. 25 wt.% of Na_2SO_4 from a regeneration plant for ion-exchange resin used in an atomic power plant is evaporated to obtain powdered Na_2SO_4, which is then pelleted in a press. To obtain uniform powder facilitating following pressing operation and to prevent deposition of scale on innner surface of the evaporator, insoluble material (e.g. powdered resin) is added to the waste liq. directly or in the evaporator. 6.2.76 as 011408 C02c-5/00, G21f-9/04 (17.2.79) HITACHI KK (4pp46) (J5 2094866)

SITR D15 69630X/37 = J7 9003-07

Water desalting process

SOC ITALIANA RESINE SPA 20.12.74-IT-030811
*(17.02.79) *J51087-170 B01d-01/28*

In the desalination of water, two-stage evaporation processes are used, pressure and temp. in the second stag being lower than the first stage. Evaporation in one stage is conducted using condensation heat of vapour generated from the other stage. Starting salt water flows down in the inner surface of vertical evaporation vessel.

The vapour and the remaining salt water are collected at the outlet and introduced into the other vessel, and condensed vapour in each stage is collected. 19. 12. 75 as 150715 (clg. 20. 12. 74-IT-030811) B01d-1/28 (17. 2. 79) SOC ITALIANA RESINE SPA (8pp) (J5 1087170)

IIDA/ D15 05026A/03 = J7 9003-077

Desalination plant using solar energy - in which separate evaporation units are linked by pumps and each is independently powered by a solar energy collector

IIDA T 24.05.76-JA-059892

*(17.02.79) *J52142-673 B01d-03 C02b-01/06*

Plant comprises evaporators with solar energy collectors; a pump for feeding brine to the first evaporator, and a reservoir for storing the resulting pure water. Each evaporator comprises a casing, a heat-exchanger and vapour trap each inlet of the collector being connected via an outlet in the casing to the next evaporator.

Brine is firstly circulated to the third evaporator by a pump to heat it to 94°C. Then the heated brine is fed to the first and second evaporators so that fresh brine is evaporated to give pure water in the trough. 24. 5. 76 as 059892 C02b-1/06, B01d-3/00 (17. 2. 79) IIDA, T (10pp) (J5 2142673)

SAIK/ D15 10939A/06 = J7 9003-078

Water distilling device using solar energy - including evaporating chamber, slanting condensing plate and convex lenses

SAI K 16.06.76-JA-070481

*(17.02.79) *J52153-874 B01d-03 + C02b-01/04*

In the device a cooling, condensing plate having a serrated transparent surface is fitted over the cross-sectional area of a water reservoir container having an opening at the upper end. Thus an evaporating chamber is formed upon the water reservoir. Water collecting pipes are vertically erected below the water condensing slanting walls of the cooling, condensing plate. A large number of convex lenses are fitted at the top surface of the cooling, condensing plate.

The device operates using solar energy instead of electric power or fire power. 16. 6. 76 as 070481 C02b-1/04 B01d-3/00 (17. 2. 79) SAI, K (5pp15) (J5 2153874)

KAWJ ★ D15 21160B/11 ★J7 9003-079

Plain water prodn. from sea water - using multistage flash evaporator

KAWASAKI HEAVY IND KK 00.00.75-JA-153654 (08.07.71-JA-050916)

(17.02.79) B01d-03/06

The multistage flash evaporator comprises brine effect evaporators and sea water effect evaporators alternately arranged in series. The raw sea water is fed into condensers disposed in the sea water effect evaporators from the low temp. side, into a heater, and then into the brine effect evaporators. 8. 7. 71 as 153654/75 Div ex 50916/71 B01d-3/06 (17. 2. 79) KAWASAKI HEAVY IND KK (4pp26) (J5 1101786)

JAOR ★ D15 21163B/11 ★J7 9003-141

Treating waste soln. from chromium plating - using hydrogen-type strongly acidic cation exchange resin and hydroxide-type weakly basic anion exchange resin in initial treatment

JAPAN ORGANO KK 27.03.71-JA-017741

A91 J01 M11 (19.02.79) C02c-05/08 C25d-03/04 C25d-21/22

Treatment of waste soln. which is exhausted from cleaning a Cr electroplating bath using a dimineralised water comprises (1) feeding waste soln. to a H-type strongly acidic cation exchange resin layer and an OH type weakly basic anion exchange resin layer to recover dimineralised water from the waste soln.; (2) removing chromic acid from the OH type anion exchange resin layer with NaOH soln., and (3) feeding soln. contg. chromic acid ions to a H type weakly acidic cation exchanger resin layer and H type strongly acidic cation exchange resin layer so as to recover free chromic acid soln. 27. 3. 71 as 017741 C25d-21/22 3/04, C02c-5/08 (19. 2. 79) JAPAN ORGANO KK (5pp13 (J4 7033731)

SHIK- D15 58457Y/33 = J7 9003-

Regeneration of polyvinyl alcohol absorption liq. - by addn. o borate and a salt and sepg. the pptd. PVA

SHIKISHIMA SPINNING 24.12.75-JA-155613

*A35 (A14) (21.02.79) *J52079-568 C02c-05/02 + C08l-29/04*

Process comprises adding to a polyvinyl alcohol-contg. soln. a borate, e.g. $Na_2B_4O_7 . 10H_2O$, $NaBO_2$ and ortho b ate etc. and an inorganic acid salt of a Gp. (I) or (II) me ammonia or Al to ppte. the PVA. The PVA is sepd. and mother liquor thus obtd. is re-used as a polyvinyl alcoh dissolving soln. PVA is very soluble in the acidic mothe liquor. 24. 12. 75 as 155613 C02c-5/02, C08l-29/04 (21. 2. 79) SHIKISHIMA SPINNING (4pp) (J5 2079568)

MUNT ★ D15 21212B/11 ★NL 7808-

Spray device for distribution of liquid over a treatment bed - w horizontal spray pattern minimising overhead clearance required

MUNTERS C AB 31.08.77-SW-009810

J08 Q78 + P42 (02.03.79) B05b-01/26 C02c-01/04 F28f-25

Water is distributed over a horizontal treatment plane s as the upper surface of a bio-filler bed or a cooling towe by means of a spraying system. The system contains a series of horizontal distribution branches equipped with individual spray components. Each spray component con sists of inverted cones placed vertically over the outlet hole in the feeder branch such that the water issuing und pressure from the hole strikes the underside of the cone and is diverted horizontally in the form of a fine spray. the preferred form, the underside of the zone is equippe with stubs which break the flow of water to achieve a goo horizontal distribution pattern. The cone is pref. mounte on a vertical stem which passes through the hole in the -tribution branch and is anchored to the lower inside wal of the pipe.

The system enables the pipework to be laid in the filt bed or cooling tower structure and, since the spray is h -zontal, minimal clearance is required for the spray hea above the structure. Investment and pumping costs are therefore minimised. 31. 8. 78 as 008974 (11pp1370)

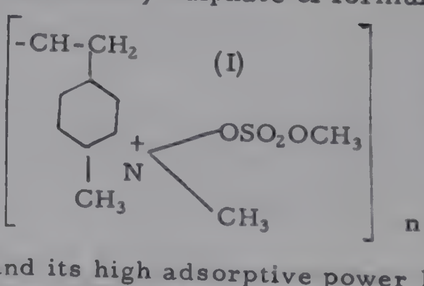
VLPO= ★ D15 21390B/11 ★SU -603-

Petroleum processing waste prods. removal from waste water using aq. soln. of poly-di:methyl-vinyl pyridinium-methyl-sulpha as flocculating agent

VOLG POLY 03.05.76-SU-354975

A97 J01 (05.04.78) C02c-05/02

More effective removal of petroleum products from wast water is based on using poly-1,2,-dimethyl-5-vinylpyrid iniummethylsulphate of formula (I): as flocculant. (I) supplements coagulant additives and is added as aq. soln. of concn. 0.05-1 wt.%. The proposed purificn. is carried out at 20-85°C.



The coagulant is added first to form primary sediment. (I) is then added and its high adsorptive power links up the prepd. aggregates. The waste water may contain 40-400 mg/l of impurity,(e.g. hydrocarbon pyrolysis prods., coke, carbon black etc.)

No B.I., Ushchenko V.P., Yurin V.P. et al. Bul. 15/ 25. 4. 78 3. 5. 76 as 354975 (3pp114)

VIME= ★ D15 21452B/11 ★SU -603-70

Electrolytic cell for product separation from electrolyte - wit adjustable-angle paddles near electrolyte surface increasing risin rate of hydrogen bubbles

VILIN MECHAN AUTOM 04.01.77-SU-437004

E31 J03 (03.04.78) C02c-05/12 C25b-09

The electrolytic cell is partic. suitable for the prodn. of iron hydroxide, used as coagulant in water purifcn. Normally difficult sepn. of prod. from the electrolyte, is facilitated by paddles located near liquid surface. A particular paddle angle sets optimum rising rate of hydrogen bubbles, which maximises product flotation. Product

removal is possible only with the paddles forming an incline towards the outlet.
Budilovskii Yu. Ya., Ryskin S. Ya., Lautsevichutie Ya. I., et al. Bul. 15/25.4.78 4.1.77 as 437004 (2pp1403)

MODU- ★ D15 21518B/11 ★US 4107-795
Self contained toilet station - with excess treated effluent used to condition incoming ventilation air
MODULAR CONCEPTUAL 18.08.75-US-605285
*Q17 Q42 (22.08.78) B01d-01/16 B60r-15/04 E03d-05/**

A toilet station is divided into separate toilet compartments. Each toilet breaks down waste and paper to provide a relatively clean effluent which is discharged into a flush tank.

A control device determines when excess effluent is present in the flush tank. A valve is responsive to this control to direct a flow of the excess effluent to an evaporator where it is filtered and aerated during evapn. Pref. the evapd. liq. is used as a heat exchange medium for conditioning atmospheric air which is discharged through a duct into the toilet compartments.

The toilet station may be used at parks, campsite or playgrounds. The toilets require no connection to water or sewage lines. The toilet compartments may be heated or cooled by ducted air. 18.8.75 as 605285 (7pp295).

REVR ★ D15 21599B/11 ★US 4108-596
Chromium recovery from acid waste soln. - by pptn. with magnesium oxide or hydroxide in presence of sulphate ion
REVERE COPPER BRASS INC 18.04.77-US-788583 (11.07.75-US-595147)
E31 F06 M25 (F09) (22.08.78) C01g-37 C14c-03/06

Cr values are recovered from aq. soln. by contacting an acidic soln. of pH ⩽ 4 and contg. SO_4^{2-} and Cr^{3+} (at 0.1-20 Cr/l concn.) with magnesium (hydr)oxide in an amt. of ⩾4 molar equivs. per 3 molar equivs. of Cr^{3+} in addn. to that required to adjust the pH to about 4, in order to form an amorphous solid, grainy, easily settleable Cr-contg. ppte. and a soln. having a final pH of 7-10. The ppte. is sepd. from the soln. at 15-48°C.

The process can be used to treat waste solns. from e.g. chromium plating, wood preserving, tanning, textile dyeing, pigmenting and mordant operations. When a 4 molar equiv. excess of Mg cpd. (per 3 molar equivs. of Cr^{3+}) is used, a Mg-free ppte. is obtd. which can be ignited (e.g. at 800-1300°C) to form pigment-quality CR_2O_3, dissolved in inorganic acids for use e.g. in tanning processes, or dried or ignited and fused with alkali metal carbonate to form a mixt. of alkali metal chromate and dichromate useful e.g. as an anti-corrosion agent.

When a greater excess of Mg cpd. is used, the ppte. can be dissolved in acids for industrial use or ignited to form a chrome-magnesite compsn. useful in the brick and ceramic industries. 18.4.77 as 788583 (5pp935).

USNA ★ D15 21605B/11 ★US 4108-604
Detecting tri:nitrotoluene in effluent water - by passing over ion-exchange resin opt. coated with fluorescent dye
US SEC OF NAVY 18.07.77-US-816225
A89 K04 K14 R16 (22.08.78) G01n-21/06 G01n-33/18

The presence of trinitrotoluene (I) in water is detected by passing a water sample over an ion-exchange resin coated with a fluorescent dye and observing whether the fluorescence of the dye changes. Specified dyes are rhodamine-B and fluorescein and the resin pref. contains quat. ammonium gps. Alternatively the sample is flowed over a film of resin which changes colour when it reacts with (I) and observing if the colour changes.

Used for monitoring effluent water quality from ammunition depots. The method avoids complicated extraction or concentration procedures and can be made quantitative by measuring the degree of change in fluorescence or of darkening. 18.7.77 as 816225 (3pp1251).

PURD ★ D15 21647B/11 ★US 4108-718
Vapour filtration system for recovering impurities in water - uses pressure differential to pull water vapour through thin film filter
PURDUE RESEARCH FOUNDATI 27.01.76-US-652831
J01 (22.08.78) B01d-01

Vapour filtration system for recovering dissolved materials from water comprises a container for the water and a thin film filter held against the container by a spring-biased clamp so that one side is in contact with the water in the container. The filter passes water vapour but blocks passage of water and solids.

A vacuum pumping system establishes a pressure differential on the side of the filter not in contact with the water. This causes the water in contact with the filter to change to water vapour which passes through the filter with dissolved solids being solidified and retained on the filter.

More than 95% of impurities are recovered. 27.1.76 as 652831 (4pp67).

MILE D15 50714Y/29 =US 4108-727
Test material for determining density or osmolarity - comprising microcapsules contg. dye
MILES LABORATORIES INC 23.08.76-US-716962
*A97 B04 J04 R16 (A88 A89 D16) (22.08.78) *DT2700-297 G01n-31/14*

The specific gravity or osmolarity of a liq. contg. a nonionic, ionisable solute is determined by contacting the liq. with an ionising agent capable of ionising the solute, and a test device capable, upon contact with a liq. contg. the solute in ionised form, of producing a detectable response which is a function of the specific gravity or osmolarity of the liq.. The specific gravity or osmolarity of the liq. is subsequently determined by detecting the response produced by the test device.

The nonionised solute is e.g. urea or glucose and the method is useful in brewing, urinalysis, water purification, etc.. 23.4.76 as 716962 (8pp910).

ORON- D15 34542W/21 =US 4108-756
Vertical electrolytic cell battery for water sterilisation - for drinking water, bathing pools, preventing clogging by insoluble matter
ORONZIO DE NORA IMP 30.10.73-IT-030709
*J03 (22.08.78) *DT2451-629 C25b-11*

A bipolar element for vertical electrolyser comprises an electrically non-conductive, electrolyte inert divider element and a series of bipolar electrodes passing through the divider element in an evenly distributed manner over the cross section of the divider element.

Anode and cathode portions extend at the same distance fromthe horizontal surfaces of the divider element and the electrolyte is permitted to flow upwardly therethrough. Pref. the bipolar electrodes are in the form of rods. 26.11.76 as 745403 Div. ex. 4032426 (+ 15.10.74 - US - 514762) (-pp1363).

ICIL D15 86609Y/49 =US 4108-76
Aerobic biological purificn. of polluted effluent - by dissolvin oxygen at progressively increasing liq. pressure
IMPERIAL CHEM INDS LTD 08.06.76-GB-023604
*(22.08.78) *BE-855-386 B01f-03/04 C02c-01/08*

Appts. for treating liq. sewage or effluent with O_2-contg. gas comprises a first tubular, compression, coil and a second, decompression, coil which communicate with each other and are rotated about a common vertical axis. The liq. borne sewage is introduced into the inner end of the compression coil and then circulated through the compression and decompression coils.

O_2-contg. gas is supplied to the liq. sewage in the compression coil. A portion of the sludge carried by the circulating liq. is recirculated to the compression coil. Pref. gas is removed from the treated liq. by vacuum. 26.5.77 as 800854 (5pp1363).

VAJN/ D15 34922R/20 =US 4108-76
Ion exchange apparatus
VAJNA S (DYNN) 10.02.64-DT-V25359
*J01 (22.08.78) *CA-841-662 +B01d-15/06 C02b-01/76*

In an ion exchange process, an ion exchange bed is successively charged and discharged during an exchange cycl with an ion X with Y, the replacement ion, and Z the oppositely charged ion associated with X and Y, by passing aq. solns. of the ions through the bed with the flow being reversed during charging and discharging.

Improvement in the charging or discharging comprises in terms of discharging, starting with the bed charged with X ions and filled with water free of X, Y and Z ions, comprising passing ≥4 gps. of fractions through the bed, recovering ≥3 effluent gps. of fractions and collecting the second and third effluent gps. and using this in a subsequent discharge portion of a cycle of the process. 22.7.77 as 818035 C.i.p. 3448043 (+ 19.8.68, 23.7.71, 25.4.75, 1.12.75, 6.7.76 - US - 754531, 165586, 571876, 636482, 703033) (8pp982).

WINC- ★ D15 21664B/11 ★US 4108-768

Clarifying waste water contg. soluble impurities - by raising pH and adding calcium chloride

WINCHESTER CHEM CO 27.08.76-US-718353

A97 (22.08.78) B01d-17/04

Waste water contg. hexane soluble oil or grease is clarified by raising the pH to ≥11.6, adding ≥1,700 ppm $CaCl_2$ to flocculate the oil and grease, and then a floc coagulant to agglomerate the floc into clumps, and removing the floc.

The process is esp. useful for laundry waste water. Heavy metals are also removed with the floc. 27.8.76 as 718353 (6pp955).

FARH D15 70955Y/40 =US 4108-769

Reducing mercury content of waste water - by oxidn., ferrous ion addn., redox potential setting and pptn.

HOECHST AG 27.03.76-DT-613128

*E36 J03 (22.08.78) *DT2613-128 C02c-05/04*

Mercury content of industrial waste waters is reduced to 50 mg/m^3 by precipitating mercury cpds. having converted total mercury to the bivalent ionic state.

Waste water is adjusted to pH ≤ 4.5 by adding HCl or H_2SO_4; Cl_2, chlorinated water or NaOCl is then added to give 2-50 mg active Cl_2/l, 0.1-1.5 g iron (II) ions/l; redox potential is adjusted to -0.1 to -0.8 V relative to hydrogen electrode by addition of chemical agent, and the pH increased to ppte. insol. mercury (I) salt.

Process is useful for treating water from chlorine-alkali electrolysis by the amalgam process. 22.3.77 as 780126 (3pp931).

ROYC/ ★ D15 21665B/11 ★US 4108-770

Removal of hexavalent chromium from industrial waters - by redn. to trivalent chromium by passage over iron particles with sulphuric acid

ROY C H 18.10.76-US-733354 (10.12.70-US-083120)

E31 (22.08.78) C02c-05/02

Cr^{6+} cpds. (I) in industrial process waters are completely reduced to Cr^{3+} cpds. (II) with minimal sludge formation by the following continuous, gravity flow process (a) waters are adjusted to pH 1.0-2.1 with H_2SO_4; (b) the waters are continuously passed by gravity flow over a bed of non-powdery Fe particles (particle vol. equiv. to particles of length and width ≮ 0.25 inch, and thickness 0.125 inch) while at least stoichiometric amts. of H_2SO_4 and (I) are kept in the waters.

Simple, economical process effectively reduces (I) levels in a variety of industrial process waters and effluents (from oxidn. procs. and chrome electroplating procs., etc.) to relatively non-toxic values (≯ 1 ppm). Process avoids the use of hazardous chemicals (SO_2 and N_2H_4 etc.); very little $FeSO_4$ sludge is formed; reaction rate may be controlled by monitoring the pH; and rusting of the Fe does not impede the flows. 18.10.76 as 733354 (+ 11.7.72; 4.1.74; 20.8.75 - US - 270711, 430735, 606024) (7pp478).

WEIS- ★ D15 21666B/11 ★US 4108-771

Elimination of odours from organic wastes - using compsn. contg. aq. acid, oxidising salt, and iron slat

WEISS & CO (CHCO-) 27.05.77-US-801350 (06.02.74-US-439879)

(22.08.78) C02b-01/34 C02c-01/40 C02c-05/04

Method of reducing air-polluting odours (organic S cpds. and NH_3) emanating from solid-contg. organic wastes produced by metabolic processes (animal and human wastes, organic industrial wastes, and sewage sludges) is as follows: the waste prod. is mixed with an acid soln contg. 3-25% by wt. H_2SO_4, 3-20% of an oxidising agent and 10-40% of an S-pptg. agent (II), and the mixt. is kep at pH ≯ 6.5 until the odour has gone. (I) is an H_2O-soluble NH_4 or alkali metal persulphate, nitrate, chlorate, or permanganate. (II) is an H_2O-soluble Fe^{2+} or Fe^{3+} cpd.

Method effectively eliminates odours from a variety of organic waste prods., but does not use chemicals whi might damage the environment or adversely affect chemical or biological processes normally applied to the furth processing of the wastes. 27.5.77 as 801350 (+ 23.12.75 US - 643821) (5pp478).

DUPO ★ D15 21667B/11 ★US 4108-

Disinfection and flocculation of activated sludge - by treatment w zinc cpd. and raising pH

DU PONT DE NEMOURS CO 01.02.77-US-764581 (30.03.76- 672034)

(22.08.78) C02b-03/10

Biological sludge having total suspended solids (TSS) va of 8,000-30,000 ppm and volatile suspended solids (VSS content of 4,000-15,000 ppm is disinfected by adding a quantity of a zinc cpd. and adjusting the pH to 10-11.

The sludge is simultaneously disinfected and floccula 1.2.77 as 764581 (3pp955).

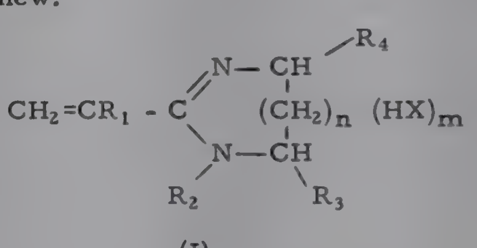
AMCY D15 11061Y/06 =US 4109-

Unsatd. imidazolines and their salts - useful for preparing polym for treating water sludges, fibres formation, paper treatment lowering cholesterol levels

AMERICAN CYANAMID CO 06.05.74-US-467331 (22.12.75- 643729)

*A41 B03 E13 (22.08.78) *US4006-247 C08f-26/06*

Vinyl addn. homopolymer of a monomer of formula (I) i new.



(I)

n and m are 0 or 1; X is an anion; R_1 is H, Me or P and R_2-R_4 are H, 1-4C alkyl, 6-10 aryl, 7-11C aral or 7-11C alkaryl Polymer is colourless and free of non-amidine imi carboxyl, ester and amide gps. unreacted CN gps. and unreacted polyamine.

Polymers are useful in treatment of aq. sludges, pr of fibres and paper treatment. Also used to lower cholesterol levels in warm-blooded animals. Parent patent claimed the monomers per se. 22.12.75 as 643729 Div. 4006247 (9pp963).

KLEI- ★ D15 21814B/11 ★US 4142-

Sludge dewatering device with superimposed filter bands - mov along meandering path over filter drums, deflection and guide r to discharge trough

KLEIN A KG 03.04.76-DT-U10510

P71 (06.03.79) B30b-09/24

Appts. for dewatering sludge comprises a pair of drum having perforated walls for passage of water released from sludge into the drum and discharge conduits for th water. A pair of endless filter bands are superimpose for feeding sludge between the bands to a preliminary p ssure zone and then to the drums.

Guide rolls are disposed above the drums for guidin the bands along a meandering path to effect further dew ering of the sludge through the bands. A deflection rol positioned to guide the bands along an S-shaped path. bands are spread apart along part of their path to form discharge shoot for the dewatered sludge.

Used for dewatering sludge, sewage and other mate contg. water and solid particles. The meandering path followed by the bands loosens the sludge cakes and cau further release of water. The dewatered sludge is disc arged at the end of the path into the shoot formed by the bands. 17.3.77 as 778695 C.i.p. 4019431 (+7.6.74

477413) (6pp1044)

PRIN ★ D15 21891B/11 ★US 4142-944

Effluent stream analysis appts. using mercury drop electrode - to provide turbulent free flow of effluent about drops to maximise analysis sensitivity

PRINCETON APPLIED R 26.01.78-US-872505

J04 R16 (06.03.79) G01n-27/34

Appts. for effluent stream analysis comprises a Hg drop electrode for forming drops symmetrical about a vertical axis at a tapered end of a capillary passage. An effluent delivery tube directs an effluent in a vertically upward direction from a bore coaxial to the vertical axis of the passage to flow about the Bg drops. The tip of the tube below the passage is also tapered and the passage and bore are maintained in a fixed static relation to one another.

C.pds. exhibiting adsorption or other surface activity on an electrode can be detected, such as enzymes, proteins, tannins, hormones, surfactants, detergents and soaps. The appts. provides mooth turbulent-free flow of effluent about the mercury drops. The dead vol. between the effluent stream and the indicating electrode is minimized, e.g. approx. 0.4 µl, which provides increased testing sensitivity over prior art techniques. 26.1.78 as 872505 (8pp1044)

MONS D15 67733W/41 =US 4142-966

Sepn of water from aqueous mixts - by diffusion through membranes into liqs having temp dependent water miscibility

MONSANTO CO 01.04.74-US-456719

*A97 J01 (06.03.79) *DT2514-094 B01d-13*

Liquid to liquid, one phase sepn. of water from aq. mixts. is achieved by contacting an aq. mixt. with the first surface of an organic polymeric membrane selectively permeable to water; permeating a portion of water from aq. mixt. into and through membrane.

A second and opposite surface of the membrane is contacted with a water-miscible sweep liq. of phenol; a water-enriched, miscible phase is withdrawn from the second membrane surface, the miscible phase is thermally adjusted to temp. beyond water-miscibility temp. of phenol; and two liq. phases of water-rich and phenol-rich phases are formed.

Method involves reduced power and heat differential requirements using simple equipment. 1.4.74 as 456719 (4pp931)

FUNK/ ★ D15 21907B/11 ★US 4142-969

Oil-adsorbing compsn. for removal of oil from water - comprising expanded perlite, cellulosic fibre and asphalt sizing

FUNK R S 12.03.75-US-557688 (17.05.71-US-144257)

H03 J01 (06.03.79) C02b-09/02

An oleospecific hydrophobic compsn. (I) and a method for removing oleaginous cpds. from aq. systems using (I) as solvent are claimed. (I) consists of an intimate mixt. of expanded volcanic gloss (II), partic. perlite, cellulosic fibre (III), and a water-repellent sizing consisting of asphalt.

(I) comprises about 73.9% (II), having a particle size in the range of -8 to +400 mesh (with the majority passing a 14 mesh screen and being retained in the 200 mesh screen), about 19.9% (III) (of which $\leqslant$ 35% is -200 mesh), and about 6.2% (IV).

Used partic. for removing oil spills from water. This solvent retains the oil which may subsequently be recovered in usable form. 12.3.75 as 557688 (5pp920)

PASE D15 15497U/11 =US 4142-970

Effluent treatment - by mechanical or chemico-mechanical techniques

PASSAVANT-WERKE 12.10.71-DT-U38603

*(06.03.79) *BE-789-974 +B01d-21/16*

Liq. contg. solid pollutants is treated by destabilising and flocculating the liq., and dividing it, in a sedimentation zone, into a number of streams flowing through downward channels, where the solids settle out. The solids are discharged from the bottom of the channels into a thickening zone, the solid-free liq. being removed so that as little as [illegible] thickening zone. The solids are thickened mechanically, pref. by a stirring and scraping device attached to a movable bridge.

The treatment appts., e.g. for waste water, occupies much less space than conventional plant, with a min. of conveying and control necessary. 27.11.72 as 309905 (+12.10.72-US-296775) (10pp1379)

DEGM D15 82895Y/47 =US 4142-971

Band pressure filter for dehydrating waste water sludge etc. - has power cylinder band tensioning to compensate for cake thickness variation

DEGREMONT SA 11.06.76-FR-017718

*J01 +P71 (06.03.79) *BE-854-558 B01d-33/04 +B01d-37*

A system for the dehydration of residues, e.g. sludge com-prises two endless filter belts moving at identical speeds, the residue being supplied between the belts prior to the belts passing over a perforated drum and a series of rollers.

The pressure exerted on the residue by the belts is controlled by tensioning the belts in an identical manner, by means of separate fluid-operated devices fed from the sam source. The residue is pref. supplied to a horizontal run of the belt, and distributed by a roller.

The tension of the belts is precisely controllable, allowing close control of the filter cake produced. 25.5.77 as 800550 (10pp1379)

SANI- ★ D15 21910B/11 ★US 4142-975

Sewage treatment appts. with series treatment chambers - provided with oxygen supply and baffles for causing continuous semi-circular flow pattern of mixed liquor

SANILOGICAL CORP 26.09.77-US-836375

(06.03.79) C02c-01/08

Appts. for treating sewage comprises a series of treatment units each having a treatment chamber with baffles for directing the flow of mixed liquor in the chambers. Air is supplied to the chambers through a conduit having orifices so as to cause a continuous semi-circular flow pattern of mixed liquor in the chambers.

Raw sewage is supplied via an inlet to the first mixt. o the series and an outlet is provided in the last unit for withdrawing clarified effluent. Fluid communication is provided between an intermediate top portion of each successive unit of the series. A quiescent zone is defined in the last mixt.

Used for treating sewage wastes through consumption of organic matter in waste materials and redn. of microo ganism content prior to effluent discharge. 26.9.77 as 836375 (13pp1044)

DEGM D15 85054X/46 =US 4142-97

Sludge recovery device fixed to rotating bridge - for use wi circular settlement tank

DEGREMONT SA 12.08.75-FR-025059

*(06.03.79) *BE-843-567 B01d-21/24*

A circular decanter for liq. comprises an enclosure of circular cross-section having a stationary hollow central column through which liq. enters the enclosure, and a bridge element rotatably mounted above the column and spanning the enclosure from the column to the periphery. Sludge settles onto the bottom of the enclosure and is sucked into a radially-extending trough attached to the bridge, from where it is removed through a duct coaxial with the column, by a siphon effect.

The decanter allows for the direct evacuation of sludg into a duct within the central column without the need for any intermediate channel or spout. 20.6.77 as 808351 (+22.6.76-US-698605) (7pp1379)

DOWC ★ D15 21947B/11 ★US 4143-0

Recovery of lower carboxylic acids from aq. streams - using extracting agent and an organic solvent

DOW CHEMICAL CO 16.12.76-US-751225

E17 J01 (06.03.79) B01d-03/14 C07c-51/44

Process for recovery of a lower carboxylic acid from it mixt. with organic solvent, an extracting agent and wate comprises; first passing the mixt. to a first distn. zon in which a substantial part of the water is sepd. from th main stream.

The stream is passed to a second distn. zone in which the organic solvent and the extracting agent are sepd. from the main stream. Finally the stream is passed to a third distn. zone in which water and any remaining organic solvent are separated from the carboxylic acid.

Used in the recovery of lower carboxylic acids from aq. streams contg. 0.0005-20 wt.% lower carboxylic acid, after contacting the aq. stream with an extracting agent and an organic solvent. 16.12.76 as 751225 (8pp1390)

See Also

D13 GB 1541876 D22 BE 870281 D22 SU 369930

D16: FERMENTATION INDUSTRY

FARB ★ D16 20031B/11 ★BE -870-359

Stable microorganism preparations for degradation of organic material - prepd. from mixed cultures, under optimum conditions with at least two passages

BAYER AG 15.12.77-DT-756032

B07 C03 E19 (12.03.79) C12b C12k

Storage-stable microorganism preparations which degrade synthetic organic industrial prods. are prepd. from mixed cultures of stabilised, activated microorganisms. The conditions for prodn. of a concd. mixed active culture by the usual methods, in the presence of the degradation prod are optimised in classical manner according to the speed of decomposition of the prod. and the mixed culture is converted under determined optimum conditions, by 2 passages, to give a stabilised activated mixed culture, which is made stable to storage whilst preserving its activity.

The microorganism preparations may be used to treat water e.g. sewage or other waste water contg. organic prods., to wash tanks or other vessels used to transport materials, to remove and make safe accidental contamination, to decontaminate skin and soil. Typical uses include degradation of insecticides, herbicides, fungicides, pharmaceuticals, dyes esp. azoic and anthraquinone cpds. organic intermediates e.g. monomers such as nitriles used in rubber production, sulphonic acids, and organic solvents esp. aromatic solvents. 11.9.78 as 870359 (37pp395)

FRED/ ★ D16 20087B/11 ★CA 1049-429

Cider prodn. at reduced temps. - adding wine yeast in place of natural fermentation

FREDETTE V 24.09.74-CA-209961

(27.02.79) C12g-03

Cider prodn. comprises first pasteurising fresh apple juice of S.G. 1.035-1.065 and organic N content 0.01-0.05. The juice is then fermented with a wine yeast sacharogyces cerevisieae var. ellipsodeus in a closed pressure vessel at normal temp. until pressure builds up, and the juice is then cooled to 5-10°C and fermented to S.G. 1.000-1.020 and alcohol content 4-7 vol.%.

Pref. yeast is ATCC 14825, the inoculum pref. being 1-10 (5)% of final vol. sharp and/or sweet apples may be used. Pref. fermentation is stopped at S.G. 1.010-1.020 for sparkling sweet cider, S.G. 1.006-1.000 for sparkling dry cider, or 1.010-1.005 for sparkling semi-sweet cider.

Clear ciders are obtd. which are delicate in flavour and lack the usual bitter after-taste of other prods. 24.9.74 as 209961 (8pp949)

DRED D16 11188U/09 =DS 2225-039

Conversion of digitoxigenin glycosides into digoxin and gitoxin -- in digitalis plants by fermentation

VEB ARZNEIMITTEL DRESDEN (BAR /) 24.01.72-DL-160475

*B01 (08.03.79) *DL--94-363 C07j-19*

Method is described for the conversion of digitoxigenin glycosides to digoxin and fitoxin. The digitoxigenin glycoside-contg. starting material (pref. freshly cut and comminuted digitalis plant) is exposed to a fermentation process inherent to digitalis plants, at 20-45°C for >60 hrs., with the exclusion of air or use of N_2 or CO_2 flow. Opt. fermentation is followed by a high temp. drying (cf. DL50730) to preserve the material. The pure glycosides are then isolated conventionally.

Alternatively an extract from fresh, lyophilised or dried (at 35°C) digitalis plant, purified over a cross-linked dextran gel, can be reacted with the starting material for 24 hrs. at 30-35°C, under the same ambient conditions. 23.5.72. as 225039 (3pp913)

HIRO/ D16 57407W/35 =DS 2424-76

Tonic contg. purified pyroligneous acid and cellulase - pr extracted from comfrey, for human and veterinary use

HIROSAKI K 14.02.74-JA-017112

*B04 C03 (08.03.79) *DT2424-762 A23k-01/16 A61k-35/78*

Prepn. of tonic comprises refinement of wood vinegar; extn. of plant leaves with this refined vinegar in the presence of a crude cellulase enzyme; removal of plant tissues and insoluble materials; and purification of the filtrate, opt. by adsorption on soft wood charcoal.

Pref. raw materials are the leaves of bonewell, bamboo, garden radish or matrimony wine plants. The prods are used as animal fodder additives. 22.5.74. as 424762 (12pp047)

CANA D16 03558X/02 =DS 2536-1

Membrane filter for counting microbial colonies - having gridde pattern of barrier material to define colony isolating cells

CANADIAN PAT & DEV LTD 14.08.74-US-497285

• *A89 +R28 (08.03.79) *US3929-583 C12k-01/10*

Device for facilitating counts of microorganisms comprises a membrane filter element with a pattern printed upon that surface which retains the microorganisms present in a filtered sample.

The material used for printing the pattern is adapted to modify the surface of the membrane filter so that the spreading of the microorganisms is inhibited without affecting their growth upon the free membrane filter surface by release of inhibitors. The pattern is such that it delimits a major number of colonies of microorganism into "cells" whose area is smaller than that of usual areas of such colonies, i.e. 0.05-25 mm². The printing material is a hydrocarbon wax, silicone wax or petrolatum. 13.8.75. as 536163 (7pp267)

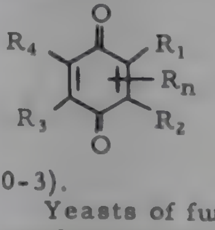
YOUS/ ★ D16 20222B/11 ★DT 2740-01

Suppressing bacteria growth in fungus or yeast cultures - usin compsn. contg. a sugar and para:quinone or hemi:quinone derivs.

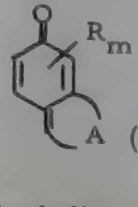
YOUSSEF K A 06.09.77-DT-740013

E14 (08.03.79) C12b-03/16

Compsn. for suppressing bacteria growth in fungus or yeast cultures contains a sugar and either a paraquinone (I) or a hemiquinone (II). In the formulae R's are individu substituents, or a pair(s) of neighbouring R's denotes a fused ring(s); n=0-4. A denotes a fused heterocyclic or carbocyclic ring contg. the marked double bond R's are individual substituents, or a pair of neighbouring R's denote another fused ring; m= 0-3).



(I)



(II)

Yeasts of fungi (including fungi producing antibiotics) can be selectively cultured and yields are increased due to the suppression of bacteria growth. The method is alsc useful for the identification of (including pathogenic species). The method is esp. effective against gram-positive bacteria; the action on gram-negative bacteria is somewhat weaker. 6. 9. 77 as 740013 (26pp70)

MICR- ★ D16 20240B/11 ★DT 2809-759

Bacteria concentrate for fermenting sausages and other meat prods. - contg. Micrococcus varians and lactic acid bacteria, pref. Pediococcus cerevisiae

MICROLIFE TECHNICS 06.09.77-US-830917
(D13) (08.03.79) A22c-11 A23b-04/12 A23l-01/31 C12k-03

Bacteria concentrate contains (a) Micrococcus varians and (b) 0. 01-100 parts (by bacteria w. r. t. Micrococcus) of lactic acid-producing bacteria capable of causing fermentation in meat (pref. Pediococcus cerevisiae strain NRRL-B-5627) with pH lowering to a value from below 5. 4 to above 4. 8. The concentrate contains ⩾10^9 bacteria cells/ml. It is stored at below -20° C, pref. in presence of a freezing stabiliser. After thawing, the concentrate is used in an amt. of pref. 0. 0001-10 wt. % w. r. t. the meat (the concentrate is used in 50-500g. portions). The fermentation temp. is pref. 52° C.

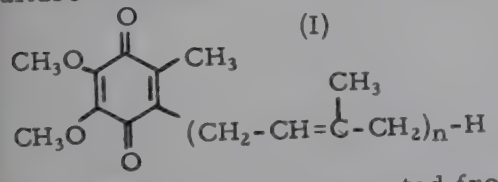
Micrococcus varians improves the taste and colour of the meat, which Pediococcus cerevisial rapidly reduces the pH (this is essential for the process). Red colouration can be produced by addition of up to 200 ppm of an edible nitrite. 7. 3. 78 as 809759 (18pp70)

BELN ★ D16 20252B/11 ★DT 2834-952

Ubiquinone 8,9 or 10 prodn. - by fermentation of Gram-negative bacteria esp. xanthomonas stewartii

LAB BELLON R SA 17.08.77-GB-034584
B05 (08.03.79) C07c-49/73

In the prodn. of ubiquinone-10 (i. e. (I; n=10), bacteria of the genus Xanthomonas are cultivated in a culture medium therefor and ubiquinone-10 is recovered from the culture medium.



(I)

In the prodn. of ubiquinones 8, 9 and 10 (i. e. (I; n=8, 9 or 10), Gram-negative bacteria are cultivated in a culture medium therefor, bacterials solids are separated from the culture medium, and the ubiquinone is recovered from the bacterial solids by drying them, extracting the dry residue with an organic solvent, and concentrating and purifying the organic extract. 10. 8. 78 as 834952 (17pp280)

KANF ★ D16 20269B/11 ★DT 2836-821

Antibacterial and antitumour protein antibiotic auromomycin - produced by macromomycin-producing organism Streptomyces macromomyceticus

KANEGAFUCHI CHEM KK (ZAID) 25.08.77-JA-102323
B04 (08.03.79) A61k-35/74 C07g-11 C12d-09/14

New protein-like antibiotic is auromomycin, which crystallises as yellow plates; is readily soluble in water but insoluble in organic solvents; has no defined melting or decompsn. point (foams, browns and carbonises at 260 ° C); has an optical rotation $[\alpha]_D^{20}$ =-280° (c=1%, water); contains aspartic acid, threonine, serine, glutamic acid, proline, glycine, alanine, cystine, valine, isoleucine, leucine, tyrosine, phenylalanine, tryptophan, lysine and histidine, with alanine at the N-terminal; has a mol. wt. (gel filtration) of 12500 and contains 47. 06% C, 6. 62% H, 14. 66% N, 3. 25% S and 25. 80% O; is stable in aq. soln. at pH 5-9; and has an isoelectric point of pH 5. 4.

(I) is active against Gram-positive and Gram-negative bacteria. and also has antitumour activity (active against Ehrlich ascites carcinoma, ascites sarcoma 180 and leukaemia L1210 in mice). 23. 8. 78 as 836821 (24pp280)

NEST D16 88588Y/50 =GB 1539-494

Orange pigment from Monascus species prepn. - by two stage cultivation in growth stimulating and pigment stimulating media

SOC PROD NESTLE SA 02.06.76-CH-006919
*E24 (D13) (31.01.79) *DT2724-992 C09b-61*

In the prodn. of a Monascus pigment by growing a Monascus genus microorganism in aq. nutrient medium under [illegible]ditions (1) the microorganism is grown at pH 4-7 in a first medium which promotes its growth, (2) the resulting biomass is transferred to a second medium which stimulates pigment prodn. whein the pH is adjusted to 2-4 and the growth is continued for 2-7 days at 20-35°C, and (3) the pigment is extd. with solvent from the resulting second biomass.

A high purity orange pigment is obtd. which can be converted to a red pigment with perfectly determined structure by reaction with a pure substance such as a given aminoacid, aminopolysaccharide or aminoalcohol. Used for colouring food, wines etc. 17, 5. 77 as 020662 (5pp945)

BRIM D16 14578Y/09 =GB 1539-740

Complex glycopeptide antibiotics Bu-2231 A and B - with antibacterial, antifungal and antitumour activity

BRISTOL MYERS CO 28.08.75-US-608494
*B04 C03 (31.01.79) *BE-845-513 +C07g-07*

The glycopeptide antibiotic Bu-2231 and its acid addn. salts are new. It is prepd. by submerged aerobic culture of a Streptoalloteichus hindustanus organism in aq. nutrient medium contg. assimilable N and C source. Specifically the strain used is ATCC 31158 or its mutant (as defined). The resulting Ub-2231 complex is sepd. from the culture medium and co-produced aminoglycoside complex (I) by absorp-tion on a cationic exchange resin then elution with base to remove (I), and acid to recover the B-2231.

The new antibiotic is effective against bacteria and fungi which are pathogenic to plants and animals and also shows anticancer activity. 27. 8. 76 as 035740 (24pp945)

GRAC D16 23384A/13 =GB 1542-009

Fixing protein, esp. enzyme, on polyurethane - by reaction with an isocyanate contg. prepolymer in the absence of water

GRACE W R CO 18.11.76-US-743035
*A96 B04 +R16 (A25) (14.03.79) *BE-860-941 C07g-07 C08g-18/83*

A biologically active material comprising a solid polyurethane to which a protein (pref. an enzyme, antibody or anti-gen) is bound in active form, is pref. by (i) dissolving a protein in an isocyanate-capped liq. polyurethane prepolymer, and (ii) allowing solid polyurethane to form, the process being carried out in the absence of water.

Esp. the protein is penicillin amidase, and is present i an amt. of ⩾ 10 wt % based on the wt. of prepolymer. Parti the prepolymer is prepd. by reacting toluene diisocyanate with an admixture, of polyethylene glycol (I) of mol. wt. 800-1200 and 1, 1, 1-(trimethylol)propane (II), (II) and (I) b-ing provided in a mole ratio of 1: 1-4 and the diisocyanat being provided in an amt. of 0. 85-1. 25 mole per equivs. of hydroxyl provided by (I)+(II). 16. 11. 77 as 047772 (4pp990)

AGRO- D16 10273A/06 =GB 1542-02

Fermentative prodn. of D-(3)-hydroxybutyric acid - useful i parenteral feeding and as intermediate for perfumes

AGROFERM AG 05.08.76-CH-010010 (04.08.76-CH-009957)
*B04 (14.03.79) *BE-857-486 A61k-31/19*

D(-)-3-hydroxybutyric acid (I) is produced by (i) breeding a suitable microorganism at 25-40°C and a pH of 4-8 in a aq. nutient medium contg. a carbon source selected from CO_2, an assimilable carboxyhydrate from glucose, fructos saccharose, lactose, molasses and whey, an assimilable alcohol from methanol, ethanol and glycerin, and a spent lye from caprolactam synthesis, together with an assimil able nitrogen source and trace elements, and (ii) isolatin the (I) produced from the culture medium.

The microorganism is able to produce > 100 mg of th acid per l. of nutrient medium, when bred for 30 hrs. und the specified conditions, and is pref. e. g. a mutant derive from Alcaligenes eutrophus ATCC 23440 or Azotobacter chroococcum DSM 281.

(I) can be used in parenteral nutrition and can be converted to optically active esters useful as odoriferous a aromatic substances in e. g. foodstuffs and perfumery. 3. 8. 77 as 032573 (10pp990)

MEEH/ D16 36904A/21 =GB 1542-0

Shaped articles for growing edible tree fungus - prepd. from natu cellulose, starch and protein sources, inoculated after sterilisation

MEE H M L 08.11.76-US-739393
*P13 (14.03.79) *DT2750-009 C05f-11*

Article useful in the growth of tree mushrooms is prepd. by mixing water in 1-2 pts. wt. of a dry mixt. having major portion by wt. of naturally derived material, contg. cellulose and minor portions of naturally derived materials contg. starch and protein, into a permeable mass.

The substrate is introduced into a container, sealed and sterilised. The substrate is then inoculated with tree mushroom spawn and incubated under aseptic conditions to allow mycelial growth, and to form the inoculated substrate into the desired shape.

Method yields better crop and conditions for rapid growth. 1. 11. 77 as 045318 (6pp931)

IDEK ★ D16 20419B/11 ★GB 2003-499

Treating yeast cell suspension with carbon di:oxide - to eliminate odour, and improve flavour and dispersibility in foods

IDEMITSU INDUSTRIES KK 29.08.77-JA-102653

(14.03.79) C12c-11/28

Prodn. of yeast comprises treating an aq. suspension of yeast cells with CO_2, then drying the suspension. Pref. the suspension contains 1-25 best 2-20 wt % yeast and is treated with CO_2 for 1 min. to 30 hr. esp. 2 min. to 20 hr.

The suspension may also contain a very water-soluble Ca salt at 0. 01-4 wt % on the yeast to improve the flavour of the prod. The yeast used is esp. Candida utilis or Saccharomyces cerevisiae.

The prod. has no characteristic yeast odour and improved flavour. It is easily dispersed in foods or water without agglomeration. 29. 8. 78 as 034827 (4pp1251)

NAGY/ ★ D16 B/11 ★HU T016-070

Purification of aq. industrial effluents - from fermentative and/or agricultural plants processing raw materials contg. molasses

NAGYPATAKI I 18.03.76-HU-TA1391

(D17) (28.02.79) C02b-01

CHIN ★ D16 B/11 ★HU T016-101

Chinosporin C isolation from Bacillus coagulants culture broth - using phenol-formaldehyde ion exchange resin

CHINOIN GYOGYSZER 03.03.77-HU-CI1723

A91 B04 C03 (A21) (28.02.79) C12d-09/02

MITU ★ D16 20519B/11 ★J5 4014-579

Yeast prepn. - by culturing yeast strain which can utilise normal paraffin, higher alcohol or higher fatty acid as carbon source

MITSUBISHI CHEM IND KK 06.07.77-JA-080786

(02.02.79) A23k-01 A23l-01/34 C12c-11/08 C12d-01/02 C12d-13/08 C12k-01/02

In the prepn. of a yeast strain in which enzymic system for synthetising fat directly from fatty acid not through acetyl coenzyme A, is defficient or almost inactivated, is characterised by culturing a yeast strain which can utilise normal paraffin, higher alcohol or higher fatty acid, in a culture medium contg. one of these components, and obtaining the yeast strain which cannot grow in a culture medium contg. an inhibitor for biosynthetising fat from acetyl coenzyme A and fatty acid.

Yeast body having low odd-C fatty acid content can be obtd. by culturing in a culture medium containing n-paraffin, higher alcohol or higher fatty acid having odd carbon number. 6. 7. 77 as 080786 (11pp5)

OJIP ★ D16 20521B/11 ★J5 4014-584

Cephalosporium or Trichoderma fungal body prodn. - in a culture medium contg. methanol, nitrogen source, vitamin(s), aminoacid(s), inorganic salts, etc.

OJI PAPER KK 04.07.77-JA-079006

(02.02.79) A23k-01 A23l-01/34 C12k-01

The process comprises cultivating a mould belonging to genus Cephalosporium, e.g. B-7-12-2 (Ferm. P. No. 3976) A-10-71-1 (Ferm. P. No. 3977), etc., or genus Trichoderma e.g. B-3-5-1 (Ferm. P. No. 3982), etc., in a culture medium contg. methanol as a main carbon source, and recovering the fungal body.

In addn. to methanol, the culture medium contains conventional nutrients such as nitrogen sources (e.g., urea, ammonia, ammonium sulphate, ammonium nitrate, corn steep liquor, peptone, meat extract, etc.), vitamins, amino acids, inorganic salts (e.g. (di)potassium phosphate, magnesium sulphate, manganese sulphate, etc.). The carbon source may be a mixt. of methanol and other assimilable substances. The molds can grow at a methanol concn. of $\leqslant 5$, pref. $\leqslant 3$ wt. %. The cultivation is aerobically performed at 20-40 °C and pH 3-8. 4. 7. 77 as 0790 (4pp140)

KYOW ★ D16 20526B/11 ★J5 4014-5

Therapeutic agent cytidine di:phosphate choline prepn. - reacting yeast culture or fungus with reaction liq. contg. cytosin saccharide, choline, phosphate and surfactant

KYOWA FERMENTATION KK 01.07.77-JA-077758

B03 (02.02.79) C12d-13

Prepn. of cytidine diphosphate choline useful as therapeu ic agent for treating brain disorders comprises reacting a culture, a fungus body or a treated culture or fungus b (i.e. culture filtrate, ruptured fungus body, a prod. obtd. by treating the fungus body with solvents) of a suitable yeast (e.g. Saccharomyces cerevisiae ATCC 15248, S. Rouxii ATCC 15249, Toluropsis spherica ATCC 8549, Candida Guilemondy ATCC 9058, etc.) with a reaction li contg. cytosine, a saccharide (e.g. glucose, fructose, sucrose, maltose, etc.) choline (deriv) (e.g. choline chloride), a phosphate (e.g. KH_2PO_4) and a surface activ agent (e.g. alkyl trimethylammonium chloride.

The starting material cytosine is relatively inexpensi c.f. cytidine and its phosphoric ester which are conventionally employed. 1. 7. 77 as 077758 (5pp140)

ZAID ★ D16 20527B/11 ★J5 4014-5

Beta-lactamase inhibitor prodn. - by cultivating a Streptomyc microorganism and recovering MC 696-SY2-A produced

ZH BISEIBUTSU KAGAKU KEN 29.06.77-JA-076557

B04 (02.02.79) A61k-31/40 C07d-403/02 C07g-07/02 C12 09/14 C12d-13

Prepn. of a β-lactamase inhibitor comprises cultivating microorganism belonging to the genus Streptomyces and capable of forming MC696-SY2 (e.g. MC 696-SY2-A and or -B), specifically Streptomyces fluvobilidis MC 696-SY2 strain (Ferm. P. No. 1504), and separating only the MC 696-SY2-A in the form of a salt, pref. a Ba salt or N salt, from the culture.

Pref. MC 696-SY-2-A in the culture medium is adsor -ed onto a strongly basic cation exchange resin (sulphuri acid type) (e.g. Amberlite IRA-400 or 401 (RTM)) and eluted using an aq. NH_4Cl soln., aq. NaCl soln. or (NH_4 -SO_4 and a crude prod. contg. only MC 696-SY-2A is recovered from the eluate. The crude prod. is purified by passing through a molecular sieve for organic solvents, e.g., a tower contg. a dextran deriv. (e.g. Sephadex G-25 or Sephadex LH-20 (RTM), and developed using an 85 95% aq. methanol soln. or an 85-95% aq. acetonitrile soln., or by passing through a tower contg. silica gel an developing using an 85-95% aq. acetonitrile soln. MC 69 -SY-2A is always recovered as a salt with a mono- or divalent cation. 29. 6. 77 as 076557 (14pp140)

KAKE ★ D16 20528B/11 ★J5 4014-5

Antibiotic C19-97 having anticancer activity - prepd. by culturi Streptomyces griseoflavus

KAKEN CHEM KK 01.07.77-JA-077740

B04 (02.02.79) A61k-35/66 C07g-11 C12d-09/14

New antibiotic C19-97 is prepd. by cultivating a strain belonging to genus Streptomyces capable of forming antibiotic C19-97 (specifically Streptomyces griseoflavus strain C19-97 (Ferm. P. No. 2297)).

Antibiotic C19-97 exhibits growth inhibitory activity against Gram positive microorganisms and also anticanc activity. 1. 7. 77 as 077740 (9pp140)

TORA ★ D16 20613B/11 ★J5 4015-0

Immobilising enzymes on fibre - by preparing ion-exchange fib based on vinyl aromatic polymer and treating with enzyme soln.

TORAY INDS INC 30.06.77-JA-078300

A97 B04 F06 (A13 A17) (03.02.79) D01f-06/56 D01f-11

Enzyme immobilised on fibre is produced by (1) prepari ion-exchanging fibre, of which the equilibrium water abs -ption capacity is $\nless$ 100% on wt. of dry fibre, from a ble composed of (a) poly (monovinyl aromatic cpd.) and (b) reinforcing polymer (pref. polyalpha-olefin); and (2) trea the ion-exchange fibre with enzyme soln. to effect adso -tion of the enzyme by the fibre.

The fibre-supported immobilised enzyme, can be used in industrial chemical processes, and has excellent mechanical strength and chemical resistance. Even very viscous substrates can be handled without difficulty because of smaller pressure-drop. Deactivated enzyme can be easily replaced by fresh, active enzyme by ordinary desorption-and-readsorption cycles.

In an example, 80 pts. wt. of polystyrene and 20 pts. wt. of polypropylene were blended to prepare a base material. From 50 pts. of the base material (matrix) and 50 pts. of polypropylene (cores), multicore conjugate filaments were prepd. After treating with crosslinking agent (5 pts. paraformaldehyde + 25 pts. acetic acid + 70 pts. conc. H_2SO_4) at 90°C for 4 hrs., the crosslinked filaments were chloromethylated with chloromethylether and $SnCl_4$ and then treated with 30% aq. trimethylamine soln. to obtain strongly basic ion-exchange fibre (equilib. water absorption capacity 100%, anion exchange capacity 2.4 meq/g). The ion-exchange fibre was treated at room temp. for 2 hr. with aq. glucose isomerase extract (contg. 2000 U of enzyme, 0.05 M/l of $NaHCO_3$, 0.01 M/l of $MgCl_2 \cdot 6\,H_2O$; pH 8.2), to obtain the immobilised enzyme. 30. 6. 77 as 078300 (8pp173)

SANY ★ D16 21008B/11 ★J5 4017-179
Powdered enzyme prodn. - by extracting solid culture prod., removing low molecular substances by e.g. ultrafiltration and spray drying
SANKYO KK 08.07.77-JA-081675
B04 (08.02.79) A61k-37/48 C07g-07/02

Method comprises extracting the solid culture prod., removing low molecular substances from the extract by reverse osmosis or ultrafiltration and spray-drying the concentrate.

Low molecular substances can be removed effectively by reverse osmosis or ultrafiltration to prevent high viscosity and the treated extract can be easily spray-dried to excellent powdery enzyme.

In an example, 1kg of solid culture prod. is extracted with water to obtain the extract 1.8-2.4 lit. and the extract is concentrated to 1/5-1/15 (1/6-1/10) by reverse osmosis or ultrafiltration. The obtd. powdery enzyme is as good as that prepared by adding salt or organic solvent to the aq. extract of solid culture prod., precipitating the enzyme sepg. it and drying it. 8. 7. 77 as 081675 (3pp5)

TANA ★ D16 21009B/11 ★J5 4017-180
Purificn. of human urinary urokinase by gel filtration - using allyldextran gel crosslinked with N,N' methylene-bis-acrylamide
TANABE PHARMACEUTICAL KK 08.07.77-JA-082310
A96 B04 (08.02.79) C07g-07/02

Human urinary crude urokinase is passed through a column of an allyldextran gel crosslinked with N, N'-methylene-bisacrylamide, using a phosphate buffer (pH 6-11) contg. sodium chloride. Pyrogen and contaminated proteins are removed. The active fractions thus obtd. are submitted to salting out with ammonium sulphate, dialysis and freeze-drying to give a purified urokinase.

Urokinase used in treating thrombosis and myocardial infarction. The process gives urokinase in a higher purity and yield than the known methods. 8. 7 . 77 as 082310(3pp33)

CORP ★ D16 B/11 ★J5 4017-181
Glucose isomerase enzyme prodn.
CPC INTERNATIONAL INC 00.00.78-JA-020777 (26.10.71-US-192313)
(08.02.79)

25. 10. 72 as 020777/78 Div. of 107043/72

TOYM ★ D16 21010B/11 ★J5 4017-182
Choline oxidase prepd. by cultivating strain of Alcaligenes - useful as diagnostic agent for detection of choline, phospholipid, acetylcholine or choline esterase
TOYOBO KK 07.07.77-JA-081836
B04 (08.02.79) C07g-07/02 C12d-13/10

The strain of Alcaligenes is cultivated in a nutrient medium comprising a nitrogen source (e.g. peptone, yeast extract, meat extract, corn steep liquor), an inorganic salt (e.g. potassium phosphate, magnesium sulphate) and choline at 25-35°C within a neutral pH range under aerobic conditions

The strain is e.g. Alcaligenes AK-2. 7. 7. 77 as 081836 (6pp33)

AJIN ★ D16 21011B/11 ★J5 4017-183
L-Glutamic acid prepn. - by culturing Brevibacterium or Corynebacterium bacteria in medium contg. pyrrolidone-5-carboxylic acid
AJINOMOTO KK 07.07.77-JA-081241
B05 E16 (08.02.79) C12d-13/06

The method is characterised by culturing bacteria belonging to Brevibacterium or Corynebacterium in culture medium contg. biotin-active substance > 30µ g/lit. as d-biotin and inhibitor for biotin-activity, adding pyrrolidone-5-carboxylic acid to the culture medium before the multiplication reaches stationary phase for converting it to L-glutamic acid and recovering thus formed L-glutamic acid.

When pyrrolidone carboxylic acid (PCA) is added initially or during the growning period of the bacteria, D- and L-PCA can be converted to L-glutamic acid with conversion rate 100%.

Specifically, Brevibacterium flavum ATCC 14067, B. lactofermentum ATCC 13869, B. divaricatum ATCC 14020, Corynobacterium glutamicum ATCC 13032, C. acetoacidophilum ATCC 13870, etc. can be used and the culture practiced at 24-37°C at pH 6-9 aerobically. The inhibitor for biotin activity prevents L-glutamic acid fermentation. As the inhibitor, penicillin and surfactant such as higher satd. fatty acid, its ester, etc. can be used. As biotin-active substance, biotin, desthiobiotin, 7,8-diamino-pelargonic acid, d-biotinsulphoxide, etc. can be used. 7. 7. 77 as 081241 (4pp5)

YAMA/ ★ D16 21012B/11 ★J5 4017-186
Carcinostatic emitanin prepn. - by culturing bacteria of lentinus genus, by ion exchange treatment, ultrafiltration, fractional pptn. and chromatography
YAMAMOTO H 00.00.78-JA-086700 (25.12.75-JA-154037)
B04 (08.02.79) A61k-35/84 C12d-13

Method comprises culturing a basidiomycetes belonging to Lentinus genus in a medium, treating the resultant culture or processed material with ionexchange resin, by ultrafiltration with molecular sieve, by fractional precipit-ation with organic solvent, acid and quaternary ammoniur salt, and by chromatography to give emitanin.

Emitanin A and B are white powdery substances mainly consisting of polysaccharide and exhibit 81 and 63% inhibi-tion rate, to ICR mice subcutaneously inoculated with Sar-coma 180, at intraperitoneal dosis of 10 mg/kg/day for 10 days. 25. 12. 75 as 86700/78 Div. ex 154037/75 (4pp38)

YAMA/ ★ D16 21013B/11 ★J5 4017-187
Prepn. of carcinostatic emitanin - involves culturing mycelia o genus Flammulina
YAMAMOTO H 00.00.78-JA-086701 (25.12.75-JA-154037)
B04 (08.02.79) A61k-35/84 C12d-13

Process comprises culturing a basidiomycete belonging to Flammulina genus in a medium, treating the resultant cul ture or processed material with ion exchange resin, by ultrafiltration with molecular sieve if required by fractio al pptn. with organic solvent, acid and quat. ammonium s and by chromatography if required to give emitanin.

Emitanin A and B are white powdery substances mainl consisting of polysaccharide and exhibit 79 and 82% inhibi tion rate, to ICR mice subcutaneously inoculated with Sar coma 180, at i. p. doses of 10 mg/kg/day for 10 days. 25. 12. 75 as 86701/78 Div. ex 154037/75 (4pp38)

YAMA/ ★ D16 21014B/11 ★J5 4017-18
Prepn. of carcinostatic emitanin - involves culturing mycelia c genus Pleurotus
YAMAMOTO H 00.00.78-JA-086702 (25.12.75-JA-154037)
B04 (08.02.79) A61k-35/84 C12d-13

Process comprises culturing a basidiomycete belonging t Pleurotus genus in a medium, treating the resultant cult or processed material with ion exchange resin, by ultra-filtration with molecular sieve if required, by fractional pptn. with organic solvent, acid and quat. ammonium sal and by chromatography if required to give emitanin.

Emitanin A and B are white powdery substances main consisting of polysaccharide and exhibit 80 and 75% inhib tion rate, to ICR mice subcutaneously inoculated with Sarcoma 180, at i. p. doses of 10 mg/kg /day for 10 days. 25. 12. 75 as 86702/78 Div. ex 154037/75 (4pp38)

FURU/ ★ D16 21015B/11 ★J5 4017-191
Alkaline wine prepn. - using electrolysed water opt. admixed with organic acid
FURUICHI T 08.07.77-JA-080916
(08.02.79) C12g-03/02

Wine is prepd. using electrolysed water opt. combined with organic acid e. g. lactic acid.

Prods. such as sake, beer, etc. with the same colour, taste and flavour as conventional wines, can be prepd. easily, without addn. of alkaline cpd. 8. 7. 77 as 080916 (3pp5)

AJIN ★ D16 21085B/11 ★J5 4017-899
Determining peroxidase activity - by carrying out enzymatic reaction in acid conditions in the presence of protein or peptide and determining fluorescent activity
AJINOMOTO KK 11.07.77-JA-082703
B04 J04 R16 (09.02.79) G01n-31/14 G01n-33/16

Determining the activity of peroxidase comprises carrying out enzymatic reaction in acid conditions and in the presence of protein or peptide having no peroxidase activity. The activity of peroxidase is determined by fluorescent analytical method.

The enzymatic reaction is carried out in acidity, esp. at pH 3. 5-5. 0. Protein having no peroxidase activity is e. g. serum albumin, serum globulin, casein, gelatin, egg lysozyme, etc., usually boving albumin. The amt. of protein or peptide having no peroxidase activity used can be as small as some μg. or more in each test tube for the determn. Peptide used is partial hydrolysate of protein, chemically synthesised straight chain or cyclic peptide, peptide system antibiotics, etc. The enzymatic reaction mixt. is finally subjected to the determn. of the fluorescent intensity by a spectrophotofluorometer.

The activity of peroxidase is determined with high sensitivity, high accuracy and very high reproducibility c. f. previous methods such as Gilbert's method. 11. 7. 77 as 082703 (6pp50)

FARM- D16 78067W/47 =J7 9002-986
Clearing or prevention of clouding of aq liquids e.g. drinks - by treatment with streptomyces protease
INST FARMACOC ESPAN 06.05.74-GB-019884
*(16.02.79) *NL7505-198 A23l-02 C02b-09 C02c-05/02 C07g-07/02 C12h-01*

Clouding in aqs. liqs. is cleared by treating the liq. with an enzyme product derived from a Streptomyces culture and maintaining contact for sufficient time at a suitable temp. to clear or prevent clouding of the liq. Process is esp. useful for treating drinks contg. coagulatable protein which cloud on storage. The proteolytic enzyme treatment prevents this clouding and is more effective than mechanical treatments. 6. 5. 75 as 054112 (clg. 6. 5. 74-GB-019884) A231-2/00, C12h-1/00, C02b-9/00, C02c-5/02, C07g-7/02 (16. 2. 79) INST FARMACOL ESPAN (14pp) (J5 1043854)

MATS/ D16 76924R/42 =J7 9003-155
Elutriation of materials from a carrier
MATSUMOTO T (MAT /) 30.08.69-JA-069038
*J01 +R16 (19.02.79) *DT2015-818 +B01d-15/08 G01n-31/08*

An absorbed component in an ion exchange resin or absorptive gel is sepd. from the carrier by introducing the suspension-carrying soln. into an annular chamber of a rotor through an inlet passage opening into a radially inner portion of the rotor chamber, and introducing a liq. soluble to the absorbed component in the carrier soln. into the rotor chamber through a passage opening to the outer peripheral portion of the rotor chamber so as to form a boundary surface between the two liquids introduced to the rotor chamber.

As the rotor rotates, the absorbed component passes into the outer soluble liquid by the centrifugal forces and is discharged from the rotor chamber through an outermost passage. 30. 8. 69 as 069038 B01d-15/08; G01n-31/08 (19. 2. 79) MATSUMOTO, T. (3pp47)

STAR/ ★ D16 21228B/11 ★SU -19
Bactericidal compsn. for veterinary use - contg. boron tri:chl
and tri:ethylamine complex and additionally sulphanol, to incr
activity
STARKOV A V 13.11.64-SU-928863
B04 C03 P34 (05.07.78) A61l-13

Bactericidal compsn. contains boron trichloride-trieth
amine complex Sulphanol is added to increase activity.

The complex is obtd. by reacting boron trichloride
triethylamine in benzene medium and sepg. the resulti
crystalline prod. The above bactericidal compsn. can
used in a form of aq. suspension or in oil medium for
administration in veterinary medicine. It has low toxi
It does not stain and has no odour.

Starkov A. V., Mikhailov B.M., Limanov V. E. et al.
Bul. 26/15. 7. 78 13. 11. 64 as 928863 (1pp938)

PROT= ★ D16 21232B/11 ★SU -211
Vitamin/b2 microbiological synthesis - using nutrient co
specified hydrocarbon fraction as cheap carbon source
PROTEIN BIOSYNTH 31.01.66-SU-052588
B02 H04 (26.06.78) A61k-31/52 C12d-05/04

Vitamin B_2 is microliosynthesised using nutrient mediu
contg. cheap hydrocarbon fraction of carbon source. I
an example, Torulopsis 0-3 yeast strain was cultured
a medium contg. 10-20C paraffinic hydrocarbons. Usi
0. 5-2 vol. % of above hydrocarbons in a mineral nutrie
medium, 0. 86 mg vitamin B_2 was obtd. by 1 g. of yeas
culture.

Dikanskaya E.M., Gorobtsova T.A., Bul. 30/15. 8. 78
31. 1. 66 as 052588 (1pp938)

LIVE= ★ D16 21271B/11 ★SU -481
Prodn. of nutrient medium for chlorella cultivation - inclu
oxygenation and mineralisation of liquid fraction of pigg
effluent
LIVESTOCK MECHN RES 10.10.73-SU-968039
P13 (18.04.78) A01g-31/02 C12k-01

Nutrient medium for culturing chlorellae is obtd. from
piggery sewage by sepg. the sewage into solid and liq.
fractions. After aerating the liq. fraction in a circulat
ion oxidiser at 22°-25°C for 7-9 days, it is mineralise
a laminar filter to reduce the BOD to 300-350 mg O_2/1.

The nutrient medium mfr. is accelerated and the ch
ella Aromass is obtd. in high yield using this nutrient.

Batsanov I. N., Shut Yu. E., Semchenko A. I., et al. Bu
31/25. 8. 75 10 10. 73 as 968039 (1pp314)

UYDN= ★ D16 21300B/11 ★SU -498
Bacterial strain Achromobacter delicatulus 25 - is used
dephosphorising manganese oxide ores and concentrates
DNEPR UNIV 12.12.73-SU-975841
M25 (20.04.76) C12k-03

Bacterial strain Achromobacter delicatulus 25 is used
diphosphorising Mn oxide ores and their concentrates.
The strain has high phosphate-solubilising activity. Th
cells of the strain are bacilli of size 3. 1-1. 0 x 0. 5 u ar
anged either singly or in chains. No spores are forme
and the strain is Gram-negative; motion is rotational.

Babenko Yu. S., Grigorev E. F., Tyrygina G. I. et al.
Bul. 1/5. 1. 76 12. 12. 73 as 975841 (2pp314)

RETO ★ D16 21336B/11 ★SU -544-
Fermentation process using immobilised microbial cells -
flocculation of enzymically active cells with polyelectroly
addition of zeolite, filtration and freezing or drying
REYNOLDS R J IND INC 02.01.73-SU-870481
(19.04.78) C07g-07/02

Microbial cells with fermentation activity can be used
repeatedly by first flocculating them with anionic or cat
ionic polyelectrolytes, adding e.g. zeolite 545 to facili
ate filtration, filtering, and freezing or drying.

The yields the prod. which retains full enzymic acti
of the cells prior to flocculation.

When glucose is used as the substrate, the fermenta
is carried out at pH 6-10, at 50-90°C.

Lee C. K., Long M. E. Nystrom C. W., Bul. 3/25. 1. 77
2. 1. 73 as 870481 (3pp124)

ANTI= ★ D16 21350B/11 ★SU -576-338

Bacterial strain Escherichia coli HA-165 - is used as a producer for asparaginase

ANTIBIOTICS RES INS 30.12.75-SU-306560
(06.10.77) C12d-13/10 C12k-01/02

Bacterial strain Escherichia coli HA-165 is a producer of L-asparaginase. The bacilli are 2 μ in length and are Gram-negative. On a Chapek medium the colonies are irregularly circular, convex, mat and of dia. 1.5-2.0 mm On a wheat agar the colonies are irregularly circular, mat, flat and of dia. 3.0-4.00 mm.

The strain is opt. aerobic and optimum growth temp. is 37°-42°C. Glucose, fructose, galactose, lactose, arabinose and maltose are all assimilated; saccharose is not assimilated. Glycerine is assimilated; mannitol is not assimilated. Indole is formed and the strain is stable towards streptomycin.

Golub E.I., Romanova N.B., Meshkov A.N., et al. Bul. 38/15.10.77 30.12.75 as 306560 (2pp314)

CHEC/ ★ D16 21411B/11 ★SU -603-658

Microorganisms e.g. yeast culture unit - has circulation pipes below cyclone and foam breaker in gas exhaust to reduce foaming

CHECHURA A A 04.01.77-SU-441014
(06.04.78) C12b-01/10

To eliminate the foam above the tubes and enhance process efficiency the cyclone is at the top of the unit with lower part of the cyclone is above the tubes in the heat exchanger circulation system while the foam breaker is set in the conduit exhausting gas from the cyclone.

The rotation of the aerator ensures intensive stirring and gas satn., while the pumping effect forces the medium through the heat exchanging circulation pipes resulting in the cooling of the medium. The gas saturated medium moving upwards passes through the cyclone with final separation of air in the foam breaker.

Chechura A.A., Boiko V.I., Yurevich Yu.I. et al. Bul. 15/25.4.78 4.1.77 as 441014 (2pp89)

DAIR= ★ D16 21413B/11 ★SU -603-660

Bacterial strain Streptococcus thermophilus 28m - used in yogurt, soured cream etc. mfr. to accelerate prodn. and improve prod. quality

DAIRY IND RES INST 15.06.76-SU-376127
(D13) (13.04.78) A23c-09/12 C12k-01/02

Bacterial strain Streptococcus thermophilus 28M cells of a 17-hr. culture are 0.6-0.8 μ in dia. and are uniformly coloured; they have a coccus form and are single, double or in 5-10 member chains.

On an agar with hydrolysed milk, 2-day calories are round and white of size 0.4-0.6 mm. In liq. hydrolysed milk they create uniform turbidity. In milk the strain generates a dense, uniform curd, occasionally with vertical ridges. Optimum growth temp. is 43°C.

The strain assimilates glucose, saccharose and lactose it does not liquefy gelatin. Milk is coagulated at the optimum temp. with 1% of the ferment in 3.5-4 hrs. The acidity after 18hrs. is 80° T. Penicillin is developed in the milk in an amt. 0.01-0.05 units. Escherichia coli is suppressed in filtered culture liqs. in cultures 1 : 2 and 1 : 4. The strain displays stability towards the bacteriophage.

Koroleva N.S., Melnikova E.V., Bul. 15/25.4.78 15.6.76 as 376127 (3pp314)

PRVA= ★ D16 21414B/11 ★SU -603-661

Protein based nutrient for diphtheria microbes culturing prepn. - includes recovery of globulin and albumin fractions from cholinesterase and immune serum mfr. waste

PERM VACCINE SERUMS 19.06.73-SU-934977
B04 (12.04.78) C12k-01/06

Protein base for nutrient media used in culturing diphtheria microbes is obtd. by (a) recovering a B-2 and γ globulin fraction (I) as the byprod. of a cholinesterase prodn.; and an albumin and α- and β_1-globulin fraction (II) as the byprod. of antiserum prodn., (b) dialysing the fractions, (c) sepg., (d) combining the purified fractions (I) and (II) in a ratio 3 : 2 and (e) sterilising. The method is less

Fraction (I) is obtd. from cholinesterase prodn. from horse serum and fraction (II) is obtd. during the purifcn. of horse antiserum.

Borzunina L.M., Podgaiskaya M.O. Bul. 15/25.4.78 19.6.73 as 934977 (2pp314)

CHPR D16 34283X/19 =SU -603-662

Cultivating microorganisms pref. yeasts aerobically - with pH control and addn. of carbon-source to balance rise in oxygen concn.

CHEMOPETROL 16.10.74-CS-007092
*(12.04.78) *DT2546-236 +C12k-01/06*

In a microorganism culturing nutrient medium contg. acidic K phosphate, the ammonium salt of a strong mineral acid and a C source, the pH of the medium is held at 2.0-6.0 by adding an inorg. base and a C source initially in an amt. 75-85% of the theoretical amt., the balance of C source being added 5-120 secs. from the time the O_2 concn. increases to 10-80% of satn. The method improves the efficiency of the cultivation.

The inorganic base is pref. NH_4OH and the C source is pref. synthetic ethanol or an n-alkane. The medium may be used typically to culture Candida utilis and Candida lipalytica.

Prkop A., Sobotka M., Shvoigr M. et al. Bul. 15/25.4.78 16.10.75 as 181655 (3pp314)

CUNN/ ★ D16 21541B/11 ★US 4108-052

Electric cooker for starch slurries - operates by passing current through slurry

CUNNINGHAM N T 21.04.77-US-789702 (04.12.75-US-637865)
(22.08.78) A23l-01 C12c-11

Appts. for cooking a slurry of cereal grains consists of an electrically conducting tube, having inlet and outlet ends, surrounding a co-axial central electrode, with supports at the inlet end. An AC power source is connected between the electrode and the tube.

The appts. is intended for use in the ethanol prodn. process claimed in U.S. 4035515, in which cereal starch is gelled by rapid heating before any enzymatic or microbial action can occur, and then treated with maltase prior to fermentation. This enables starch to be used more efficiently, and increases the yield of ethanol. 21.4.77 as 789702 C.i.p. 4035515 (10pp955).

PETZ/ ★ D16 21609B/11 ★US 4108-609

Compost container - with two compartment waste holding top and sap collecting base

PETZINGER M W A 04.08.77-US-821849
(22.08.78) C05f-09/02

A container includes a base section receiving fertiliser sap for selective removal, an upper section mounted on the base for receiving garbage and waste, and a grill across the corners of the upper section to prevent accumulation of waste in the corners and to permit air circulation.

A floor between the sections supports the waste and allows sap to pass into the base. The base pref. has a bottom sloping to a discharge, and the upper section has a barrier between the sides at its mid-point to form two compartments, and has an access cover over each compartment, or normally closed doors to each compartment at the lower end of the upper section. 4.8.77 as 821849 (7pp1358).

ATLF ★ D16 21649B/11 ★US 4108-722

Restoration of underground reservoirs - created after extn. of minerals, comprises introducing sulphate-reducing bacteria into the reservoir

ATLANTIC RICHFIELD CO 10.12.76-US-749597
K05 M26 (22.08.78) C12b-01

The restoration of an underground reservoir, created afte certain minerals (I) have been extd. by soln. mining from subterranean formations, consists of introducing a sulphate-reducing bacteria into the reservoir.

The simple method effectively restores leached underground reservoirs, esp. those which have been leached of recoverable U, and which have high total dissolved solids content. (I) is partic. Cu, Ni, V, Mo, Ag, Re or Se, esp. U, and the reservoir may have been leached with an acidic or alkaline leach soln. Bacteria are suitably sp. of Desulforvibrio or Vibrio, e.g. D. desulfuricans. 10.12.76 as 749597 (4pp478).

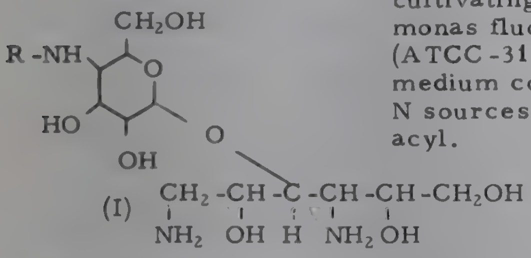
SUMO D16 21861A/12 =US 4108-723
Prepn. of L-lysine from DL-lysine alkyl ester - using a non-specific protease produced by Streptomyces to separate the optical isomers (NL 10.3.78)
SUMITOMO CHEMICAL KK 08.09.76-JA-108277
*B05 E16 (22.08.78) *DT2740-348 C07b-19/02*

Prodn. of L-lysine or its acid addn. salts comprises contacting under weakly acidic condition an aq. soln. of DL-lysine alkyl ester or its acid addn. salt with a non-specific protease which can resolve the ester or its acid addn. salt and is produced by bacteria from the genus Streptomyces.

Pref. the bacteria is St. griseus, St. fradiae, St. erythreus, St. rimosus or St. flavovirens. The enzymatic reaction proceeds very efficiently and no non-enzymatic spontaneous hydrolysis proceeds. 1.9.77 as 829945 (6pp393).

TAKE D16 93385X/50 =US 4108-724
Biotics, P-2568 prodn.
TAKEDA CHEMICAL IND KK 11.04.75-GB-015062
*B04 (22.08.78) *J51123-886 +C12d-09/20*

Antibiotic P-2563 having the formula (I) is prepd. by cultivating a strain of Pseudomonas fluorescens P-2563 (ATCC-31125) in a culture medium contg. assimilable N sources. In (I) R is H or acyl.



The antiobotic is useful for the treatment of pustule and as a disinfectant. 7.4.76 as 674310 (15pp910).

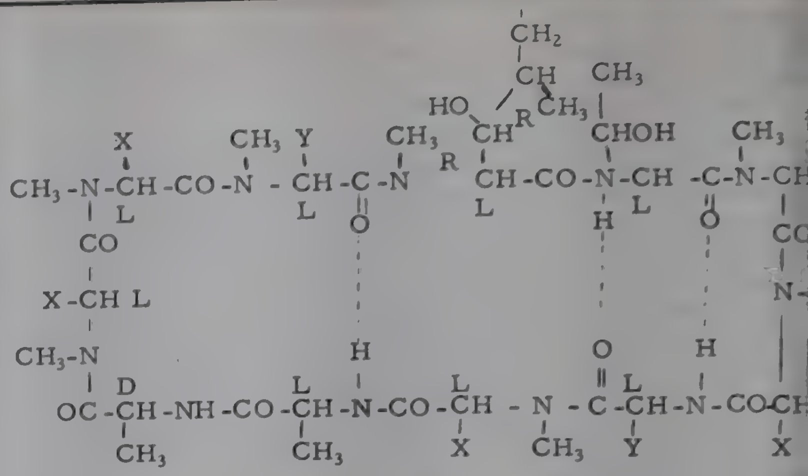
WIST- D16 90419Y/51 =US 4108-983
Antitumour viral oncolysate vaccine - produced by infecting species-specific tumour cells in vitro with a virus, esp. vaccinia
WISTAR INST 01.06.76-US-691486
*B04 (22.08.78) *DT2705-610 A61k-39/12 C12k-09*

Prepn. of a vaccine capable of stimulating the immune mechanism of mammals to species-specific tumours comprises infecting cells of a species-specific tumour in vitro with a virus having a lytic action on the cells of the tumour, the virus cmoprising virus and being less pathogenic for the mammal than is the tumour. The virus infected cells are maintained under culture conditions until a viral oncolysate is formed, and the oncolysate is then harvested.

Method is esp. used for prepn. of vaccines effective against spontaneous malignant tumours in humans. 1.6.76 as 691486 (5pp927).

SANO D16 32745Y/19 =US 4108-985
(Dihydro)cyclosporin C immunosuppressant and antiarhtritic prepn. - by cultivation of Trichoderma polysporum Rifai or Cyclindrocarpon lucidum Booth and hydrogenation
SANDOZ LTD 04.11.75-CH-014195
*B03 (22.08.78) *BE-847-941 A61k-31/16 C07d-259*

New dihydrocyclosporin C (I) is of formula $CH_3-CH_2-CH_2-Z$ where Z is of formula (II) in which X is $-CH_2-CH(CH_3)_2$ and Y is $-CH(CH_3)_2$.



(II)

Cpd. (I) is obtd. by hydrogenating Cyclosporin C of formula $CH_3-CH=CH-Z$, which itself can be obtd. by cultivating the strain NRRL 8044 of Trichoderma polysporum (Link ex Pers) Rifai. (I) exhibits a stimulating effect in humoral immunity and an immonusuppressive activity in cellular immunity. It is also useful for treatment of chronic inflammations and polyarthritis. 27.10.76 as 736106 (6pp927).

STAD ★ D16 21831B/11 ★US 4142-
Clay-free shale stabilising drilling fluids - contg. flax seed g potassium or ammonium salt, and non-clay polysaccha viscosifier
STANDARD OIL CO (IND) 13.02.78-US-876976 (09.03.77-776017)
A97 H01 (A11 D17) (06.03.79) C09k-07/02

Clay-free aq. drilling fluid consists of: (a) 0.2-1.5 lb/ barrel of flaxseed gum (I); (b) < 10,000 ppm of one or more NH_4 or K salts (II); (c) a non-clay viscosifier (III from hydroxyethyl cellulose (opt. contg. a heteropoly-saccharide produced by Xanthomonas campestris NRRI B-1459), or carboxymethyl cellulose.

Compsn. provides long-lasting stabilisation of shale and the drilling fluid can be used (in contact with the sh formation) to drill formations beneath the shale without addn. of other shale-stabilising agents. 13.2.78 as 876976 (5pp478)

OREG- D16 74416Y/42 =US 4142
Inhibiting or identifying bacteria - with bacteriocins f taxonomically unrelated species of bacteria
OREGON HIGHER EDUC 31.03.76-US-672292
*A97 B04 +P34 R16 (06.03.79) *DT2714-415 C12d-13/06 C 01/04 +G01n-31*

Bacteriocin (I) having bactericidal activity against Neis ia gonorrhoeae is obtd. by broth culturing Pseudomona aeroginosa ATCC 29260, removing supernatant from th culture, purifying the supernatant, and sepg. a (I)-rich fraction from it.

Pref. the culturing is in the presence of mitomycin increase the concn. of (I). (I) is used for the identifica of the Neisseria. 31.3.76 as 672292 (9pp974)

HERA D16 87074X/47 =US 4142-
Plastic biological cultivation container - with inner and outer holding plastic bottom foil taut by sealing snap fit
HERAEUS W C GMBH 13.09.75-DT-541000
*A92 (06.03.79) *DS2541-000 C12k-01/10*

A cultivation container has a botton wall formed of a st tched gas-permeable but liq.-impermeable membrane.

The membrane is held between two concentric plasti rings having a recess-projection locking arrangement their matching surfaces. The rings are pref. of differ plastics, e.g. a hard, rigid plastic and a soft yielding stic, the latter being pref. the outer ring. The hard pl tic is pref. polystyrol or a polycarbonate, and the soft plastic PVC, polythene or polypropylene. The membra is pref. of plastic.

The membrane is held in a stretched state by a sim device, allowing bulk manufacture. Cultures, micro-organisms etc. may be grown. 7.9.76 as 720993 (4pp1

GREO ★ D16 21906B/11 ★US 4142-968

Reducing the beer-soluble iron content of diatomaceous earth - by treatment with small amts. of acids

GREFCO INC 09.11.77-US-849873

(06.03.79) B01d-15/06

Diatomaceous earth filter air (I) contg. reduce beer-soluble Fe material (II) is prepd. as follows: (I) of (II)-content $<$ 0.01% is treated with an aq. acid ($<$ 15% by wt. based on dry (I)) and the mixt. is left until the (II)-content has been reduced by $\nless$ 60%. The acid is such that when it is applied as a 3N-aq. soln. (15% by wt. of dry (I)) to (I), the (II)-content is reduced within 7 days.

(I) is a calcined, or pref. flux-calcined filter aid, and pref. contains $<$ 0.005% (II). Acid may be organic (HOAc or oxalic acid), or inorganic (HCl, HNO_3, etc.), pref. H_2SO_4.

Efficient, economical process reduces beer-soluble Fe material (II) normally present in (I) to extremely low levels. In addn., since the amt. of acid used is very small, it does not have to be removed after treatment by leaching or washing etc. (II) are known to reduce the shelf life of beer, etc. 9.11.77 as 849873 (8pp478)

FUJI D16 84781Y/48 =US 4143-135

Hydroxyamino-alk(en)yl-phosphonic acid (derivs.) - for use as antimicrobial agents

FUJISAWA PHARM IND KK 27.07.76-GB-031339

*B05 +P34 (06.03.79) *BE-857-211 +A61r-31/16 C07f-09/38*

New antibiotic FR 900098 and its pharmaceutically acceptable salts, has the following props.: (a) is effective in inhibiting the growth of various Gram $\pm$ve bacteria; and as it mono-Na salt, (b) has the elemental analyses: C27.74; H 5.03; N 6.66 (and the others: P and O); (c) has a m. pt. of 193-194°C in the form of colourless prisms; (d) has an optical rotation $[\alpha]_{D25}$ = O (C=1.0, or water); (e) has a given I. R. spectrum, (f) has a given UV spectrum; (g) has a given T. L. C. pattern; (h) is positive in colour reaction with each of $FeCl_3$, $KMnO_4$ and I_2 vapour, and is negative in colour reaction by each of ninhydrin reaction and Molish Molish's reaction; and (i) is very soluble in water and methanol, and is sparingly soluble in acetone and propanol, and is insoluble in ethyl acetate, chloroform and benzene. 27.7.77 as 819551 (10pp910)

TAKE D16 29100Y/17 =US 4143-201

Beads of water insoluble beta-(1,3)-glucan gel - useful e.g. as enzyme supports and in affinity chromatography

TAKEDA CHEMICAL IND KK 24.05.76-JA-060438 (21.10.75-JA-127196)

*A96 B04 J04 +P73 (06.03.79) *BE-847-467 B32b-09/02 B32b-19/04*

Carrier for immobilised enzyme, affinity chromatography gel filtration and ion exchange comprises a water-insoluble β-1, 3-glucan gel in the shape of beads having a dia. of 5-1000 μ.

The beads are composed of water-insoluble β-1, 3-glucan gel surrounding a core material chosen from (1) beads of pumice ejected from volcanoes and the secondary deposit of such pumice, (2) pumice, (3) alumina, (4) silica, (5) glass bead and (6) hollow glass bead. 20.10.76 as 734352 (11pp910)

See Also

D13 GB 1541876
D13 J5 4014585
D13 J5 4017167
D15 US 4108727
D25 US 4142999
D13 HU T016038
D13 J5 4014588
D13 J5 4017192
D17 HU T016098
D13 J5 4014583
D13 J5 4014589
D13 SU 603659
D21 US 4143141

D17: SUGAR; STARCH

DASU- ★ D17 20379B/11 ★GB 1539-553

Chromatographic recovery of fructose rich fraction - from isomerised starch conversion syrup, using two cation exchange resins

DANSKE SUKKER-FABRI (DDSK-) 13.07.76-GB-029046

(31.01.79) C13k-11

Recovery of a fructose-rich fraction (F) from an isomeris -ed starch conversion syrup (S) comprises first applying S to a cation exchange resin in Na+ form. This column is eluted to recover a first fraction (PS) of di- and higher saccharides, and a second fraction (M) of monosaccharides

M is put onto a second resin column in Ca^{2+} form together with an amt. of water equivalent to that in PS and successively glucose-rich (G) and fructose-rich (F) fractions recovered. G is isomerised and recycled to the first column. Pref. PS is conc. by reverse osmosis and added to F.

The Na^+ resin gives better sepn.of PS than Ca^{2+} resin. By recycling isomerised glucose overall fructose yields are improved. 13.7.77 (9pp1251)

CORP D17 25240A/14 =GB 1542-167

Powdered beta:dextrose prodn. - by seeding aq. commercial dextrose concentrate

CPC INTERNATIONAL INC 04.10.76-US-729325

*E13 (14.03.79) *BE-859-296 C13k-01/10*

Powdered dextrose contg. a substantial proportion of anhyd -rous β-dextrose is produced from an aq. soln. contg. dextrose by (a) contg. to 90-98 wt % dextrose, (b) introducing $\geqslant$ 0.2 wt % (w.r.t. sugar) of seed crystals contg. β-dextrose, at $>$ 80°C and (c) vacuum dehydrating while stirring and keeping the temp. at $>$ 80°C.

Pref. the soln. contg. dextrose is a saccharification starch soln. The prod. has a larger surface area and exhibits a faster dissoln. rate c.f. prods. of other crystallis -ation processes. 3.10.77 as 041020 (4pp974)

PUTS- D17 53929A/30 =GB 1542-351

Cutting machine for treating sugar cane tubers - comprises cutting plate or cylinder carrying cutting blades, also useful for treating beetroot

PUTSCH H & CO 26.10.76-DT-U33541

*P62 R26 (14.03.79) *FR2369-778 C13c-01/08 +B26d-01/26*

Cutting machine for treating tuberous fruit, sugar cane et comprises (a) a cutter disc supporting blades, and (b) a positioning device for stopping the blades in a predetermi -ed position consists of sensors inserted in the casing of the machine and connected to an electronic control circuit for the cutter disc. Trigger elements are inserted in the cutter disc and project above its surface to be scanned by the sensor, the sensors can be proximity initiators or co tactless electronic end switches. Switching signals are produced in the control circuit which cause the main driv motor to stop.

The cutter disc is stopped in a predetermined position to facilitate interchanging or cleaning of the blades. 26.10.77 as 044595 (6pp1364)

CHIN ★ D17 B/11 ★HU T016-09

Pure beta-cyclodextrin prepn. from starch - using alpha-amylas and cyclodextrin-glucosyl transferase

CHINOIN GYOGYSZER 26.05.77-HU-CI1745

A11 (D16) (28.02.79) C08b-37/16

RAFT ★ D17 B/11 ★IT 1027-50

Sugar juice treatment appts.

RAFFINERIE TIRLEMONTOISE 13.02.67-BE-693979

(20.12.78) C13d

PLAK ★ D17 21235B/11 ★SU -218-7

Prodn. of granulated sugar from sugar liquor - includes furth purificn. of a thickened, purified liquor before evaporating down a massecuite

PLASTICS RES INST 15.08.64-SU-916335

(11.04.78) C13f-01

Granulated sugar is produced from sugar syrup by (a) purifying the liquor by defecation saturation and ion-exchange, (b) regenerating the ionite, (c) evaporating the syrup (d) purifying the resulting thickened syrup on an ionite (e) evaporating down to a massecuite, (f) sepg. this into granulated sugar and white and green molasses (g) further purifying the green molasses on an ionite (h) diluting the green molasses, and (i) electrodialysing them through an ionite membrane. The addn. of steps (d) and (g) to the basic process improves the granulated sugar yield.

The ionites used are regenerated pref. using salt solns. formed during the ion-exchange and electrodialysis puricns.; they are concd. and recovered by electrodialysis purificn. The ion-exchange carried out in step (a) pref. uses a cationite in salt form and the purificns. of steps (d) and (g) are pref. carried out using a mixt. of cationite and anionite in salt form, which is regnerated without sepg. the mixt.

Saldadze K. M., Katorova T. V., Bul. 17/17.5.68 15.8.64 as 916335 (3pp314)

SUGA= ★ D17 21342B/11 ★SU -560-512

Sugar solution concentrator and crystalliser - has internal porous screen whose lower edge is below solution surface forming hydraulic trap

SUGAR IND RES INST (AUMA=) 09.06.75-SU-142498
(26.06.78) B01d-09 C13g-01

Appts. to concentrate and crystallise sugar-contg. solns. made as a container with a surface heat-exchanger in the lower part and means to prevent incrustation in the walls of the steaming zone in the upper part. Incrustation removal is made more effective by making the prevention device as a porous screen. This is permeable to the flowing medium and forms a chamber between it and the container walls so that the medium can be fed to the screen. The lower edge of the screen comes under the heating surface below the level of the soln. to form a hydraulic trap chamber. Fins divide this into sections each with a pipe to admit the medium.

Poltorak P. V., Koka V. P., KOT Yu. D. et al. Bul. 29/5.8.78 9.6.75 as 142498 (4pp29)

KAOS D17 45304Y/26 =US 4108-891

Oxidn. of monosaccharides to acids - with oxygen, using palladium on carbon catalyst prepd. in basic soln.

KAO SOAP KK (KAWA-) 21.09.76-JA-113376
*B03 E13 (D13 D25) (22.08.78) *BE-851-804 C07c-51/26 C07c-59/17*

Oxidn. of monosaccharides to carboxylic acid derivs. with O_2 gas is catalysed by a Pd-C catalyst having a Pd particle size of 40-70 A which is prepd by (1) suspending activated C in aq. soln. of alkali metal hydroxide or carbonate, (2) adding aq. Pd salt soln. to the suspension at 30 to 60°C to adsorb the Pd salt onto the C, (3) adding formalin to reduce the Pd salt to Pd, and (4) sepg. the Pd-C catalyst. The alkali metal hydroxide or carbonate concn. is sufficient to provide pH $\geqslant 9$ on completion of the Pd salt adsorption stage.

Gluconic and aldonic acids can be obtd. in high yields using reduced amts. of catalyst. The catalyst can be readily filtered off from the reaction prods.. 3.2.77 as 765203 (7pp945).

CORP D17 00403A/01 =US 4109-07

Saccharide separation by chromatography - and continuous washing out zone with recycled least diffusable first fraction an then water

CPC INTERNATIONAL INC 09.06.76-US-694258
*E13 (22.08.78) *DT2725-964 C07h-01/06*

Saccharides are separated by exclusion chromatography by supplying a feed mixt. to a molecular exclusion chromatography zone; collecting a first fraction from the zone to contain highest mol. wt. saccharides.

Subsequent fractions are collected from zone including a second fraction contg. intermediate mol. wt. saccharides, and a third contg. low mol. wt. saccharides. Zone is continuously eluted with first fraction, then water. Fractions are recovered from the zone.

Prod. is used as sweetener for flavour enhancement in beverages and in foodstuffs. Volume of eluting solvent is reduced. 9.6.76 as 694258 (4pp931).

MORG D17 67108A/38 =US 4142-91

Non-hygroscopic lactulose powder prodn. - by adding ethanol t hygroscopic powder, allowing to stand, opt. with agitation, the separating

MORINAGA MILK KK 26.05.77-JA-061675
*E13 (06.03.79) *BE-866-880 C13k-13 +C13f-01/14*

Non-hygroscopic lactulose-contg. powder is prepd. by adding $>$0.8 wt. parts ethanol to 1 wt. part highly hygroscopic lactulose-contg. powder contg. $>$ 55 wt.% lactulose, while adjusting ethanol so added to yield water content $<$ 2 wt.%; allowing resultant mixt. to stand or stirring $<$ b. pt. ethanol for 1 hr. and cooling; separating ethanol insoluble lactulose-contg. ppte.; and removing ethanol.

Pref. ethanol added is 1.5-2.0 wt. pts. to 1 wt. pt. hygroscopic powder. Mixt. is allowed to stand or is stirred at 30°C for 24-48 hrs.

Prod. has low hygroscopicity, prepd. by simplified process using non-toxic reagents. No lactulose is lost du to decomposition and yields are high. 3.5.78 as 902752 (5pp931)

See Also

D13 DT 2736864 D16 HU T016070 D16 US 4142595

D18: SKINS; HIDES; LEATHER; TOBACCO

HAUN D18 19195V/10 =DS 2112-211

Tobacco processing with common treatment adjustment - in response to variation in equalisation level in metering section

HAUNI-WERKE KORBER KG 13.03.71-DT-112211
*P15 +Q35 R26 (08.03.79) *US3794-049 +A24b-03*

Tobacco prepn. equipment transports the tobacco along a track between stations where different operations are performed. One track section, with stations before and after it, delivers the tobacco fed to it at a constant rate.

In this section, the tobacco flow rate is kept to a predetermined and adjustable desired value, and operations in one or more downstream stations are controlled dependent on this value. Operations in one or more stations upstream are controlled by the quantity of tobacco between the track section and this upstream station.

13.3.71. as 112211 (17pp160)

MOLM D18 58177V/32 =DS 2265-322

Air separator for tobacco feed system - with pivotted deflector which guides tobacco either to tobacco outlet or air outlet

MOLINS LTD (MOLI) 28.07.71-GB-035516
*+P15 P41 (08.03.79) *US3826-065 A24c-05/39*

A pneumatic conveyor, for delivering tobacco in a cigarette-making machine, has an air separator with a chamber incorporating an inlet for the tobacco, a curved tobacco deflector leading to an outlet, and an air outlet away from the tobacco outlet.

The deflector is adjustable between a first position delivering to the above outlet and a second one discharging through a second outlet. 28.7.72. as 265322 Div. ex. 2237292 (6pp160)

FARB ★ D18 20218B/11 ★DT 2739-844
Chrome tanning of hides and pelts - using trivalent chromium salt formed by reacting basic chromium sulphate with formate and/or formic acid in presence of dolomite (NL 6.3.79)
BAYER AG 03.09.77-DT-739844
(08.03.79) C14c-03/06

Process comprises a pre-tanning of the pickled material with Cr(III) salts, and final tanning with Cr (III) salts and an acid-binding agent. The final tanning is carried out with products of the reaction between formates and/or formic acid and a basic Cr (III) sulphate in a molar ratio of $\geqslant 2$ mols of the formate and/or formic acid per 1 mol. of Cr_2O_3. The total amt. of Cr_2O_3 is 1-1.8 wt. % w.r.t. the h hide or pelt. The liq. phase is $\ngtr 100$ wt. % w.r.t. the hide. The pref. acid-binding agent is dolomite. The tanning is carried out until the pH reaches at least 4 (pref. 4.4-5.5)

The exhausation of the tanning bath is greatly increased (final Cr_2O_3 content <1g/l). The quality of the prod. is improved because of the improved dispersion of chromium 3.9.77 as 739844 (16pp70)

DAIL ★ D18 20245B/11 ★DT 2830-049
Filter for tobacco smoke - contg. fibrous material and particulate synthetic mica for effective adsorption of nicotine, tar, acetaldehyde and solid particles
DAICEL KK (GOSE-) 19.07.77-JA-085569
E33 P15 (08.03.79) A24b-15/03 A24d-01/04

Filter contains $\geqslant 1$ layer of a fibrous material (e.g. cellulose acetate fibres) and $\geqslant 1$ layer of synthetic mica (10-200 wt.% w.r.t. the fibres); alternatively the mica particles (4-100 mesh) are dispersed in the fibre matrix.

The synthetic mica contained inthe filter material has high adsorptivity with respect to nicotine, tar, acetaldehyde and minute solid particles contained in the tobacco smoke. The aroma and taste of the tobacco is not affected. 7.7.78 as 830049 (17pp70)

PATP- ★ D18 20291B/11 ★DT 2837-571
Flat material drying machine - with heated jacketed drum and sealed membrane strip
PATPAN INC 26.01.78-GB-003132 (02.09.77-CH-010706)
J08 Q76 (08.03.79) C14b-01/58 F26b-09/06

A machine to dry porous flat pieces of material under a vacuum consists of a heated jacketed drum against which a driving jockey pulley rests. A flexible airtight membrane which is fixed at one end to the drum and at the other end to the pulley carries a porous cushion layer, surrounded by a sealing strip, on the drum side. The material to be dried can be rolled inside and a vacuum is applied.

The machine is simple and compact and needs little space for handling. Adjustments are easily made. 29.8.78 as 837571 (35pp39)

JOBB ★ D18 20325B/11 ★FR 2393-542
Composite triple filter for cigarettes or cigars - has finely divided active carbon or carbon fibres increasing efficiency
SOC JOB 10.06.77-FR-017871
P15 (09.02.79) A24b-15/02 A24d-01/06

Very fine synthetic or artificial fibres having a morphology similar to cellulosic fibres fibrillised by continuous processing, are introduced into a central chamber between two coaxial filtration tampons, to form a composite filter for cigarettes and cigars; the intrinsic structure of the fibres being maintained.

Before the fibres are introduced into the central chamber or whilst the introduction is taking place, the synthetic or artificial fibres are pref. mixed with a finely divided absorbent material. This may be granulated active carbon or consist of fibres of active carbon.

The aerated structure of the carbon fibres increases the efficiency of each of the components cf. their performance separately. 10.6.77 as 017871 (4pp1014)

HARR/ ★ D18 20359B/11 ★FR 2393-883
Disposable holder for cigarette is exposed during smoking - and consists of non-flammable thread rolled in paper
HARRINGTON D E 07.06.77-FR-017315
F09 (09.02.79) D21h-05/16

A paper for a cigarette is in the form of a thin band along which a very thin uninflammable support is fixed. The support may be glued to the paper in the lengthways direction of a cigarette, and it exposes itself progressively as the cigarette is smoked and consumed, so that the cigarette can be manipulated by it.

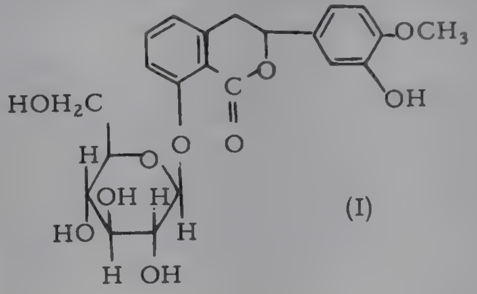
The paper is in the form of a sheet of the normal length and breadth approximately, the support being fixed longitudinally. The support is fixed to one edge of the paper by which it is enclosed. The support may be formed by a thread which is glued to the paper.

Support is quite cheap and causes no inconvenience since it is disposed of. 7.6.77 as 017315 (8pp1014)

SABA- ★ D18 B/11 ★HU T016-127
Drying installation for leather industry - has several interconnected units with vertical shaft conveyor assemblies
SABARIA CIPOGYAR SZ 18.08.76-HU-SA2963
Q76 (28.02.79) F26b-03

NISB ★ D18 20604B/11 ★J5 4015-000
3'-Hydroxy-4'-methoxy-3-phenyl-3,4 di:hydro:iso:coumarin D-glucose - useful for improving flavour and fragrance of tobacco
JAPAN TOBACCO & SALT PUB 06.07.77-JA-079939
E13 (03.02.79) A61k-07/46 C07d-311/76

Glucose of deriv. of formula (I) is used as fragrance and flavour improving agent for tobacco.



(I)

(I) can be obtd. by extraction of leaves of Hydrangea macrophylla seringe var Thunbergu Makino, and is glucoside of phyllozulcin well known as the fragrance and flavour improving agent for tobacco obtd. from the same plant.

(I) is excellent sensitising agent for fragrance and flavour of tobacco, and has good suppressing activity for irritation of tobacco. 6.7.77 as 079939 (5pp43)

MOVE= ★ D18 21291B/11 ★SU -494-409
Preservative for animal pelts - comprises a soln. of an acrylic acid polymer, penetrator, hydroquinone and sodium chloride
MOSC VETERINARY 14.02.74-SU-999859
A97 E14 (A14) (19.04.78) C14c-01/02

Compsn. for preserving skins and pelts comprises (in g/l): 5-15g. acrylic acid water-sol. polymer, 1.5-6.0 g. penetrator, 0.002-0.008g hydroquinone and 20-40g sodium chloride. The treated skins have improved quality.
Tserevitinov B.F., Kasparyants S.A., Mashukov S.D. et al. Bul. 45/5.12.75 14.2.74 as 999859 (1pp314)

AUHE= ★ D18 21292B/11 ★SU -494-410
Tanning extracts from raw material - are obtd. by comminuting and treating hydrothermally whilst subjecting it to UV radiation
AS UKR HEAT PHYSIC 29.02.74-SU-995660
(19.04.78) C14c-03/10

Tanning extract is obtd. from tannin-contg. material, e.g wood, by (a) comminuting the material, (b) heating it in air at 100°-120°C with a moisture content of 100-120g/kg of dry air, pref. for 20-60 mins., and (c) subjecting the material to UV radiation. The method provides a high quality extract. Step (c) may be carried out before, after or during step (b).
Kremnev O.A., Borovskii V.R., Grabov L.N., et al.
29.1.72 as 995660 (1pp314)

OLIN ★ D18 21554B/11 ★US 4108-151
Gamma alumina filler for cigarette paper - to selectively reduce organic vapour phase constituents in tobacco smoke
OLIN CORP 10.03.77-US-776183 (10.12.75-US-639293)
E33 F09 P15 (22.08.78) A24d-01/02

Combustible cigarette paper effective in selectively reducing the vapour hase constits. in tobacco smoke consists of cellulose fibres, and 50-80 % by wt. of filled paper of a γ-Al_2O_3 filler (I). (I) is free of other crystalline forms of Al_2O_3, and is ground up to pass a 300 mesh screen.

Paper may also contain conventional burning chemicals (alkali metal hydroxides, bicarbonates, or carbonates, or various citrate, phosphate, or nitrate salts), or (for use with cigars) brown dyes, etc..

Efficient, inexpensive paper selectively reduces the amt. of gaseous components in cigarette (and cigar) mainstream and sidestream smoke. 10.3.77 as 776183 (3pp).

DOKO/ D18 40602A/23 =US 4142-386

Continuous leather embossing machine - with rollers exerting pressure on smooth outer running tracks of embossing elements

DOKOUPIL J 26.11.76-DT-653682

*+P71 Q47 (06.03.79) *DT2653-682 +B30b-03/04 E05b-67/10*

A leather embossing and ironing machine comprises a tubular thick-walled element with an outer surface having an embossing or ironing zone and at least one end free from a central journal. The element has cylindrical contact surfaces at the ends externally of the zone, and processing force can be exerted on the surfaces.

There is an elastic support and at least one counter-pressure roll for supporting and transporting the leather pieces. The forces are applied pref. by rolls or open rolling-contact bearings. The arrangement permits high operating speed. 18.11.77 as 852853 (7pp1358)

BRAN/ D18 74290Y/42 =US 4142-534

Cigar(ette) construction - producing a smoke of reduced carbon monoxide content but whose taste is unaffected

BRANTL V (BRAS-) 02.04.76-DT-614367 (04.09.75-DT-539418)

*P15 (06.03.79) *DT2614-367 A24d-01*

Tobacco-filled smoking article has a mouthpiece end and an end to be lighted and is adapted to produce a low proportion of carbon monoxide in the gaseous prods. of combustion. Prod. contains a tobacco filling and means for readily confining. There is >1 tobaccoless region sepd. from tobacco by an air-impermeable partition which is combustible and remains form-stable under the effect of heat during burning. External air is prevented from passing
through the partition into the inner region behind the com
ustion zone. Tobaccoless region is air-impermeable at
end adjacent the mouthpiece, with cross-sectional area
60% total area.

Toxic by-prod. levels are reduced. 14.5.76 as 68640
(10pp931)

IMPT D18 79015W/48 #US 4142-5

Smoking prod. contg. non-tobacco additive - bonded with pect
and contg. nicotine and inorg. filler, pref. complex silicate

IMPERIAL GROUP LTD 21.02.74-GB-007949 (04.05.76-US-68295

*P15 (06.03.79) *DT2505-149 +A24b-03/14*

Smoking prod. in sheet form is produced contg. 5-60 wt.
tobacco and 40-95 wt.% non-tobacco additives. including
pectin having degree of methylation of 30-75% and inhere
viscosity of 2-6.5 decilitres per gm. as film-forming or
binding agent.

Sheet has greater relative filling power as a measure
firmness when in a cigarette than that of cured Virginia
tobacco, relative filling power (RFP) defined as mean de
sity of control cigarette/mean density of experimental ci
arette. Pref. pectin is a slow set citrus pectin with deg
of methylation 55-70% and inherent viscosity 3-6 decilitr
per gram.

Prod. is used in cigarettes, hand rolling tobacco, pip
tobacco, cigar or cigarillo having high filling values than
other compsns. contg. no additive. 7.11.77 as 849429
(3pp931)

See Also

D23 US 4143173

D2: DISINFECTANTS; DETERGENTS

D21 : DENTAL; TOILET PREPARATIONS

OREA ★ D21 20012B/11 ★BE -870-248
Hair dyeing compsn. contg. specified cationic polymer - fatty acid, alkali, benzyl alcohol and oxidn. dye
L'OREAL SA 15.06.78-FR-017900 (07.09.77-FR-027096)
A96 E19 (06.03.79) A61k

The compsn. to dilute with an oxidising soln. contains ⩾ 1 oxidn. colourant and a support comprising 1 fatty acid, ⩾ 1 alkalising agent in stoichiometric excess to the acid, 2-20% benzylalcohol and 1-15% of ⩾1 cationic polymer constituted by moieties of formula:- $X^- -N^{\oplus}(R_1)(R_3)-A-N^{\oplus}-(R_2)(R_4)-B-X^-$.

In the formula R_1 and R_2 are 1-3C alkyl; R_3 and R_4 are 1-3C alkyl or hydroxyalkyl, also R_2 and R_4 can be 4-8C alkyl when $R_1=R_3=CH_3$ and in this case $R_2=R_4$; also R_4 can be benzyl, cyclohexyl or 4-12C alkyl when $R_1=R_2=R_3=CH_3$; A and B independently are 2-20C alkylene or alkenylene, $-(CH_2)_n-O-(CH_2)_n-$, $-(CH_2)_m-NHCONH(CH_2)_m-$, $-CH_2-CH(OH)-CH_2-$ or $-CH_2-$phenyl$-CH_2-$in which n and m are 2 or 3; and X is an anion.

The compsns. are less injurious to the hair than known prods. They give an excellent untangling effect and give the dry hair a pleasant moist feel. After colouration the hair is full, vibrant, shiny and non-electric, with excell- ent dyeing. 6.9.78 as 870248 (41pp597)

HERZ/ ★ D21 20127B/11 ★DT 2737-906
Dental prostheses - are made from multiphase plastics materials which can be deformed before polymerisation and set afterwards
HERZOG H 23.08.77-DT-737906
A96 P32 (08.03.79) A61c-13 A61f-01

Dental prostheses are produced from plastics materials which are deformed into the final shape prior to polymeri- sation and fixed by special setting process such that the hitherto known use of waxes, guttapercha in the prelimin- ary stages is rendered superfluous. 23.8.77 as 737906 (3pp536)

MULL/ ★ D21 20138B/11 ★DT 2738-072
Floatable bath soap - is provided with one or more air spaces imparting buoyancy
MULLER F 24.08.77-DT-738072
(08.03.79) C11d-17/02

Bath soap in the form of a cake or animal shape is rendered floatable by providing the interior of the cake, etc., with one or more air spaces. Air space may take the form of a plastics foil bag, a foamed plastics core or a number of random or regularly distributed pores or spaces.

Also the soap can be produced from an erated pasty soap mass, which following moulding is allowed to set. 24.8.77 as 738072 (16pp536)

UNIL ★ D21 20277B/11 ★DT 2837-088
Non-irritant, non-tacky antiperspiration compsn. - contg. moisture-absorbing water-insoluble polymer, a surfactant and liquid which does not dissolve the polymer (NL 28.2.79)
UNILEVER NV 26.08.77-GB-035981
A96 (08.03.79) A61k-07/32

The compsn. contains (a) 0.1-30 wt.% moisture absorbing water-insoluble polymer having a dry touch when swollen with water; the water-absorption coefft. is ⩾ 2 pref. 5-500 esp. 10-50; (b) 0.1-15 wt.% of a surfactant melting between 30 and 75° C; and (c) 1-99.8 wt.% of an organic solvent in which polymer (a) is insoluble. The components are mixed together so that a fine polymer dispersion in the liquid phase is formed.

The compsn. does not excessively suppress the perspi- ration so that it does not cause irritation of the skin. In- stead, the exuded sweat is absorbed by the polymer, with- out causing tackiness. 24.8.78 as.837088 (28pp70)

LIOY ★ D21 20281B/11 ★DT 2837-235
Olefin oligomerisation esp. to lubricating oils - using catalyst prepd. by mixing aluminium halide and sec. or tert. alcohol
LION FAT & OIL KK 31.08.77-JA-104413
A17 B07 H07 (A96 A97 B04) (08.03.79) C08f-04/52 C08f-10/14

Catalyst for ⩾6 (6-20)C olefin oligomerisation consists of a reaction mixt. prepd. by mixing an Al halide, esp. $AlCl_3$, with a sec. or tert. alcohol, at pref. 10-150 (esp. 20-100) °C, Equiv. ratio alcohol:Al halide is 0.05-0.95.

The oligomers are used as lubricating oils, eg. as gear-, refrigerator-, metal working- and tyre cord spinning oils, as motor oil additives; as fat-, cosmetic- and medicinal materials. The liq. oligomers have high kinematic viscosity, low pour point, e.g. -30° C, high viscosity index and good shear-stability, e.g. 0.2-0.3%. Oxidn. and heat-stability may be improved by hydrogenation. 25.8.78 as 837235 (18pp200)

ACQU/ ★ D21 20329B/11 ★FR 2393-570
Capillary lotion for the scalp esp. of males - contg. alcohol, salt, and thickening agent, to reduce hair fall
ACQUAVIVA A 08.06.77-FR-017603
A96 (09.02.79) A61k-07/06

The lotion comprises an aq. alcoholic soln. contg. > 60 vol.% of alcohol but below that amt. which can irritate the skin; having a low salt content and an amt. of thickening agent below that giving a stickiness to the hair but such that the amts. of salt and thickener slow down evapn. of the alcohol after application but without suppressing it completely.

The lotion is used to stabilise the hair, prevent falling, make it easier to comb, and to treat dandruff. The salt gives a wetting effect facilitating uniform application. The resulting slow evaporation gives a pleasant fresh sensation and a longer contact time. 8.6.77 as 017603(6pp597)

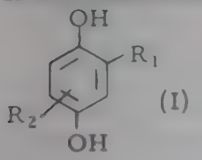
CARS- ★ D21 20330B/11 ★FR 2393-572
Setting hair using guanidine hydroxide as active agent - for waving, perming, setting and styling
CARSON PROD CO 09.06.77-US-805149
E16 (09.02.79) A61k-07/09 C07c-129

Hair waving process comprises putting it into the desired form in curlers and then contacting it with an aq. compsn. comprising as main active ingredient guanidine hydroxide, followed by removal of the compsn. The compsn. is esp. obtained by reacting a water-soluble inorganic hydroxide with a soluble guanide salt the anion of which forms an insoluble salt with the cation of the hydroxide. The com- psn. is novel and that of the first embodiment above of pH at least 11.8 and contg. 1-50% of guanidine hydroxide. The process is also applied to permanently setting crimped hair, and to other setting and styling methods.

The process includes perming and "Afro" styling. It avoids the use of organic and inorganic sulphur cpds. nor- mally used which can have an adverse effect on the hair and also irritate the scalp. 30.5.78 as 016029(35pp597)

OREA D21 50431Y/29 =GB 1541-97
Hair dyeing compsns. contg. easily oxidised diphenylamines which are stabilised with specified polyhydroxy benzene cpds.
L'OREAL SA 19.01.76-FR-001252
*E14 (14.03.79) *BE-850-490 A61k-07/13 +D06p-03/08*

Compsn. suitable for dyeing keratin fibres comprises ⩾ 1 diphenylamine (salt) and ⩾ 1 polyhydroxybenzene (salt). D phenylamine is such that its corresp. indoamine has redo potential of -450 to -350 mv. The polyhydroxybenzene ha a redox potential of -600 to -300 mv. and is of formula (I



(I)

where R_1 is -OH or -NHR_3, R_3 is H or alkyl, and R_2 is H with the proviso that when R_1 is NH_2, R_2 may also be NH_2. The molar ratio of diphenylamine to polyhydroxybenzene is 2-7:1,

Polyhydroxybenzenes are esp. used in the oxidn. dyeing of hair. Diphenylamines such as the leuco-derivs. of indophenols, indamines and indoanilines are used in hair dyes either alone or in a mixt. 18. 1. 77 as 001952 (15pp931)

COMB- D21 68924Y/39 =GB 1542-034
Hair dyeing using oxidn. dyes by stages - achieving desired shade by successive treatments
COMBE INC 20.04.77-US-789076
*E24 (14.03.79) *BE-855-170 A61k-07/13*

Hair is dyed by application of a mixt. of colourant soln. of prim. aromatic amines and aminophenols, and oxidant contg. hydrogen peroxide or peroxy deriv. for a predetermined time, followed by a rinse removal of residual mixt.

Colourant-oxidant mixt. is applied in successive applications to get rid of undesirable colour, The time period is 5 mins. for each application, and quantity of soln. is predetermined and constant, quantity of oxidant in first mixt is steadily increased in successive applications, each mixt. produces predetermined oxidation colour to hair, each colour is deeper shade than preceding application.

Target shade is achieved by use of progessively deepening shades. 26. 5. 77 as 022308 (7pp931)

HERA D21 54205Y/31 =GB 1542-181
Using dental training alloys contg. copper, cobalt and tin - in vacuum pressure casting process
HERAEUS W C GMBH 11.05.76-DT-620733
*M26 +P32 R32 (14.03.79) *DS2620-733 C22c-09/02*

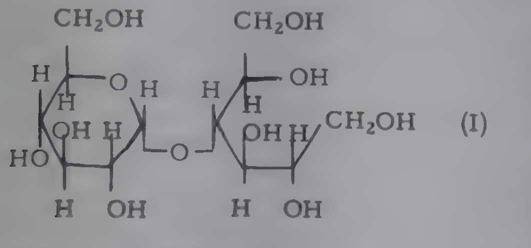
A phantom or training metal casting is produced by filling a dental mould with a liq. alloy contg. 78-92 wt % Cu, 3-7 wt % Co, Fe and/or Ni, 5-15 wt % Sn and 0-10 wt % Ag, excluding unavoidable impurities.

Alloy has lower hardness, very good polishability and excellent solderability with commercially available Au or Ag solders. 9. 5. 77 as 019406 (2pp997)

SZIL- ★ D21 B/11 ★HU T016-041
Skin-care cosmetic prepn. - contg. volatile oil, camomile oil, lavender extract and alcohol
SZILASMENTI EGYESUL 12.11.76-HU-SI1549
(28.02.79) A61k-07/04

NIKA- ★ D21 20505B/11 ★J5 4014-524
Cosmetic, e.g. cream, milk or face lotion, make/up, etc. - contains a maltitol higher fatty acid ester to improve retention of moisture and perfume
NIHON KANKO SHIKIS 02.07.77-JA-079225
E13 (02.02.79) A61k-07

The cosmetics contain maltitol higher fatty acid ester (I).



(I)

(I) is soluble in water and in the oily components of cosmetics such as fluid paraffin, alcohol, etc. It has excellent humidity-holding and perfume-holding properties. It has low toxicity.

(I) can be dissolved at 50°C 150 times, 350 times and 80 times by wt. in fluid paraffin, propyleneglycol and alcohol respectively. It hardly suffers from browning at high temp. (I) can be prepd. e.g. by reacting maltitol with higher fatty acid methylester in DMF with heating under reduced pressure or by reacting aq. maltitol soln. with higher fatty acid chloride. 2. 7. 77 as 079225(3pp5)

POKK ★ D21 20506B/11 ★J5 4014-525
Bis(alkylglyceryl)-alkylene ether - is used in skin cosmetics, is stable and easily dissolved, and gives moisture-retaining and emollient effect
POLA KASEI KOGYO KK 05.07.77-JA-079541
E17 (02.02.79) A61k-07 C07c-41/02 C07c-43/10

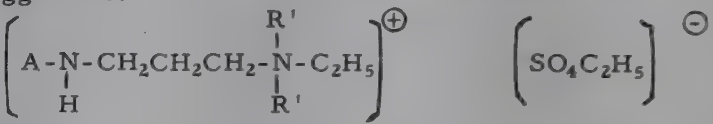
New bis(alkyl-glyceryl)alkylene-ether is of formula $ROCH_2$-CHOH-CH_2OXOCH_2-CHOH-CH_2OR (where X is 2-C alkylene; and R is 1-5C alkyl). (I) is a novel stable cp and is not stimulative to skin. It can be easily dissolved not only in water-alcohol type cosmetics but also in othe oily components of cosmetics without using surfactant, which has often caused skin disorder. It also gives moisture-retaining effect like glycerin and emollient effect like oily components, and is not hydrolysed at any pH. It can be combined with various cosmetics from water-like liq. to viscous liquid and gel.

(I) is e.g. bis(ethylglyceryl)ethylene-ether, bis(propy glyceryl)tetramethylene-ether, bis(amylglyceryl)-ethyler -ether, bis(2-propenylglyceryl)tetramethylene-ether, etc

(I) can be prepd. e.g. by reacting alkyleneglycol, suc as ethyleneglycol, with alkylglycidylether, such as methy -glycidylether, in the presence of Lewis acid, such as boron trifluoride-ether complex, tin tetrachloride, aluminium chloride, etc., with heating; extracting the catalys from the reaction mixt. with aq. calcium carbonate soln. and rectifying the obtd. oily liq. under reduced pressure 5. 7. 77 as 079541 (9pp5)

KANE ★ D21 20507B/11 ★J5 4014-52
Skin cosmetic which does not putrefy or give skin disorders contains a quat. ammonium salt and dry egg white
KANEBO KK 29.06.77-JA-078319
E16 (02.02.79) A61k-07

The cosmetic contains a quat. ammonium salt (I) and dry egg white.



$$\left[\begin{array}{c}\text{A-}\underset{\text{H}}{\text{N}}\text{-CH}_2\text{CH}_2\text{CH}_2\text{-}\overset{\text{R}'}{\underset{\text{R}'}{\text{N}}}\text{-C}_2\text{H}_5\end{array}\right]^{\oplus} \quad \left[SO_4C_2H_5\right]^{\ominus}$$

(I)

In (I) A is H or RCO; R is 6-21C alkyl, 6-21C alkenyl or 14-18C hydroxyalkylene; and R' is (m)ethyl or propyl).

The cosmetic shows excellent emollient and treatment effects on skin and has excellent preservation, etc.

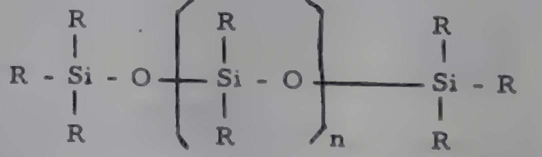
(I) does not form a ppte with egg white and is used in a amt. of 0.02-0.1, pref. 0.03-0.05 w/w%, and dry egg white is used in an amt. of 0.1-4 pref. 0.5-2 w/w%. 29. 6. 77 as 078319 (7pp5)

KOBA- ★ D21 20509B/11 ★J5 4014-52
Press moulded make/up compsn. - contg. cosmetic powder, silicon water repellent and caking oil
KOBAYASHI KOSEI KK 05.07.77-JA-080252
A96 E11 (A26) (02.02.79) A61k-07/02

Compsn. is composed of 60-90 w/w% of cosmetic powder 5-40 w/w% of water-repellant and 1-25 w/2% of caking oi

Showing strong water-repellency, the compsn. can be applied with wet spreader without wetting the powdery ma erial in the compsn. As water repellant silicone oil of formula (I) can be applied.

In (I), R is H, lower alkyl, benzyl, cyclohexyl, napht or furfuryl; and n is 5-250.



$$R-\overset{R}{\underset{R}{Si}}-O\left(\overset{R}{\underset{R}{Si}}-O\right)_n\overset{R}{\underset{R}{Si}}-R$$

(I)

5. 7. 77 as 080252 (5pp5)

MATW ★ D21 20510B/11 ★J5 4014-52
Hair curling compsn. contg. cysteine cpd. - and component whic increases the pH of the compsn. as the temp. increases
MATSUSHITA ELEC WORKS 30.06.77-JA-078871
A96 E16 (02.02.79) A61k-07/09

The compsns. pH increases while it is kept at high temp. during hair setting with heating. Excellent curling effect can be attained without damaging hair. The cpd. or compsn. which can increase pH of the compsn. at high temp. is borax, calcium hydrogen tartarate, sodium phos-phate or mixt. of ammonia and ammonium chloride. It is used in amt. 0.005-5 pts. wt. per 100 pts. wt. compsn Prior to addition it is pref. to adjust pH of the cpd. or th compsn. to neutral with aq. ammonia or organic acid suc as oxalic acid.

The hair treating compsn. contains 1-15%

cpd. such as cysteine, acetylcysteine, etc. as the major ingredient and usually contains surfactant such as polyo-ethylenelaurylether, etc., emollient such as ethyleneglycol, silicone oil, etc., antioxidant, perfume, colourant, etc. 30. 6. 77 as 078871 (2pp5)

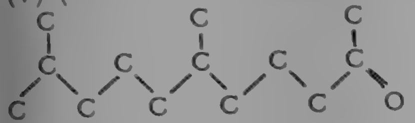
KURS ★ D21 20559B/11 ★J5 4014-902

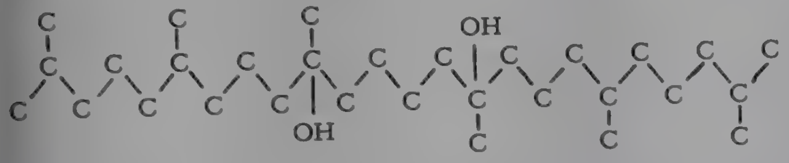
Squalane prodn. from 13C-ketone - which is obtd. by hydrogenating unsatd. ketone(s) obtd. from a propargyl-type alcohol

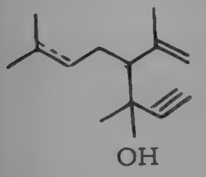
KURARAY KK 06.07.77-JA-081258

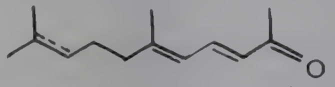
E17 (03.02.79) C07c-01/20 C07c-09/16 C07c-45 C07c-49/20

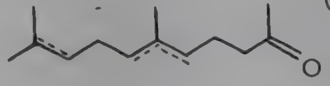
Squalane is produced from unsatd. C_{30}-diol having a frame (II) obtd. from opt. unsatd. C_{13}-ketone having a frame (I). The C_{13}-ketone is produced by hydrogenating unsatd. ketone (IV-1) and (IV-2) obtd. by heating propargyl-type alcohol of formula (III) and C_{13}-ketone is represented by formula (V) (dotted lines indicate optional double bonds).

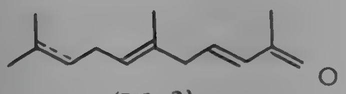

(I)


(II)


(III)


(IV-1)


(V)


(IV-2)

Propargyl-type alcohol is produced easily from cheap raw material and it is changed into unsaturated ketone (IV-1) and (IV-2) by only heating. Therefore, by combining with the rearrangement process of propargyl-type alcohol, the industrial value of usual squalane prodn. is raised. Squalane is useful as a basic material of toiletry goods and lubricating oil of precision machine. 6. 7. 77 as 081258 (9pp78)

LIOY ★ D21 20751B/11 ★J5 4015-912

Shampoo compsn. - contg. sodium on potassium salt or anionic surfactant, cationic polymer and lanolin (deriv.)

LION FAT & OIL KK 24.06.77-JA-075299

A96 (06.02.79) A61k-07/06 C11d-10/02

Shampoo compsn. comprises 1-50 wt. % anionic surface active agent of Na salt type, K salt type or alkanolamine type; 0. 1-5 wt. % cationic polymer; and 0. 1-10 wt. % lano-line (deriv.).

Compsn. is suitable for the cleaning of hair and skin. Flaking of hair after shampoo is prevented, and the compsn has a favourable hair conditioning effect.

Specifically the surfactant is ≥1 Na-, K- or alkanolamine salt of tallow fatty acid, lauric acid and synthetic higher fatty acid, R-$(OR')_nOSO_3M$, R-SO_3M and OS-M (R is 8-18C alkyl or alkylphenyl replaced by alkyl of 6-15C, R' is 2-3C alkylene, n is 0-6, M is Na, K, alkanolamine). Pref. cationic polymers are derivs. of quat.-nitrogen substituted cellulose ether, derivs. of quat-nitrogen contg. polytrialkylalkylaminoethylmethacrylate, water soluble polytrialkylalkylaminoethylmethacrylate, water soluble cationic polymer of tetraethylenepentamine-epichlorhydrin, cationic polymer of tetraethylenepentamine-epichlorhydrin, quat.-nitrogen contg. polyvinylpyrrolidone, polyethyleneimine, etc. 24. 6. 77 as 075299 (5pp170)

KANE ★ D21 20997B/11 ★J5 4017-136

Creamy hair dressing compsn. - contains propylene oxide-ethylene oxide adduct with higher alcohol, higher fatty acid salt, oily substance and water

KANEBO KK 18.06.77-JA-072308

A96 E17 (E12) (08.02.79) A61k-07/11

The compsn. contains (a) 14-45 w/w% propyleneoxide-ethyleneoxide co-adduct with straight chained aliphatic higher alcohol $RO(CH_2CHCH_2O)_n(CH_2CH_2O)_mH$ (I), (b) 0.5-6.0 w/w% of higher fatty acid alkali salt (c) 3-14 w/w% of the oily substance which is solid or pasty at 20 °C and (d) 51.5-81.5 w/w % water.

In (I) R is 12-22C alkyl group alkenyl group. n : integer 10-100. m is a number satisfying following inequality (II).

$$3 \leqslant \frac{\text{(molecular weight of } (CH_2CH_2O)) \text{ x m x 100}}{\text{molecular weight of the compound (I)}} \leqslant 15 \quad \text{(II)}$$

The compsn. is excellent in preservative property, touch, hair-dressing activity, emollient activity and rinsing property and hardly corrodes nitrocellulose articles such as spectacle frames, combs, etc.

As the component (b) Na salt, K salt, ammonium salt or alkanolamine salt of lauric acid, myristic acid, palmitic acid, stearic acid, etc. can be applied. 18. 6. 77 as 072308 (9pp5)

BIOP= ★ D21 21242B/11 ★SU -241-429

Synthesis of amino-thiol radiation protective agents - by reacting halo-alkylamine hydrochloride with sodium thiosulphate, hydrolysis with sodium sulphide, and steam distillation or pptn.

BIOPHYSICS INST 20.07.67-SU-173284

E16 (17.04.78) C07c-149/24

Aminothiols are obtd. when aminoalkylthiosulphuric acid obtd. by reacting haloalkylamine HCl with $Na_2S_2O_3$ (I) is hydrolysed with Na_2S. The prod. extd. and purified by steam distn., extn, or partial ppten. of its organic acid salt.

The final prod. has improved purity and is obtd. in higher yield.

Yakovlev V.G., Bul. 14/18. 4. .69 20. 7. 67 as 173284 (3pp 124)

LEEP ★ D21 21527B/11 ★US 4107-845

Adhesive dental restorative composite - contg. fibres partic. calcium silicate suspended in acrylate resin

LEE PHARMACEUTICALS 16.12.76-US-751517 (03.01.72-US-215112)

A96 G02 (A14) (22.08.78) C08k-07/02

A composite contains 40-70 wt.% inorganic filler fibres of Mohs scale hardness 3.5-6 suspended in a liq. acrylate or substd. acrylate resin compsn. of viscosity <5000 centipoises. The fibres have length 1-100 microns and dia. 1/20 to 1/5 of their lengths. A peroxide catalyst and an accelerator are also included.

The fibres are pref. composed of calcium silicate, and pref. 97 wt.% of the fibres have a length < 20 microns and 94 wt.% <10 microns. Partic. pref. composite contains 55 wt.% fibres, together with resin contg. 40 wt.% triethyleneglycol dimethacrylate and 60 wt.% bisphenol-A-bis(3-methacrylato-2-hydroxypropyl)ether. Accelerator is N-bis(2-hydroxyethyl)-p-toluidine and the catalyst benzoyl peroxide.

The composite is a dental restorative which can be used to repair eroded enamel and dentine, esp. gingival erosion. The tooth surface is claimed with an acid cleanser, opt. primed with a silane keying agent, dried and then the composite is flowed onto it. 16.12.76 as 751517 (+ 13.12.73 - US - 424223) (13pp1331).

OREA D21 81520Y/46 =US 4108-185

Fat free make-up element esp. for eyelids - the support being impregnated with water-soluble polymer coated with make-up paint

L'OREAL SA 28.01.76-FR-002282

*A96 +P24 (22.08.78) *FR2339-393 +A45d-33*

A cosmetic article for directly applying a greaselss cosmetic comprises a solid support coated with ≥1 im- pregnatic layer carrying a coating layer contg. a cos- metic. In this improvement the impregnating layer com- prises ≥1 hydrosoluble polymer deposited in soln. on the support.

The coating layer comprises a homogeneous mixt. contg. (a) a prod. which is thixotropic in aq. suspension; (b) a polymeric binder capable of forming a gel. in aq. medium, the binder forming with the thixotropic prod. a mixt. of high viscosity; and (c) a mixt. of cosmetic powders comprising $\geqslant$1 pigment.

An article comprising sufficient cosmetic for single make-up operation and which may be discarded afterwards is described. 20.12.76 as 752806 (6pp964).

APEX- ★ D21 21621B/11 ★US 4108-642
Nickel-chromium alloys, esp. for dentistry - contg. cobalt. iron, and beryllium or aluminium and molybdenum
APEX DENTAL LAB INC 11.05.77-US-795954
M26 (22.08.78) C22c-19/05 C22c-30

The alloy has the compsn. (a) 15-30 (pref. 20-25)% Cr, 30-60 (pref. 40-55)% Ni, 15-30 (pref. 20-30)% Co, 1-5 (pref. 1-3)% Fe and 1-2 (pref. 1.5-1.8)% Be; or (b) 22.2% Cr, 9.7% Co, 29.4% Ni, 29.4% Fe, 4.85% Al and 4.85% Mo.

The alloys are used for dental castings or copings, as well as for jewellery, watches, etc.. The alloys have exceptional wear resistance and hardness, suitable expansion coefft. for porcelain and tooth materials, high strength, higher m.pt. than porcelain (to permit complete wetting to molten porcelain and prodn. of strong adhesion) and low cost. 11.5.77 as 795954 (4pp935).

SHIO D21 57775A/32 =US 4108-823
Denture stabilising compsn. - contg. polyvinyl acetate, polybutylene and ethanol
SHIONOGI KK (KYOX SHIO) 18.12.76-JA-152618
*A96 P32 (A14 A17) (22.08.78) *J53076-591 +C08k-05/05*

Compsn. is prepd. for compensating the insufficient adaptation of a denture base to the ridges on the jaws or the palate comprises PVAc, polybutene and ethanol in wt. ratio 65-85·2-7·10-35, by filling the spaces between base and ridges.

Pref. PVAc has degree of polymerisation of 350-5000, polybutene in liq. form with mol.wt. 500-2500. Components are kneaded at 5-80°C to form semi-transparent, semi-fluid substance.

Compsn. contain resin having good denture stability with desirable elasticity and non-toxic properties. 15.12.77 as 860957 (2pp931).

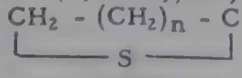
THOM/ D21 46135W/28 =US 4108-849
Glyco protein and mucopolysaccharides extraction - from naturally occuring materials fr use in cosmetics
THOMAS A 11.02.75-FR-004148 (25.02.74-FR-006369)
*A96 B04 (D22) (22.08.78) *BE-825-857 A23j-01/20*

Glycoproteins and mucopolysaccharides are extracted from animal or plant matter using an aq. extraction medium.

The process is improved byconducting the extraction at pH 7.5 - 9.5, heating the aq extract to 100-110°C, and without adding additional reagents sepg. ppte from the aq. extract and recovering the aq. extract.

The extracts are very stable and suitable for industrial, medical or cosmetic applications. 24.2.75 as 552061 (+ 8.8.74 - FR - 027513) (6pp910).

SNPA D21 31036W/19 #US 4108-866
Organic sulphoxides prepn. - by oxidizing sulphides with hydrogen peroxide with azeotropic removal of water
SOC PETROLES AQUITAINE 24.10.73-FR-037867 (30.01.75-US-545487)
*E19 (22.08.78) *DT2450-634 C07d-333/02*

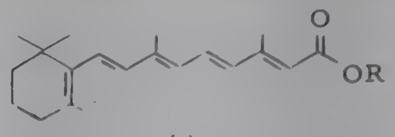
2-36C Dialkyl sulphoxides, their corresp. hydroxy-substd. alkyl sulphoxides and 2-6C polymethylene sulphoxides are prepd. by oxidising 2-36C dialkyl sulphides R^1-S-R^2 (where R^1 and R^2 are (hydroxy)alkyl) or polymethylene sulphides of formula  $\underbrace{CH_2 - (CH_2)_n - CH_2}_{S}$ (where n is 0-4) with H_2O_2 in an aq. acicid medium and a solvent from benzene, toluene, hexane, heptane, dichloroethane, chloroprene, propyl acetate and isobutyl acetate, the solvent forming an azeotropic mixt. with 5-20 wt.% water.

The solvent dissolves the dialkyl sulphides while leaving the prod. undissolved at temp. below b.pt. of the mixt.. The prod. is sepd. from the reaction medium by distilling the azeotropic mixt. from the solvent after the oxidn. and allowing the medium to cool to ppte. prod.

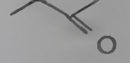
High purity prods. are obtd. which are useful e.g. in prepn. of cosmetics. 8.6.77 as 804638 (+ 29.12.75 - US 644718) (4pp984).

JOHJ D21 32746Y/19 =US 4108-8
Totally trans retinoic acid esters and amides - UV absorbers used sun-screening agents for human skin and as plastics additives
JOHNSON & JOHNSON 03.11.75-US-628177
*A60 E15 (22.08.78) *BE-847-942 +C09f-05/08 C11c-03*

Esters of all-trans-retinoic acid of formula (I) are new.



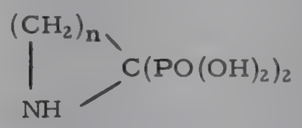
(I)

In (I), R is mixed m and p-vinylbenzene, or  Y. Y is 4-acetoxyphenyl, 2-naphthyl, 4-biphenyl, 2, 5-dimethoxyphenyl, 2, 4-dimethylphenyl, 3, 4-diacetox phenyl, 3, 4, 5-trimethoxyphenyl or 2, 4, 6-trimethylpheny A specific cpd. is 4-(all-trans-retinoyloxyacetyl)-methoxybenzene.

Cpds. (I) possess very good UV light absorption properties, do not have irritating effects on the skin and are free of the metabolic effects which are characteristi of retinoic acid, and therefore are useful as sunscreen agents. 3.11.75 as 628177 (6pp984).

HENK D21 46032X/25 =US 4108-9
Stabilising anhydrous monocalcium orthophosphate - using an az cycloalkane1-2,2-diphosphonic acid
HENKEL & CIE GMBH 30.11.74-DT-456808
*E33 (22.08.78) *BE-836-035 C01b-25/26 +C01b-15/16*

Anhydrous dibasic Ca phosphate (II) is stabilised against reaction with F ions by suspending in aq. medium at pH 5-10, contg. 0.01-5 wt.% of an azacycloalkane-2, 2-d phosphonic acid of formula (I) or one of its water-solubl salts. In (I) n is 3-5.



(I)

(II) is used in tooth cleaning prepns.. 1.12.75 as 646736 (7pp997).

HENK D21 46030X/25 =US 4108-9
Stabilising anhydrous monocalcium orthophosphate - using amino-1-hydroxypropane-1,1-diphosphonic acid
HENKEL & CIE GMBH 30.11.74-DT-456693
*E33 (22.08.78) *BE-836-033 C01b-25/26 +C01b-15/16*

Anhydrous dibasic Ca phosphate (I) is stabilised against reaction with F ions by suspending in an aq. medium of pH 5-10, contg. 0.01-5 wt.% of 3-amino-1-hydroxypropane-1, 1-diphosphonic acid or one of its water-soluble salts.

(I) is used in tooth-cleaning prepns. 1.12.75 as 646737 (5pp997).

COLG D21 59697X/32 =US 4108-9
Antiperspirant compsn. for use dry or with aerosol - compris aluminium hydroxychloride, aluminium chloride and urea
COLGATE PALMOLIVE CO 12.03.75-US-557562
*E33 (E16) (22.08.78) *BE-839-426 A61k-07/38*

Antiperspirant compsn. is prepd. comprising co-spray drying together liq. mixt. of urea and aq. soln. of aluminium chloride and aluminium chlorhydrate to form an impalpable powder contg. 1-10 % urea, 6-12% chlorid and 78-92% chlorhydrate.

Pref. powder is micronised to particle size of 325 mesh, and powder filled into an aerosol container togeth with propellant. Aluminium chloride component has 5.6-5.8% aluminium, 20-23% chlorine and balance water. Compsn. has theoretical Al:Cl atomic ratio 1, 6:1.

Dry powder aerosol formulation is prepd. in which ski irritation and valve clogging is minimised. 12.3.75 as 557562 (3pp931).

BEEC D21. 25936U/19 =US 4108-978
Silica-xe rogel polishing agent - for transparent tooth-pastes and mouth-wash compsns
BEECHAM INC 20.10.71-GB-048671
*(22.08.78) *DT2250-078 A61k-07/18*

Oral hygiene compsn. in the form of a translucent dentifrice gel consists of (a) 3-14% silica xerogel of average particle dia. 25-30 μm; (b) 4.0-10% silica aerogel; (c) 1.0-1.5% Na CMC; (d) 20-30% glycerol; (e) 20-50% sorbitol; and (f) 1.05-2.0% Na lauryl sulphate, the balance being water and agents for flavouring, sweetening and thickening the compsn. and providing it with anti-corrosive properties.

The silica xerogel has superior cleaning action c.f. prior art silica xerogel of smaller particle dia.. 2.2.76 as 654198 (+ 13.10.72, 15.4.74 - US - 297500, 461228) (5pp984).

INDV ★ D21 21749B/11 ★US 4108-979
Dentifrice compsn. contg. aluminium salt and an abrasive - e.g. calcined kaolin, having anticariogenic activity
INDIANA UNIVERSITY 02.08.76-US-710438
B06 E37 (22.08.78) A61k-07/16

Decalcification and solubility of dental enamel and the incidence and severity of dental caries, can be reduced by applying to the teeth a fluoride-free dentrifice prepn. comprising at least one water soluble aluminium salt and a dental abrasive consisting of purified, calcined kaolin, calcined aluminium silicate, silica, alumina, or their mixts..

The compsn. has improved anticarnogenic activity, the aluminium ions are present in a biologically available form in the oral cavity, and does not need fluoride ions. 2.8.76 as 710438 (6pp957).

COLG D21 39947V/22 =US 4108-980
Toothpaste compsn. - contg. calcium and phosphate-based product
COLGATE PALMOLIVE CO 12.09.73-GB-042835 (11.01.73-GB-001633)
*E33 (22.08.78) *BE-809-651 A61k-07/16 +A01n-11*

Fluoride is applied to teeth by applying a fluoride source and orthophosphoric acid soln. of pH 3-4, and neutralising to pH 7 with an aq. soln. contg. Ca ions and phosphate ions. A stoichiometric amt. of the phosphate ions are present w.r.t. the Ca ions; and the neutralising soln. has a pH of 7.

The compsn. provides controlled polishing or abrasivity, prophylactic advantages, such as redn. of caries incidence or extent or redn. of bleeding from gums, and cosmetic advantage such as increased whiteness of teeth. 4.3.77 as 774351 (+ 9.1.74, 18.11.75 - US - 431946, 633052) (+ 25.7.73(2), 30.7.73(2), 31-7-73 - GB - 035459, 35470-1,030095-6, 036428) (13pp976).

INDV ★ D21 21750B/11 ★US 4108-981
Oral compsn. comprising aluminium salt and a carboxylic acid or salt - has improved anticariogenic activity and is used as dentifrice, mouth-wash, chewing gum etc.
INDIANA UNIVERSITY 02.08.76-US-710439
B05 E33 (E17) (22.08.78) A61k-07/24

The incidence and severity of dental caries can be reduced by applying to the teeth a prepn. consisting of (i) ≥1 water-soluble Al salt, (ii) a stable carboxylic acid or its salt, and (iii) a carrier. The pH of the compsn. is 7-9, and the molar ratio of acid to Al ion is 1:1.

The compsn. has improved anticarnogenic activity, it maintains Al ions in available form and yet is not bound so tightly that it is not free to act on dental enamel. 2.8.76 as 710439 (7pp957).

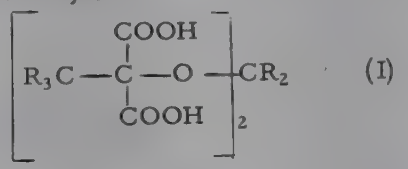
ASHL ★ D21 21784B/11 ★US 4109-094
Exhaustive quaternisation of imidazoline cpds. - by sequential alkylation and neutralisation gives cpds. useful as fabric softeners, in hair rinsing compsns., as emulsifiers and antistatic
ASHLAND OIL INC 27.06.77-US-809988
E13 F06 (D25) (22.08.78) C07d-233/16

An imidazoline (I) is quaternised by reacting with a lower alkyl halide, lower dialkyl-sulphate, benzyl chloride or bromide at about 1 mole per mole amidoamine condensate used in prepn. of (I). The mixt. is then treated with an alkali metal alkoxide (A) to neutralise protonated species formed, then additional quaternising agent, equal to the equiv. of (A) used, added. The neutralisation-quaternisation sequence is repeated until the concn. of non-quaternised cpd. is < 3 wt.%. (I) is made by cyclising a diamidoamine made by condensing an ethylene-alkylene triamine (esp. diethylene triamine) with a higher fatty acid or its functional equiv. (esp. tallow).

Quaternised (I) are fabric softeners, components of rinsing compsns. for hair, emulsifiers (e.g. for bituminous or asphaltic materials), and anti-static agents for paper, fabric, polish, etc. Reduced content of un quaternised (I) and of uncyclised prim. or sec. amine acid salts. 27.6.77 as 809988 (4pp1251).

MONS D21 36938A/21 =US 4143-125
Oral tartar inhibitor compsns. - contg. poly:carboxylic acids of the alkylene di:oxy-di:carboxylic type
MONSANTO CO 27.12.76-US-754371
*B05 E17 (06.03.79) *DT2750-873 A61k-07/16 +A61k-09/68*

Oral compsns. for inhibiting formation of dental calculus are new. They comprise a carrier and an effective amount of an alkylenedioxybis(alkyl-propanedioic acid) of formula (I) or a pharmaceutically acceptable salt. Each R is H or lower alkyl.



$$\left[R_3C - \overset{\displaystyle COOH}{\underset{\displaystyle COOH}{\overset{|}{\underset{|}{C}}}} - O - \right]_2 CR_2 \qquad (I)$$

Pref. carrier is a dental polishing agent, flavouring agent, chewing gum base or human or animal food. 27.12.76 as 754371 (6pp974)

COLG ★ D21 21974B/11 ★US 4143-126
Dental prophylactic paste - contg. pumice abrasive, humectant and gelatin
COLGATE PALMOLIVE CO 01.07.77-US-812030
B05 (06.03.79) A61k-07/16

Dental paste comprises 40-60% pumice abrasive, a humectant and 0.01-10% gelatin so that the compsn. has a viscosity of 1200-1400 centipoises at 30-40°C.

The prophylactic paste is fluoride-free, non-spattering and has improved flowability through a nozzle under low pressure. 1.7.77 as 812030 (4pp1248)

COLG ★ D21 21975B/11 ★US 4143-128
Anti-calculus mouth-wash or dentifrice compsn. - contg. a poly:amine poly:phosphonate and without calcium abrasives
COLGATE PALMOLIVE CO 10.06.77-US-805503 (12.11.71-US-198439)
B05 E11 (06.03.79) A61k-07/22

Oral mouthwash or toothpaste compsn. comprises a carrier and ≥ 0.01% polyamine polyphosphonate of formula $(CH_2)_n\left[(CH_2-PO_3H_2)_4\right]_2$ (I) (n=1-10) or its water-soluble salts. The compsn. is at pH 5-11 and free from Ca abrasives that would impair the anticalculus activity of (I).

The compsn. is used for inhibiting the formation of dental calculus without adversely affecting tooth structure. 10.6.77 as 805503 (+6.8.73, 18.4.75, 25.2.76-US-386121, 569506, 661220) (5pp1248)

ELIL ★ D21 21981B/11 ★US 4143-14
Acne treatment - by topical admin. of antibiotic A-201A compsn.
ELI LILLY & CO 14.09.77-US-833127
B04 (D16) (06.03.79) A61k-31/52

Acne is treated by topical admin of a compsn. contg. 0.1-10% of antibiotic A-201A (I). (I) is non-toxic (LD_{50} 2000 mg/kg intravenously in the rat) and is a known antibacterial.

(I) is obtd. by cultivation of S. Capreolus NRRL 3817 a described in U.S. 3843784. Pref. it is applied in a gel, cream or lotion contg. 1-3% (I). The compsn. is applied topically several times daily. 14.9.77 as 833127 (4pp124

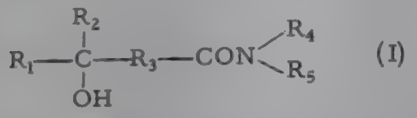
HENK D21 04133A/03 =US 4143-159

Cosmetic compsns. for the skin, contg. hydroxy alkanoic acid amides - used as hydrating agents in cosmetic emulsions

HENKEL KG AUF AKTIEN 12.07.76-DT-631284

*E17 (06.03.79) *BE-856-683 A61k-07/48*

Hygroscopicity in the skin is maintained or restored by topically applying a safe but effective amt.; as moisturiser, of a cosmetic agent contg. 1-20 wt.% $\geqslant$1 hydroxyalkyl carboxylic acid amide of formula (I). In (I) R_1 and R_2 are each H or 1-4C alkyl, R_3 has direct bond and straight-chain 1-3C alkylene, opt. substd. by $\geqslant$1 1-4C alkyl or hydroxyalkyl, and R_4 and R_5 are each H, 1-4C alkyl, 2-6C hydroxyalkyl, contg. 1-5 -OH gps. Remainder of prepn. contains conventional excipients.



$$R_1-\underset{OH}{\overset{R_2}{C}}-R_3-CON\begin{matrix}R_4\\R_5\end{matrix} \qquad (I)$$

Skin-care, skin-protection and skin-cleaning agent is prepd. whereby functional capacity of skin can be maintained or increased in spite of environmental influences and epidermal damage. 8.7.77 as 814049 (8pp931)

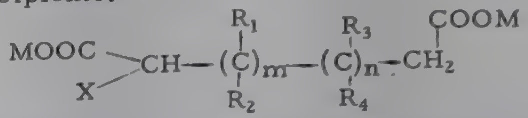
HENK D21 54013W/33 =US 4143-

Skin care compsns - contg. aliphatic polycarboxylic acids hydrating agents

HENKEL KG AUF AKTIEN 29.01.74-DT-404071

*E17 (E12) (06.03.79) *BE-824-915 +A61k-47*

The skin of warm-blooded animals is cared for and prot ted by topically applying an effective amt. of a cosmetic moisturizing compsn. consisting of an emulsion adjuste to pH 5-7 contg. an emulsifier, 1-20 wt.% of $\geqslant$1 alipha polycarboxylic acid cpd. of formula (I), and inert cosme excipients.



$$\begin{matrix}MOOC\\X\end{matrix}CH-(\underset{R_2}{\overset{R_1}{C}})_m-(\underset{R_4}{\overset{R_3}{C}})_n-\underset{}{\overset{COOM}{CH_2}} \qquad (I)$$

In (I) M is H, alkali(ne earth) metal, ammonium, lower alkyl-ammonium or lower alkylol-ammonium; X is H, COOM or SO_3M, R_{1-4} are each H or COOM; m and n are 0-2. 19.11.76 as 743473 (+28.1.75-US-544811) (6pp910)

See Also

D13 J5 3133645

D22 : BANDAGES; DRESSINGS

STER ★ D22 20017B/11 ★BE-870-281

Purifying odorous waste gases, esp. from water treatment - using aq. suspension of biological solids and active carbon

STERLING DRUG INC 15.09.77-US-833465

J01 P34 (D15) (07.03.79) A61p B01d

Process for eliminating a substantial proportion of organic and/or mineral volatile substances from an odorous gas current comprises passing it into $\geqslant$1 purifier comprising an aq. suspension of biological solid materials and active carbons at concns of 50-20,000 mg/l for each component.

The pref. concns. are 1000-5000mg/l and 5000-16,000 mg/l respectively. The process is esp. applied to waste gases contg. organic oxygen cpds. hydrogen sulphide and/or mercaptans, ammonia and/or amines.

The process is applied to industrial waste gases. The use of the activated sludge and the active carbon together gives a synergistic effect. 7.9.78 as 870281 (14pp597)

KAOS ★ D22 20067B/11 ★BE-871-829

Absorbent article, esp. sanitary towels, with pref. cellulose core - lined with blend of hydrophilic and hydrophobic fibres

KAO SOAP KK 08.02.78-JA-013136

A96 F07 P32 P34 (01.03.79) A61f A61p

Absorbent article has an outer lining comprising a fibrous non-woven fabric contg. 60-90 wt.% hydrophilic fibres and 40-10 wt.% hydrophobic fibres. The hydrophilic fibres comprise 10-90 wt.% fibres of 1.5-3 deniers and 90-10 wt.% fibres of 4-7 deniers.

Incorporation of the 4-7 denier fibres improves the absorbing capacity of the article. Used in prodn. of sanitary towels etc. 8.11.78 as 871829 (13pp950)

KIMB ★ D22 20276B/11 ★DT 2837-072

Sanitary towel without fastening loops - pad is sandwiched between impervious and absorbent films ultrasonically cross-welded at projecting ends

KIMBERLY CLARK CORP 22.08.77-US-826472

A96 P32 (A35) (08.03.79) A61f-13/16

The sanitary towel has an absorbent pad, an impervious thermoplastic film barrier on its underside, and an absorbent thermoplastic cover whose edges overlap to enclose the pad and barrier. Both cover and barrier film project at the ends of the pad, the layers and projections are ultrasonically welded together along a narrow cross-strip between the ends of the pad and the free ends of the cover and barrier.

Prod. is soft and flexible but reliably bonded. The ends of the layers can stand free at the outer edges for ease mfr. and the bond is stronger than a normal heated wel 22.8.78 as 837072 (15pp1007)

MOLN ★ D22 20286B/11 ★DT 2837-

Sanitary towel - with two fluid tight strips around absorbent c and overlapping on underside (NL 2.3.79)

MOLNLYCKE AB 31.08.77-SW-009792

P21 P32 (08.03.79) A41b-13/02 A61f-13/06

A sanitary towel or baby's napkin consists of a fluid ab-sorbent core and a fluid permeable sheath, separated by a fluid-tight protective layer on the sides and on the out side. The protective layer is made of two strips of mat erial which overlap on the outside and leave a gap at the other side by their parallel edges.

This prevents the crumpling of the protective layer a thin material can be used without endangering the fluid tightness. The manufacture can be automated without la our consuming individual inspection. 28.8.78 as 837490 (13pp39)

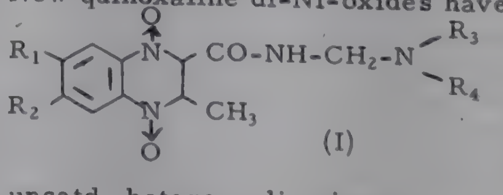
FARB D22 04168A/03 =GB 1541-

(2)-Methyl (3)-amino-methylcarbamoyl quinoxaline 1,4)-dioxide for use as antibacterial agents

BAYER AG 27.08.76-DT-638732 (14.07.76-DT-631520)

*A60 B02 C02 (14.03.79) *BE-856-771 A61k-31/49 C07d-241/ C07d-295/12 C07d-401/12 C07d-403/12 + C07d-413/12*

New quinoxaline di-Ni-oxides have formula (I) where R_1 and R_2 are each H, h -gen, alkyl or alkoxy and R_3 and R_4 are ea alkyl or R_3 and R_4 together with the N for an opt. substd. and op unsatd. heterocyclic ring.



(I)

Cpds.(I) exhibit broad spectrum antibacterial activity and have good solubility in water and organic solvents. They are useful in pharmaceutical and veterinary comps and as feedstuff additives, and also as antimicrobials fo preservation of polymers, paints, foodstuffs, water, etc. 12.7.77 as 029214 (12pp927)

RISD D22 52074Y/29 =GB 1542-177

Device producing air stream contg. vaporised cpds., e.g. deodoran' - contg. replaceable strip impregnated with active material allowing reduced size and max. contact area

RISDON MFG CO 23.07.76-US-707954

*P34 +P14 Q56 (14.03.79) *US4035-451 A61l-09/04 +F04d-25/06*

Cartridge, for use in appts. for inducing air flow through it in order to release a vaporised prod. contained in it to the environment, comprises a centrally mounted cylindrical battery which is surrounded by ducts through which air is drawn by a fan. The prod. to be vaporised is stored within the ducts. The air flow appts. comprises a cylindrical housing hinged in two halves with air inlet and outlet ports. Air is drawn through the housing by a battery-driven axial flow fan.

The self-contained disposable cartridge contains the battery to drive the fan. 12.7.77 as 029176 (6ppp1364)

BARH D22 77840Y/44 =GB 1542-225

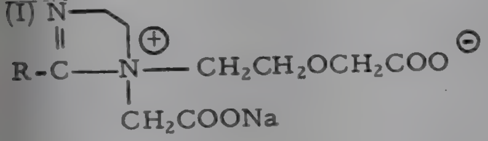
Cleaning and disinfecting aq. soln. for soft contact lenses - contg. common salt, buffer, sterilising agent and surfactant

BARNES HIND PHARM INC 12.04.76-US-676280

*P34 +R21 (14.03.79) *DT2716-166 +G02c-13*

Soft lens disinfecting and cleaning soln. comprises an aq. saline soln. buffered to pH 5-9, a preservative system and 0.001-0.5 w/v ≥ 1 N-hydroxyalkylated carboxamides of 10-18C fatty acids and/or ≥ 1 ampholytic detergent of formula

(I)



In (I) R is 10-13C aliphatic. Pref. pH is 6.5-7.6, the surfactant, is a carboxamide and is present at concn. of 0.001-0.5 w/v, esp. 0.001-0.01 w/v. Preservative is thimerosal, EDTA and/or sorbic acid, and 0.001-0.1 w/v lauramide of diethanolamine.

Prod. soln. can be used to clean and disinfect soft lenses by heating the lens in the soln. 17.1.77 as 001787 (4pp)

NIPK ★ D22 20992B/11 ★J5 4017-113

Gelatin type cataplasm - contg. alum(s) and/or sulphate, and polyacrylic acid metal salt

NIPPON KAYAKU KK 06.06.77-JA-065837

A96 E37 (A14) (08.02.79) A61k-09/06

Cataplasm of gelatin type contains 0.01-10% alums and/or sulphate and 0.01-20% metal salt of polyacrylic acid. The new cataplasm is stable at higher temp., adheres closely to the skin; is highly flexible and has high water-holding capacity.

The alums have formula $AB(XO_4)_2 \cdot 12H_2O$ (where A = Na, K, Pb, Cs, NH_4; B = Al, Fe, Cr, Mn, K; X = S), and include sodium alum, potassium alum, ammonium alum, ammonium iron alum, potassium iron alum, sodium iron alum, etc. The sulphates have formula $(M)_2SO_4$, $MHSO_4$, M^1SO_4 or $(M^2)_2(SO_4)_3$ (where M = Na, K, NH_4, Li; M^1 = Zn, Fe^{++}, Cr, Mn; M2 = Al, Fe^{+++}) and include Na_2SO_4, K_2SO_4, $(NH_4)_2SO_4$, Li_2SO_4, $ZnSO_4$, $FeSO_4$, $Fe_2(SO_4)_3$, Cr_2- $(SO_4)_3$, $MnSO_4$, $Al_2(SO_4)_3$, $NaHSO_4$, $KHSO_4$, etc. The alums and/or sulphates may be used in amt. of 0.01-10% pref. 0.05-5%. The metal polyacrylates include those of average mol. wt. 100,000-10,000,000 examples of which are alk- ali metal (Li, K, Na) salts, alkaline earth metal (Ca) salts, and trivalent metal (Fe) salts. 6.6.77 as 065837(5pp52)

LEEN= ★ D22 21254B/11 ★SU -369-930

Electric purifier for fluids - has bar electrodes in helix inside cylinder formed by dielectric discs

LENGD ENG CONS INST 28.09.70-SU-482531

J01 P41 (D15) (02.03.78) B03c-05/02

The purifier comprises electrodes, coagulator and coarse impurities filter. For greater effect and regulated results the body is a set of dielectric discs to form a hollow cylinder.

The bar electrodes are set along a helix within the cylinder and can move inside horizontally. Inside the body and coaxial to this is a tube which can both rotate and move vertically and carries an axially positioned insulated electrode formed from a taut wire strand.

Barabanov V.I., Lavrov I.S., Okunev R.A. et al. Bul. 482531 (2pp26)

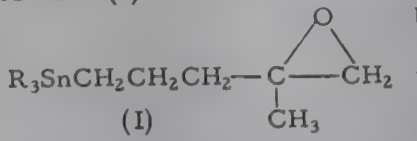
AZSU= ★ D22 21285B/11 ★SU -493-468

Organo-tin epoxide polymer stabilisers and biocides prepn. - by reacting epoxy-methyl-pentene with tri:alkyl stannyl hydride in presence of azo-iso-butyro di:nitrile

AZERB SUMGAIT PETRO 21.03.72-SU-763648

A60 E13 (11.03.77) C07d-01/02 C07f-07/22

1,2-Epoxy-2-methyl-5-trialkyl stannyl pentanes are of formula (I):



(I)

where R is an alkyl, have been synthesized.

They are described as new and are useful as stabilisers and biocides for chlorine contg. polymers. Also they react readily with carbonyl contg., vinyl chloride copolymers forming self-stabilised polymers resistant to light and air.

Cpds. (I) are prepd. by reaction of 1,2-epoxy-methyl-pentane (II) with a trialkyl stannyl hydride (III) in presence of an azo-iso-butyrodinitrile (IV). The reaction is carried out at temp. of 80-100°C.

Rzaev, Z.M., Sadykh-Zade, S.I., Kyazimov Sh.K. et al. Bul. 44/30.11.75 21.3.72 as 763648 (4pp48)

LINM D22 43507Y/25 =US 4107-937

Preserving biological substances, esp. blood, by freezing - using temp. gradient which is precisely controlled for max. cell survival

LINDE AG 22.12.75-DT-557870

*J07 P34 Q75 (22.08.78) *BE-849-649 F25d-17/02*

A process for deep freezing of biological substances comprises enclosing the substance to be deep frozen in a bio receptacle, determining the temp.-time curve for the outer wall of the bioreceptacle which corresponds to the temp. gradient necessary to freeze all of the substance within the bioreceptacle with an effective cell survival rate.

The bioreceptacle is then subjected to heat exchange with a fluid coolant at a temp. sufficient to deep freeze the biological substance while controlling the temp. applied to the outer surface of the receptacle as a function of time to conform to the temp.-time curve.

The bioreceptacle is sprayed with liq. coolant at a rate which is controlled in dependence upon the temp. measured at the outer wall of the bioreceptacle. 21.12.76 as 752930 (-pp1363).

ANDP D22 34738W/21 =US 4107-976

Safe storage and supply of medical sterilising gas - esp. ethylene oxide by immersing supply cylinder in absorbent liquid

ANDERSEN HW PROD INC 10.08.73-US-387461 (02.04.76-US-672937)

*P34 +Q69 R15 (22.08.78) *FR2240-405 F17c-13/02 G01m-03/04*

Method for detecting and controlling leaks of a volatile substance (e.g. ethylene oxide) for use in a sterilisation appts. comprises containing the volatile substance under pressure in a confined system which is immersed in a liq. (e.g. H_2O). The liq. is capable of absorbing the volatile substance so that if any of the substance leaks from the system into the liq. physico-chemical changes are sensed by a series of detectors servicing to detect leaks of the substance from the confined system.

The liq. may be used as a heat transfer medium in heat exchange relationship with the confined system and a pressure regulator is used to prevent undesirable condensation of the volatile substance. 2.4.76 as 672937 (7pp)

NATR D22 39686W/24 =US 4108-169

Bandage for orthopaedic splints - comprising fabric strip coated with poly carboxylic acid and metal oxide-aluminosilicate powder mixt.

NATIONAL RES DEV CORP 29.11.73-GB-055471

*A14 F08 P32 P73 +P34 P42 (A96) (22.08.78) *DT2456-145 A61f-05/04*

Surgical splint comprises a flexible web and a polycarboxylate cement (I). (I) is formed by addn. of water to a water-hardenable sheet comprising the web to which cement-forming material (II) is applied. (II) comprises a water-soluble polycarboxylic acid or a precursor which forms a polycarboxylic acid on contact with water and an ion-leachable inorganic particulate material.

Polycarboxylic acid is pref. a homopolymer or copolymer of acrylic acid. Splinting material is easy to use, hardens at room temp. without evolution of large amts. of heat, has high green strength, and is non toxic, water-resistant and transparent to X-rays. 25.6.76 as 701608 (+ 21.11.74 - US - 525731) (9pp936).

MOEH/ ★ D22 21564B/11 ★US 4108-180

Reusable menstrual tampon - of open-cell polyurethane foam in mesh bag with draw-string closed opening

MOEHRLE D B 20.12.76-US-752602

A96 P32 (22.08.78) A61f-13

A tampon comprises nontoxic flexible dry compressible absorptive material within a bag with ≥1 open-mesh fibrous layer and an opening closable by a drawstring woven through the mesh around an opening for entry and withdrawl of the material. The drawstring extends from the vagina in use to permit withdrawal and at least partly compresses the material when not in use.

The material is pref. open-cell polyurethane foam and the mesh has random outwardly extending parts for surface retention of mucous, clotted blood or semen. 20.12.76 as 752602 (5pp1358).

BETT- D22 08099B/05 =US 4108-601

Steam steriliser for hospital use - with outer jacket supplied with steam at two pressures under temp. control

BETTER BUILT MACH 29.12.76-US-755440

*P34 (22.08.78) *CA1046-229 A61l-03 +A61l-05*

Sterilising appts. comprises (a) chamber (I) with an open front; (b) closed jacket (II) round sides of (I) for circulating steam; (c) door for closing front of (I); (d) conduit connecting (I) and (II) for fluid communication including a valve; (e) device for opening/closing valve; (f) low and high pressure lines connected in parallel to supply steam to jacket at 2 different pressures; (g) a second valve in the high pressure line for controlling the steam flow and (i) temp. sensor for the chamber, which actuates the second valve to admit high pressure steam to give a desired temp. and then closing it, as required.

Pref. sensor is sensitive to temp. drops of ca. 1°F and is adjustable in increments of 1°F. Pref. a high pressure vacuum pump is provided to evacuate the steam from the chamber.

Useful for sterilising e.g. laboratory/hospital glassware, instruments, parenteral solns., paper, fabrics, sheets etc.. Various temps. may be used. 29.12.76 as 755440 (11pp963).

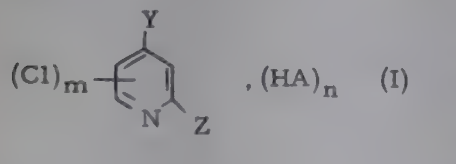
DOWC ★ D22 21702B/11 ★US 4108-859

Antimicrobial chloro:pyridyl:aminoalkyl:guanidine derivs - prepd. by reacting a (N)-(chloropyridyl) alkane di:amine with (N,N')-di:alkyl S-ethyl:thiuronium iodide

DOW CHEMICAL CO 06.06.77-US-804038

C02 E13 G02 (22.08.78) C07d-213/53

Chloropyridylaminoalkylguanidines of the formula (I) are novel: -



(I)

(where one of Y or Z is H, Cl, $-CCl_3$ or CN and the other is $-NH-R'-N=C(NHR^2)_2$; m = 1, 2 or 3; n = 1 or 2; R' = (3-8C) alkylene; $R^2 = CH_3$ or C_2H_5; HA = pharmaceutically acceptable acid.).

(I) are especially active against fungi which attack paints or plants. 6.6.77 as 804038 (8pp916).

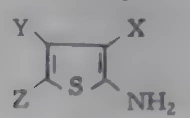
ICIL ★ D22 21705B/11 ★US 4108-867

Biocidal 2-amino-thiophene derivs. - used for controlling bacteria, slimes and moulds, and as dye intermediates

IMPERIAL CHEM INDS LTD 08.01.73-GB-000965 (28.01.72-GB-004046)

C02 E13 (22.08.78) A01n-09 C07d-333/24 C09b-27

2-Aminothiophenes of the formula (I) are new.



(I)

In (I) X = lower alkyl, sulphonyl, phenylsulphonyl, CN, COOH, lower alkoxycarbonyl, lower alkoxy-lower alkoxycarbonyl, $-CONT^1T^2$; T^1 is H, lower alkyl or phenyl; T^2 is H or lower alkyl; Y = H, lower alkyl, phenyl or nitrophen

Z is NO_2, CN or $-CONT^1T^2$.

(I) are biocides for controlling bacteria, slimes and moulds and are also intermediates for dyes. 1.5.74 as 466059 (+ 16.1.73 - US - 324190) (5pp916).

CONO ★ D22 21716B/11 ★US 4108-

Liquid phase normal alkylation of phenol(s) with alkanol(s) - in presence of alumina catalyst at 200-400 degrees Celsius and 1 to atmospheres

CONTINENTAL OIL CO 18.11.76-US-742931 (19.01.76- 650225)

B05 C03 E14 (22.08.78) C07c-39/08

n-Alkylation of resorcinol, phenol, isomerised xylenols hydroquinone, or o-, m- and p-cresol with (4-10C)n-alkanols at 200 to 400 °C and 1 to 20 atmospheres in the presence of an alumina catalyst formed by the hydrolysi of aluminium alkoxide.

The process avoids the use of expensive zinc amalga or corrosive zinc chloride of prior art methods. One product, 4-n-hexyl resorcinol, is an antiseptic and anthelmintic. Previous attempts to prepare this compound by direct alkylation yielded the inactive isohexyl resorcinol. 18.11.76 as 650225 (4pp916).

SCHD D22 96287X/52 =US 4108-

Biocidal compsns. contg. (new) diptycho tin cpds. - e.g. 1 diisobutyl diptycho oxazastannolidine, useful as disinfectar textile finishes etc.

SCHERING AG 16.03.76-DT-610931 (14.06.75-DT-526711)

*A60 C01 F06 +P34 P63 (22.08.78) *BE-842-937 A01n-09/12*

Bacteria and fungi are killed by contacting them with a diorgano tin cpd. (I) of formula $R_1R_2Zn(X-CR_3R_4-CH_2)_2-NR_5$. In the formula, R_1 and R_2 are 1-10C alkyl, 1-10C alkenyl, cycloalkyl or aromatic. R_3 and R_4 are each H o 1-10Calkyl or alkenyl, or together are =0. R_5 is H, 1-1 alkyl, 1-10C alkenyl, cycloalkyl, phenyl, naphthyl, m- or p-tolyl, m- or p-methoxyphenyl, benzyl or 5-acetam -2-ethoxyphenyl. X is O or S.

Cpds. (I) are effective as disinfectants and as protec ive agents for wood, plastics, textiles, etc. An example of (I) is 1, 1-diethyl-5-propyl-diptych-oxazstannolidin. 11.6.76 as 695125 (8pp927).

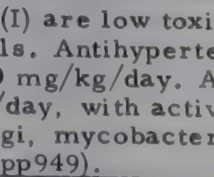
AMHP ★ D22 21756B/11 ★US 4108-

1,3-Di:hydro-3,3-di:alkyl-furo-(3,4-b)quinoline cpds. - useful antihypertensive and antimicrobial agents

AMERICAN HOME PROD CORP 08.11.76-US-739779

B02 C02 (22.08.78) A61k-31/47 C07d-491/14

Dihydrofuroquinoline derivs. of formula (I) and their therapeutically acceptable salts are new: (where R^1 and



(I)

are each lower alkyl; R^3 is H o $-(CH_2)_nNR^7R^8$ (where n is 1-6 and R^7 and R^8 are each lower alkyl); R^4 is H, Cl, Br or of formula -Y-X; Y is O or NH; X is 2, 2, 6, 6-tetramethyl-4-pi eridinyl or $-Z-R^9$; Z is (hydro -lower alkylene; R^9 is phenyl, 1-pyrrolidinyl, 2-oxo-1-pyrrolidinyl, 3-pyrryl or $-NR^{10}R^{11}$; R^{10} and R^{11} are each H or (hydroxy-)lower alkyl).

(I) are low toxicity antihypertensives and antimicrobials. Antihypertensive doses are e.g. 1-500, pref. 10 300 mg/kg/day. Antimicrobial doses are e.g 50-500 m kg/day, with activity being shown against e.g. bacteria fungi, mycobacteria and protozoa. 8.11.76 as 739779 (11pp949).

CONO D22 57424W/35 =US 4109-

Microbiocidal ammine-zinc salts of organic sulphonic acids - for in disinfectants washing compsns and soaps

CONTINENTAL OIL CO 15.02.74-US-442948

*E12 P34 (22.08.78) *DT2501-258 +A01n-09*

Anti-microbial formulation is prepd. contg. 0.5-50 wt. ammoniated zinc cpd., 98.5-20 wt.% water, 1-30 wt. % alcohol (either 2-4C alkanols or 2-4C hydroxyalkanols).

Zinc cpd. is either ammoniated zinc salt of 1-16C alkylaryl sulphonic acid, benzene sulphonic acid, 12-20 alkyl hydroxy sulphonic acid, 12-20C olefin sulpho acid, 10-16C alkyl sulphate, diphenyl(2-16C) alkane sulphonic acid, or their mixt.. The salts contain an average of 0.5-6.0 mols ammonia per mol. zinc.

Compsn. is formulated into surfactant prepns. and oilet bars, not inhibiting biodegrability properties. 15.2.74 as 442948 (4pp931).

HIRS/ D22 60241A/33 =US 4142-476

Feminine hygienic pads - made by single longitudinally folding one edge and double over-folding opposite edge before stitching

HIRSCHMAN S Z 15.10.76-US-732941 (26.10.77-US-845553)
*F07 P32 (06.03.79) *US4095-542 A61f-13/18*

Feminine hygienic pads are produced from a roll of material by folding the material in longitudinal folds, the folded form having a narrow panel abutting a wider panel. The edge of the narrow panel is stitched to that of the wider panel. A filler material is pref. inserted between the folds prior to stitching. The stitched form has an anterior narrow panel having an outer anterior leading edge and a wider posterior panel. The form is then cut into pads, pref. about 2 in long.

The form of the pad facilitates insertion into the interlabial space and improves retention. 26.10.77 as 845553 Div. ex. 4095542 (6pp1379)

HOFF D22 45803A/26 =US 4142-521

Electrostatic cicatrisation of (skin) wounds with electret dressing - allows patient freedom from battery or external power connection

HOFFMANN-LA ROCHE INC 23.12.76-US-754060
*P34 +P32 R42 (06.03.79) *BE-862-155 A61n-01/10*

Soft tissue wound healing is promoted by applying noninvasivelt and close to the wound site an electret providing an electrostatic field to the site. A piece of gauze is pref. wrapped around the electret which is then attached to the adhesive side of an adhesive bandage.

Alternatively, an electret may be held in a stocking, gloove, neck collar or limb cast. An electret may be shaped to correspond to a base which has been shaped to conform with a body area. The base is e.g. a surgical sponge. 23.12.76 as 754060 (8pp1358)

HHRE- ★ D22 21821B/11 ★US 4142-522

Paediatric arm restraint - of foam-lined plastics sheet wrappable around arm and held by fasteners

H & H RESEARCH INC 19.09.77-US-834689 (04.08.76-US-711496)
A96 P32 (06.03.79) A61f-13

A restraint to hold the elbow straight so that a child cannot touch i.v. feeds or dressings comprises a flat quadrilateral body for wrapping around an arm to form a tube from axilla to wrist while permitting free movement at shoulder and wrist, and fasteners for holding the wrapping releasably in position.

The body comprises an inner pad of thin non-irritant foam and an outer sheet of flexible deformable stiff plastics, and has an edge for placement in the axialla, a pair of spaced edges converging from this, and a second edge smaller than the first. The fasteners are pref. Velcro strips, the foam is polyethylene and the sheet is polypropylene. 19.9.77 as 834689 C.i.p. 4078560 (6pp1358)

AMCY D22 88071A/49 =US 4142-628

Surgical suture package - with folded holder card inside inner bag for easy access to contents

AMERICAN CYANAMID CO 16.05.77-US-797216
*P34 +P31 (06.03.79) *DT2820-257 A61l-17/02*

A direct dispensing multi-needle surgical suture package comprises a strand cover flap with tandem score lines and on one side of a back panel, a notch in the flap top adjacent the panel and a label cover flap at the panel bottom containing tandem score lines.

A diagonal cut connects the bottom and a side of the label flap. A side flap adjacent and connected to the label flap and opposite the cut has score lines. The strand flap is folded on its score lines onto the panel, and needled strands held together by a tab are contained between panel and strand flap with the tab and needled suture ends placed on the notch. The label flap is folded onto the strand flap which is folded under the panel so that when the tab is lifted the sutures are directly dispersed. 16.5.77 as

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DOWC D22 26764X/15 =US 4142-943

Pentachloro phenol purificn. - by distillation at reduced pressure in the presence of a polyol inhibitor

DOW CHEMICAL CO 23.09.74-US-508367
*E14 +P34 (06.03.79) *DT2541-591 C07c-37/22 C07c-39/24 +B01d-03/34*

Pentachlorophenol is purified by distn. at 190-270°C under subatmospheric pressure. Distn. is conducted in the presence of 0.1-10 wt.% hydroxyl-contg. cpd. as a sugar, polyhydric alcohol, ether of polyglycol or polyglycol, being present in 0-90% aq. soln.

Pref. hydroxyl cpd. is ethylene- or propylene glycol, glycerine, pentaerythritol, tetraethylene glycol, polyethylene glycol with mol. wt. 200 or 400, polyglycerol or sorbitol. Cpd. have b. pt. $>$100°C in the presence or absence of water.

Esp. useful in avoiding problem of pentachlorophenol decomposition inherent in the presence of metals and metal chlorides and heat. Prod. is used as an antimicrobial agent. 23.9.74 as 508367 (2pp931)

LOUD/ ★ D22 21915B/11 ★US 4142-985

Liq. surgical scrub soap compsn. - contg. cis-1-(3-chloro-allyl)-3,5,7-tri:aza-1 azonia-adamantane chloride as germicide

LOUDERBACK A L 23.01.78-US-871357
E13 (D25) (06.03.79) C11d-03/48

Liq. compsn. is prepd. as follows (all pts. by wt.): (a) glycerol (14.895-18.205) and propylene glycol (3.096-3.784) and mixed with a blend of pectin (1.674-2.046), and MeOH and/or EtOH (1.332-1.628); (b) deionised H_2O (50.265-61.435), EDTA di-Na salt (0.414-0.506), and cis-1-(3-chloroallyl)-3,5,7-triaza-1-azaniaadamantane chloride (I) (0.081-0.099) are mixed separately, then added to the prod. in (a); finally (c) the dodecylbenzene sulphonate (II) of NEt_3 (18.1-22.12) was added to afford the title compsn.

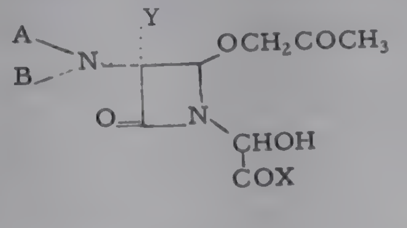
Inexpensive compsn. is readily prepd. at room temp., is non-toxic to animals and humans, kills a range of bacteria including Staphylococcus aureus and Pseudomonas aeruginosa, is non-irritating (non allergenic) to the skin, rinses freely without leaving a residue, and is biodegradable. In addn., the compsn. may be used as a shampoo which does not burn the eyes. 23.1.78 as 871357 (4pp478)

SHIO D22 20012Y/12 =US 4143-038

Antibacterial oxadethia cephalosporins - prepd. by cyclisation of an acetonyloxy-oxo azetidinyl-phosphoranylidene ester

SHIONOGI KK 04.12.75-GB-049891 (12.11.75-GB-046759)
*B02 C02 P34 (06.03.79) *BE-848-288 +C07d-205*

Cephalosporin analogues of formula (I) are prepd. by subjecting (; CHOH. COX replaced by CO. COX) to redn. with $\geqslant$ 1 equiv. Zn in acetic acid and opt. an organic solvent.



(I)

A and B are each H or a protecting gp. X is OH or a protecting gp. Y is H or CH_3O.

(I) are inters. for pharmaceutical and veterinary bactericides. 26.10.77 as 846503 (+12.11.76-US-741485) (9pp974)

AMOP ★ D22 21971B/11 ★US 4143-116

Contact lens steriliser provided with timer - to release capsule contg. lenses after sterilising time to effect neutralising in inverted position

AMERICAN OPTICAL CORP 18.08.76-US-715593
P34 (06.03.79) A61l-03 A61l-13

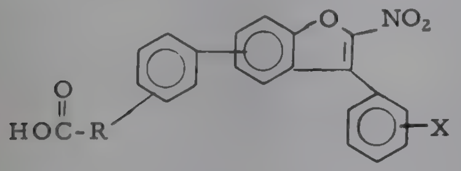
A steriliser for contact lenses comprises a frame for mounting a capsule via pivot pins at one end of the capsule. Contact lenses are received in the capsule with a sterilising soln. having a neutraliser near the end of the capsule opposite the pins.

A catch releasably holds the capsule in a treating posn. with a major portion of the capsule above the pins to immerse the lenses in the soln. A timer is connected to the catch for releasing the capsule to swing about the pivot pins to invert the capsule and effect contact between the soln. and the neutraliser.

A lock mechanism prevents removal of the capsule from the steriliser until neutralisation is complete. 18.8.76 as 715593 (5pp1044)

RIKL ★ D22 21986B/11 ★US 4143-152
Antimicrobial 2-nitro-benzofuran(s) - and 2-unsubstituted and 2-bromo intermediates, prepd. by cyclisation of alpha-phenoxy-acetophenone s), bromination and nitration
RIKER LABS INC 19.12.77-US-862013
B02 C02 (06.03.79) A61k-31/34 C07d-307/82

Substd. benzofurans of formula (I) (where R is 1-4C alkylene and X is H, halogen, 1-3C alkyl or 1-3C alkoxy) and the corresponding salts, lower alkyl esters, unsubstd. and N-alkylated amides and acid halides, are new. The corresponding cpds. where NO_2 is absent and their ethyl esters and the corresponding cpds. where NO_2 is replaced by Br, are also new.



(I)

(I) and its derivs. are antimicrobial agents. All the cpds. are active against bacteria and some are active against fungi and protozoa. They can be used for disinfecting and sterilising and as antibacterial agents. Individual doses are generally less than 100 mg/kg 19.12.77 as 862013 (6pp476)

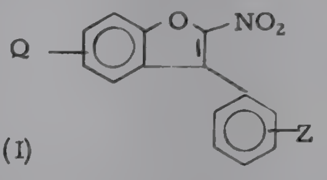
BADI D22 64078W/39 =US 4143-153
Wood-preservative fungicides - contg. amine-complexed heavy metal salts of N nitroso-N-cyclohexyl-hydroxylamine
BASF AG 06.03.74-DT-410603
*C01 E12 F09 P63 (C03 E19) (06.03.79) *DT2410-603 A01n-09*

Fungicidal compsn. for wood preservation consists of the water-soluble complex cpd. of a heavy metal salt of N-nitroso-N-cyclohexylamine. The metal is chosen from C Zn, Cd, Ni and Co.

The complexing agent is ammonia or an (in)organic cp having ⩾1 amine gp. capable complexing with the metal to convert the heavy metal salt into a water-soluble complex salt. 21.2.75 as 551937

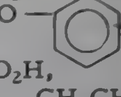
RIKL ★ D22 21987B/11 ★US 4143-1
Antimicrobial 2-nitro-3-phenyl-benzofuran carboxylic acids - prep by e.g. direct or halogen-replacement nitration
RIKER LABS INC 19.12.77-US-861891
B02 C02 (06.03.79) A61k-31/34 C07d-307/82

2-Nitro-banzofurans of formula (I) and their salts are ne where Q is $-CH_2CO_2H$, $-CH(Ph)CO_2H$, $-C(OH)(Ph)CO_2H$,



(I)

$-C(OH)(A)CO_2H$, $-CH_2OCH$ CO_2H, $-CH_2O-$



CH CO_2A, $-CH_2SCH_2CO_2H$, $-OCH_2CO_2H$, $-CH_2CH(CO_2$ or $-CH{=}C(CO_2R)_2$ in which Ph is phenyl and A is H, CH_3 or C_2H_5; Z is H except that when Q is $-CH_2CO_2H$ then Z is $-CO_2H$; and R is H or lower alkyl.

(I) are antimicrobial agents. All are active against ba teria (antibacterial) and some are antifungal and antiprot ozoal. They may be used for disinfecting and sterilizin and as antibacterial agents. Single dosages are usually less than 100 mg/kg. 19.12.77 as 861891 (9pp476)

See Also

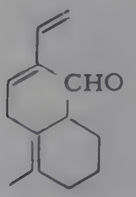
D13 US 4109083 D13 US 4109085 .D14 FR 239353
D21 US 4108849

D23: OILS; FATS; WAXES

BETT/ ★ D23 B/11 ★BR 7704-328
Osmotic cell contg. powdered vegetable product - comprises satchel with hermetically closed borders, made of membrane permeable only to steam
BETTI P L 30.06.77-BR-004328
(28.02.79) B01d-13 C11b-09

FIRM D23 68033R/38 =DS 1793-831
Unsat aldehydes with four double bonds - used as flavouring materials
FIRMENICH SA 14.12.67-CH-017568 (15.06.67-CH-008529)
*(08.03.79) *DL--74-269 C07c-47/20*

α-Sinensal of formula (I):

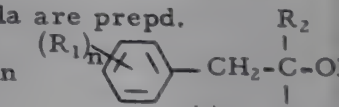


is prepd. by epoxidising ocimene with a per acid in a buffered medium, converting the expoxide to the corresp. sec. alcohol and then condensing with an unsubstd. vinyl ether to obtain 4-methyl-8-vinyl-nonadiene (4,7)-al (II). Cpd.II is condensed with propylidene imine substd. on the N atom with a 2-8C aliphatic or alicyclic gp. in presence of a metallising agent, e.g. Na. The prod. is at least partly hydrolysed in aq. acid medium to obtain sinensal.

α-Sinensal is useful as flavouring and aromatic agent for foods, drinks and medicines. 12.6.68. as 793831 Div. ex. 1768659 (4pp068)

SHEL D23 00423A/01 =GB 1542-1
Preparing phenyl ethanol derivs. - by reacting neophyl halide wi carboxylic acid, esterifying styrene deriv. and opt. hydrolysis (13.12.77)
SHELL INT RES MIJ BV 11.06.76-GB-024337
*E14 (14.03.79) *DT2726-064 C07c-31/14 C07c-67/04 C0 69/04*

2-phenylethanol derivs. of formula are prepd. by converting the corresp. halide (replacing $-OR_4$ in (I)) to the olefin by reaction with carboxylic acid R_5COOH at 50°C, reacting the olefin with R_5COOH opt. in the presence of a strong acid catalyst at ⩾ 50°C, and opt. hydrolysing the ester thus formed. Pref. the first step is carried out in the presen of a hydrogen halide acceptor to remove by-product form



$$(R_1)_n\text{-}C_6H_4\text{-}CH_2\text{-}\overset{R_2}{\underset{R_3}{C}}\text{-}O$$

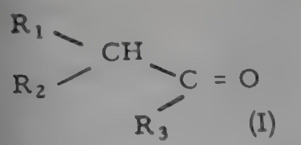
(I)

In the formulae R_1 is halogen or 1-6C alkyl or alkoxy, is 0-2, R_2 and R_3 are each H or 1-6C alkyl, R_4 is H or $-COR_5$, R_5 is H or opt. halogenated 1-6C alkyl.

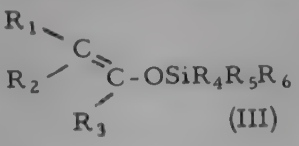
Prod. is a well-known synthetic aroma chemical with floral odour, and by this method can be prepd. on large scale. 11.6.76 as 024337 (3pp931)

AJIN ★ D23 20877B/11 ★J5 4016-4
Silyl enol ether prodn. - by reacting ketone with hydrosilane presence of cobalt carbonyl catalyst
AJINOMOTO KK 08.07.77-JA-081772
B05 E11 (07.02.79) B01j-31/20 C07f-07/18

Prodn. of a silyl enol ether of formula (III) comprises reacting a ketone of formula (I) with a hydrosilane of formula (II) in the presence of a Co-carbonyl catalyst (pref. in the presence of one or more promotors selecte from organic bases having a prim., sec. or tert. amino grp., alkali metal alkoxides, alkali metal salts of acids or organic sulphonic acid, nitriles, trisubstd. organophosphorus cpds., phosphine oxide and phosphonami').


(I)

$HSiR_4R_5R_6$ (II)


(III)

In the formulae, R_1, R_2 = H, alkyl, aryl, aralkyl or alkenyl; R_3 = alkyl, aryl, aralkyl or alkenyl; or R_1R_2CH and R_3 together form an organic cycle contg. ⩾ 4 C atoms; R_4, R_5, R_6 = H, alkyl, alkoxy, aryl, aryloxy, aralkyl or aralkyloxy, provided R_4, R_5 and R_6 all are not simultaneously H.

(III) is useful as a synthetic intermediate for pharmaceuticals and perfumes. The process provides (III) in the presence of a cheap catalyst and in a homogeneous system. 8. 7. 77 as 081772 (7pp38)

NIOF ★ D23 20900B/11 ★J5 4016-512

Purification of fats and oils - involves contacting with bi:sulphite and ammonia or ammonium salt

NIPPON OILS & FATS KK 08.07.77-JA-081022

(07.02.79) C11b-03/02

Purificn. of fats or oils comprises in addn. to the usual purificn. process, contacting the fat or oil with bisulphite cpd. and ammonia or ammonium salt before the deodorisation stage. Pref. contact with bisulphite cpd. etc. is performed before the deacidification stage.

Product has improved hue and lower peroxide value c. f. prior art. Their stability as determined by the AOM testing method is also satisfactory. Process is applicable to beef tallow, lard, fish oil, whale oil, palm oil, soybean oil, cotton seed oil, linseed oil, olive oil, coconut oil, castor oil, rapeseed oil, rice bran oil, or synthetic glycerides, etc. 8. 7. 77 as 081022 (4pp126)

NISW ★ D23 21088B/11 ★J5 4017-905

Purifying colza oil - by treating with an alcohol in which is dispersed a nickel catalyst, used to improve flavour after storage

NISSHIN OIL MILLS KK 11.07.77-JA-081911

(09.02.79) C11b-03

Method comprises treating colza oil with an alcohol (e. g. (m)ethanol, propanol, butanol, etc. in an amt. of 10-50 wt. % of the oil) in which is dispersed a nickel catalyst (e. g. conventional hydrogenation catalysts in an amt. of 0. 1-1 wt. % of the oil).

In an example, 500 g of crude colza oil from Brassica napus is recycled with 250 ml of an isopropanol stream in which is dispersed 5. 0 g of an activated nickel catalyst obtd. from nickel sulphate by conventional wet reduction for 2 hours. After removal of isopropanol by evapn. and the conventional removal of gummy material with phosphoric acid, the oil is purified with an alkali. 11. 7. 77 as 081911 (3pp59)

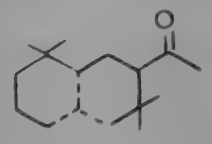
INFL D23 21425A/11 =US 4108-799

Unsaturated-acetyl-di:methyl-cyclohexane cpds. - intermediates for hexa:hydro-tetra:methyl acetonaphthone derivs. useful as vetiver ingredients in perfumes

INT FLAVORS & FRAGR INC 11.11.76-US-740890 (28.07.77-US-819873)

*E15 (22.08.78) *US4076-749 +C11b-09*

Perfume compsn. having a vetiver character comprises (i) a mixt. of 3 cpds. of structure (I) (where one of the dashed lines is C=C and each of the others is C-C and (ii) 1 adjuvant selected from natural perfume oils, synthetic perfume oils, alcohols, aldehydes, ketones other than ketones in the mixt. (i), nitriles, ethers and lactones.


(I)

The Parent Patent claims cyclohexadiene and cyclohexane cpds. The use of cpds. (I) is also described. 28.7.77 as 819373 Div.ex. 4076749 (26pp393).

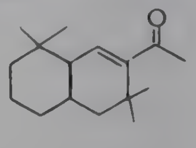
INFL D23 21425A/11 =US 4108-899

Unsaturated-acetyl-di:methyl-cyclohexane cpds. - intermediates for hexa:hydro-tetra:methyl acetonaphthone derivs. useful as vetiver ingredients in perfumes

INT FLAVORS & FRAGR INC 11.11.76-US-740890 (28.07.77-US-819956)

*E15 (22.08.78) *US4076-749 C07c-45*

A mixt. of cpds. of formula (I) (where one dashed line is a double bond and the others are single bonds) is prepd. by (a) reacting 3-chloromesihyl oxide with myrcene to form a Cl- contg. Diels-Alder adduct; (b) dehydrochlorinating the adduct to form an acetyl conjugated cyclohexadiene and (c) cyclising the acetyl conjugated cyclohexadiene.


(I)

The parent patent claims cyclohexane derivs. which are intermediates for (I).

(I) are useful as vetiver ingredients in perfumes.

28.7.77 as 819956 (27pp918).

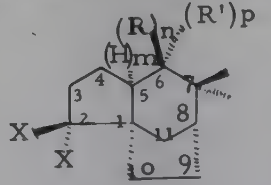
FIRM D23 32038V/17 =US 4142-997

Tricyclic undecane derivs - useful as perfume ingredients and organoleptic modifiers to replace natural etherial oils

FIRMENICH SA 10.10.72-CH-014783

*E15 (06.03.79) *NL7313-920 C07c-35/22 C07c-49/26 C07c-69/14 C11b-09*

Perfume compsn. comprises an inert diluent or carrier and ⩾1 tricyclic cpd. of formula (I) contg. a single or double bond at position 5. Indices m, n and p are integers 0 or 1, and one of X is -COO-alkyl and the other H, and R is lower alkyl when m = p = 0 and n is 1, or lower alkylidene when m = n = 1 and p is 0, or one of R or R' is lower alkyl and the other H when m = n = p = 1.



(I)

Cpds. such as 7, 7-dimethyl 6-methylene tricyclo $[6.2.1.0^{1,5}]$ undecan-2-one and 7, 7-dimethyl 6-methylene tricyclo $[6.2.1.0^{1,5}]$ undec-2-ylmethyl alcohol have powerful odour with woody character. (I) are used in foodstuffs, pharmaceuticals, etc. 16. 12. 76 as 751542 (+23. 4. 75-US-570827) (-pp931)

INFL ★ D23 21921B/11 ★US 4142-998

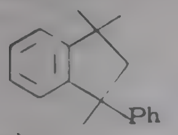
Miscible extenders for essential oil perfumery compsns. - consist of opt. hydrogenated alpha-methyl-styrene dimers

INT FLAVORS & FRAGR INC 03.05.78-US-902565

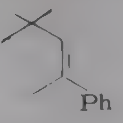
E14 (E15) (06.03.79) C11b-09

Single phase liq. compounded perfume consists of 100 pts. wt. of a synthetic and/or natural perfumery oil (I), and 1-30 pts. by wt. of one or more odourless perfumery extenders (II).

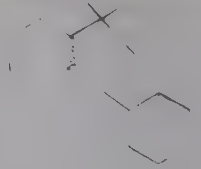
(II) is an α-methylstyrene dimer (A) and/or (B) or a hydrogenated deriv. (one or more (C)); or an α-methylstyrene methyl homologue dimer ((D) and/or (E)) or a hydrogenated deriv. (one or more of (F)-(L)).



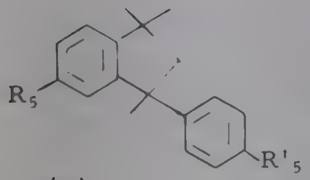
(A)



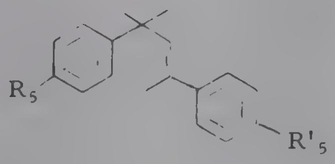
(B)



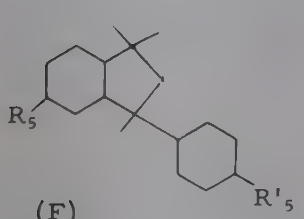
(C)



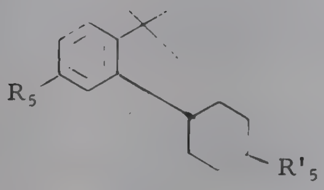
(D)



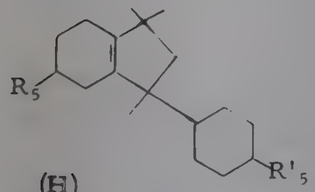
(E)



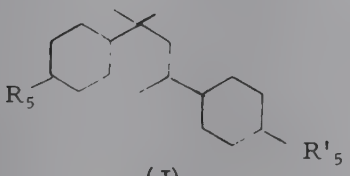
(F)



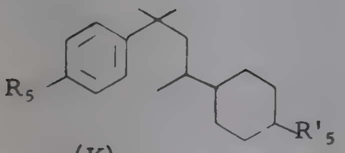
(G)



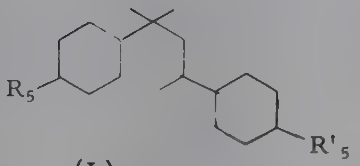
(H)



(J)



(K)



(L)

In the formulae, one of $R_5R'_5$ = Me, other $R_5R'_5$=H, or both $R_5R'_5$=Me; ∿∿∿ and ┈┈ are single bond (SB) or double bond (DB); provided that in (C) when there is only 1 DB in the dashed ring it is ∿∿∿ , that when there is more than 1 DB in the dashed ring it is benzene, and that ┈┈ is SB or no bond.

(II) do not cause an appreciable loss of the characteristic odour effect of the perfumes. (II) are completely miscible with a range of perfumery materials. 3.5.78 as 902565 (20 pp)

BADI D23 19364Y/11 #US 4143-065

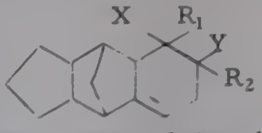
Polycyclic Diels Alder adduct perfume cpds. - e.g. by reacting vinyl tricyclo decene with a dienophilic cpd. e.g. acrolein etc.

BASF AG 01.09.75-DT-538790 (26.07.76-US-708994)

*E15 (06.03.79) *NL7608-838 C07c-121/48*

New Diels-Alder adducts are of formula (I), where R_1 and R_2 are each H or CH_3 or R_1 and R_2 together form a furthe bond between the C atoms on which they are present; and X and Y are CN or one of X and Y is H or CH_3 and the ot er is CN. Pref. cpds. are those in which R_1 and R_2 are H or CH_3 and one of X and Y is CN and the other is H.

(I)



The adducts are us ful in perfumes and body care compsns. and as flavourings in tobacco or foodstuffs. The Parent Patent claimed cpds. (I) with wider definition of X and Y. 15.7.77 as 815931 Div. ex. 4076748 (3pp927)

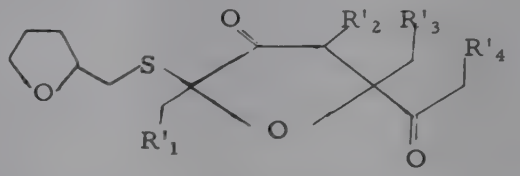
INFL D23 53306A/29 =US 4143-1

5-Alkanoyl-2-furfuryl-thio-di:hydro-2,5-di:alkyl- 2H)furan-3-one(s) for improving flavour and aroma of food, medicine, tobacco

INT FLAVORS & FRAGR INC 28.07.77-US-819957 (17.03.78-U 887632)

*B07 E13 +P15 (B03 D13 D18) (06.03.79) *US4092-334 A2 01/23*

The augmentation or enhancement of the aroma or taste foodstuff comprises added 0.01-100 ppm (on wt. of foodstuff) of ≥1 pure synthetic 5-acyl-2 (furfurylthio) dihydr 2,5-diallyl 3-(2H) furanone of formula (I): (where R'_1 -R' are independently H or CH_3). (I) may also be used in che



(I)

ing gum, toothpaste, medicine and tobacco. The Parent Patent claims cpds. (I). 17.3.78 as 887632 Div. ex. 4092334 (29pp393)

CHON- ★ D23 22015B/11 ★US 4143-23

Dehydro-jasmonic acid prepn. - from copper enolate of 3-ally cyclopentanone by alkylation with iodo-pentyne, ozonolysis, an oxidative cleavage

CHON CORP 28.10.76-US-736469

E17 (06.03.79) C07c-51/34

Dehydrojasmonic acid (I) is prepd. as follows: (a) the Cu enolate (II) of 3-allylcyclopentanone is prepd. by conjugat addn. of an allyl-Cu reagent to cyclopentanone; (b) the en late (II) is alkylated with a pentyne to afford the trans-2- pentynyl-3-allylcyclopentanone (III); (c) (III) is ozonolyse and oxidatively cleaved to provide (I).

Simple, shorter process affords higher yields of (I) than known prepns. (I) is an inter. for Me-dl-jasmonate (the odiferous constit. of jasmin) and hance the corresp. acid (a green plant growth inhibitor), Me dehydrojasmonate, and Me dl-dihydrojasmonate. 28.10.76 as 736469 (3pp478)

See Also

D13 US 4109022

D24: SOAP; SOAP DETERGENTS

UNIL ★ D24 20034B/11 ★BE -870-376

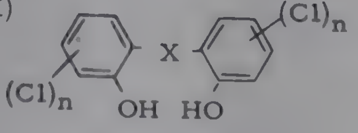
Soap tablets contg. at least one per cent free carboxylic acid - prepd. by adding an aliphatic di:carboxylic acid to soap

UNILEVER NV 15.09.77-GB-038565

E17 (12.03.79) C11d

Soap tablets, contg. ≥ 1% 8-24C free monocarboxylic acids, are prepd. by reacting the neutral water-sol. salts of the 8-14C monocarboxylic acids, not contg. a bacteriostatic agent of formula (I):- (where $\overline{X}$ is S or CH_2 and n is 1-4) with ≥ 0.1% of an aliphatic dicarboxylic acid of formula HOOC-Y-COOH, in which Y is a 1-8C hydrocarbon radical.

(I)



The use of the dicarboxyli acid to form the free monocarboxylic acid improves the foaming and reduces the rate of use by reducing the tendency to soften. The addn. of the dicarboxylic acid may be made at any convenient stage of the process. 11.9.78 as 870376 (6pp597)

D25 : OTHER DETERGENTS

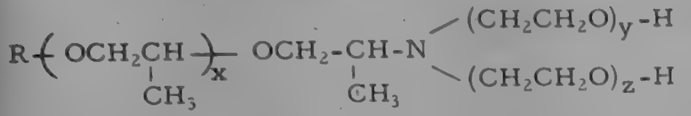
TEXC ★ D25 20043B/11 ★BE -870-412

Surface active agents prepd. from specified alkanol - by propoxylation, amination, then ethoxylation of amine obtd.

TEXACO DEV CORP 12.09.77-US-832150

A97 E16 (A25) (12.03.79) C11d

New surfactants has formula:-



$$R{\left(OCH_2\underset{\displaystyle CH_3}{CH}\right)}_x OCH_2\text{-}\underset{\displaystyle CH_3}{CH}\text{-}N\begin{cases}(CH_2CH_2O)_y\text{-}H\\(CH_2CH_2O)_z\text{-}H\end{cases}$$

where R is 8-18C alkyl; x has an average value of 0-4; y and z have average values such that y+z is 2-20 provided neither y nor z is O. The cpds. are prepd. by propoxylation of alcohols R-OH, followed by amination with ammonia, and ethoxylation of the amine obtained.

The cpds. are used for example as detergents, dispersants, wetting agents and emulsifiers. Compared with known similar cpds., they give a reduced wetting time, they have a lower surface tension in aq .soln. and also have a lower pour point. 12.9.78 as 870412 (9pp597)

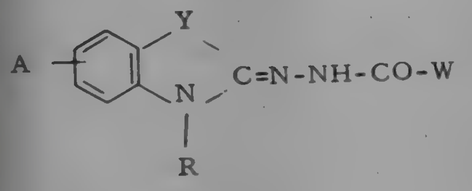
KAOS D25 39692W/24 =DS 2456-212

Powdery detergent mixt. for textiles - contg. hydrazone blueing dye intermediate converted to brightening azo dye on oxidn.

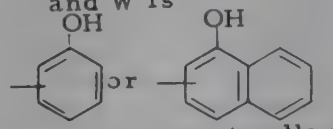
KAO SOAP KK 29.11.73-JA-134511

*E13 (08.03.79) *DT2456-212 C11d-03/40*

A powdery detergent for washing textiles contains an organic surfactant, a builder, ⩾ 1 intermediate (I) of a blueing dye and ⩾ 1 cpd. (II) releasing active chlorine on contact with water to convert I to the dye itself. The dye has the formula:



(where A is H, halogen, $-CH_3$, $-OCH_3$, $-SO_3H$ or $-SO_3Na$; Y is S, O, -NR- or -C=C-; R is $-CH_3$ or $-C_2H_5$ and W is


)

The amt. of I present is sufficient to prevent yellowing of the textiles. The amt. of II present is sufficient to convert I to the dye. 28.11.74. as 456212 (6pp068)

KAOS D25 00458X/01 =DS 2524-785

Coloured liquid cleaning compsn - stabilised to colour change by substd cresole/anisole

KAO SOAP KK 07.06.74-JA-064629

*A97 E15 (08.03.79) *DT2524-785 C11d-03/40*

A coloured, liquid detergent mixt. contains an anionic surfactant contg. a sulphate or sulphonate gp, a coal tar dye and 0.02-1.0 wt.% (based on wt. of anionic surfactant) of butylated hydroxytoluene (I) or butylated hydroxyvarisole (II).

Cpds. I and II are known antioxidants and prevent the detergent losing colour on storage. The detergent mixt. is used for cosmetic and pharmaceutical applications, e.g. dishwashing shampoos, heavy duty detergents, etc. 4.6.75. as 524785 (9pp068)

KALI D25 38650A/22 =DS 2652-488

Granulate builders for cleansing and detergent compsns. - prepd. from zeolite and oxygen-generating cpd. in presence of water

KALI-CHEMIE AG 18.11.76-DT-652488

*A97 E37 (08.03.79) *DT2652-488 C11d-03/12*

Storage-stable granules of zeolites and cpds. (I) releasing oxygen, e.g. sodium peroxoborate or sodium carbonate peroxohydrate are prepd. The zeolite and solid cpd I are granulated in the presence of water, e.g. 2-35 wt.% water, and then dried, pref. in a vortical bed drier at 30-70°C.

The granules are useful as components of cleaning or detergent mixts. 18.11.76. as 652488 (4pp068)

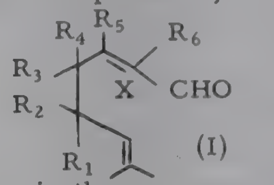
RHON D25 45149Y/25 =GB 1541-982

Hydrogenation of citral to citronellal and/or citronellol - using chromium promoted Raney nickel catalyst

RHONE-POULENC INDUSTRIES (RHOD-) 17.02.76-US-658788

*E17 (14.03.79) *US4029-709 C07c-27/04 C07c-33/02 C07c-47/20*

Ethylenic aldehydes (I) are hydrogenated to corresp. aldehydes in which the double bond X is satd. and/or to corresp. ethylenic alcohols, in which X is satd. and the CHO gp. is replaced by a CH_2OH gp. In the formula R_1, R_2, R_3, R_4 and R_6 are H or (un)branched alkyl and R_5 is (un)branched alkyl. Reaction is effected using a Raney Ni catalyst activated by Cr.



(I)

Pref. hydrogenation is carried out at 5-200°C at 0.15-35 kg/cm² pressure in the presence of 1-4C aliphatic alcohol as inert solvent present to 10-100 wt % w.r.t. aldehyde.

Used esp. for converting citral to citronellal, thence to citronellol, a constituent naturally in plants of the Rosaceae family. 16.2.77 as 006510 (10pp931)

HEND- D25 10687A/06 =GB 1542-027

General purpose cleaning compsn. - contains a vinyl acetate copolymer to facilitate removal of the residue after letting the compsn. dry on the cleaned surface

HENDRICKS & SOMMER 29.07.76-OE-005597

*(14.03.79) *DT2733-619 C11d-03/37*

Cleaning agent comprises 100 wt. pts. wash-active substance in aq. soln. 0-60 wt. pts. polyphosphate, 0-100 wt. pts. 1-6C aliphatic alcohol, 100-1000 wt. pts. vinylacetate homo-polymer or copolymer having MFT of 17-70°C dispersed in aq. medium.

Pref. copolymer is vinylacetate/methyl methacrylate co-polymer contg. protective colloid in copolymerised form, copolymer additionally contains 0.5-12 wt % w.r.t. copolymer of α, β-monoethylenically unsatd. carboxylic acid in copolymerised form.

Compsn. is esp. suitable for domestic, industrial and professional use. 29.7.77 as 031935 (6pp931)

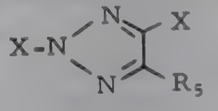
CIBA D25 90490Y/51 =GB 1542-188

Bis-stilbenyl-(v)-triazole cpds. - useful optical brightening agents for polyesters, polyamides, cellulose fibres, etc.

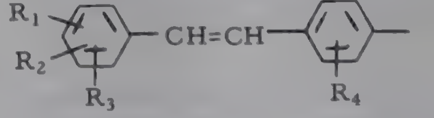
CIBA GEIGY AG 28.01.77-CH-001071 (02.06.76-CH-006933)

*A60 E23 F06 (14.03.79) *DT2724-408 C07d-249/06 C08k-05/34 D06l-03/12 + C07f-09/65*

2,4-Bis-(stilbene-4'-yl)-v-triazole cpds. of formula (I) are claimed. In (I), X is a gp. of formula (II). Each R_1 is H, sulphonic acid (salt, ester or amide)carboxylic acid (salt, ester or amide), CN, halogen, (un)substd. alkylsulphonyl, arylsulphonyl, (cyclo)alkyl, (ar)alkoxy, aralkyl or aryl (oxy), or(un)substd. 5-membered heterocycle contg. 2-3 N atoms or one O atom and 1 or 2 N atoms.



(I)



(II)

Each R_2 is H, sulphonic acid (salt, ester or amide), carboxylic acid (salt, ester or amide), CN, halogen or (un)substd. alkyl or alkoxy. The two R_1 gps. and the two R_2 gps. may form (m)ethylenedioxy, methylenoxymethylenoxy, tri- or tetra-methylene, propylene, butenylene or butadienylene.

Each R_3 is H, halogen or (un)substd. alkyl. Each R_4 is H halogen, CN, sulphonic acid (salt, ester or amide), or carboxylic acid (salt, ester or amide), R_5 is H, halogen, CN, sulphonic acid (salt, ester or amide), carboxylic acid (salt ester or amide), (un)substd. alkyl, aryl, aralkyl or styryl, or the gp. $-CH_2OZ$ in which Z is H or (un)substd. aroyl or alkanoyl.

(I) are optical brighteners for synthetic, regenerated man-made or natural organic materials. 31.5.77 as 023004 (22pp992)

ICIL ★ D25 20424B/11 ★GB 2003-522
Hypochlorite bleaching and cleaning compsn. - contg. branched chain tert. alkylamine oxide as thickener
IMPERIAL CHEM INDS LTD 04.08.78-GB-032218 (02.09.77-GB-036713)
E16 (14.03.79) C11d-01/75 C11d-07/54 D06l-03/06

Cleaning and bleaching compsn. comprises water, an alkali metal hypochlorite and amine oxide of formula $R.CHR_1.-CH_2N(R_2)R_3)\rightarrow O$ (I) (R = linear 5-17C alkyl, R_1 is 1-3C alkyl, esp. methyl and the $R.CHR_1CH_2$- gp. contains 8-20C R_2 and R_3 = 1-6C alkyl, pref. CH_3).

Suitably a mixt. of (I) plus linear amine oxides of formula $RCH_2CH_2N(R_2R_3)\rightarrow O$ (II) is used at wt. ratio 40-60-60-40, esp. a mixt. of 65-75 wt % 13C and 35-25 wt % 15C amine oxides with about 50% linear and 50% 2-alkyl(methyl) branched chain. (The C numbers refer to $RCHR_1CH_2$- only).

Used for cleaning fabrics and general disinfectant purposes. (I) increase the viscosity of the formulation more efficiently than commercial amine oxides. 4.8.78 as 032218 (5pp1251)

KOBA/ ★ D25 20718B/11 ★J5 4015-485
Cream-like compsn. for removing rust from metals, dirt from tiles etc. - contains dilute sulphuric acid, viscosity adjusting agent, e.g. colloidal silica or PVP and powdered abrasive
KOBAYASHI M 06.07.77-JA-079809
A97 G04 M12 (05.02.79) C11d-17 C23g-01

The compsn. comprises aq. dil. H_2SO_4 soln. (6-10%), a viscosity-adjusting agent, e.g. colloidal silica, PVP etc., and a powdered abrasive, e.g. fused alumina, emery, silicon carbide, garnet, etc. Opt. non-oxidising inorganic acid, e.g. HCl, H_3PO_4 etc. or organic acid, e.g. oxalic acid, sulfamic acid, citric acid, and gluconic acid etc. may be used in combination with the aq. dil. H_2SO_4 soln.

In an example, 0.5% of an alkylphenolpolyoxyethylene ether surfactants was added to 9%-dil. H_2SO_4 soln. to afford permeability, after which 20 wt. % of colloidal silica is suspended, followed by adding 40 wt. % of powdered fused Al_2O_3 to give a product. 6.7.77 as 079809 (2pp34)

MIYO ★ D25 20901B/11 ★J5 4016-513
Detergent compsn. - comprising sodium soap, potassium soap and organic amine soap of synthetic fatty acid mixt. and natural fatty acid mixt.
MIYOSHI YUSHI KK 08.07.77-JA-080926
(07.02.79) C11d-09/02

The synthetic fatty acid mixt. contains 55-70 wt. % 14-16C fatty acids with 30-50 wt. % being satd. fatty acids branched at the α-position, among the mixt. of straight chain and branched chain satd. fatty acids derived by the Oxo process The natural fatty acid mixt. contains oleic acid as essential component. The proportion of the synthetic fatty acid mixt. in the total fatty acid compsn. of the detergent is 5-90 wt. %.

The fatty acid soap is storage stable, has high solubility at low temp. and high foam generating property. Generation of scum by coagulation of the insoluble soap is slight. Only mild skin irritation is experienced. 8.7.77 as 080926 (6pp126)

UNIL ★ D25 21208B/11 ★NL 7808-640
Coloured specks for addn. to washing powders - by agglomerating cyclone dust from washing powder mfr. with a coloured agglomerating agent
UNILEVER NV 22.08.77-GB-035090
A97 (26.02.79) C11d-17/06

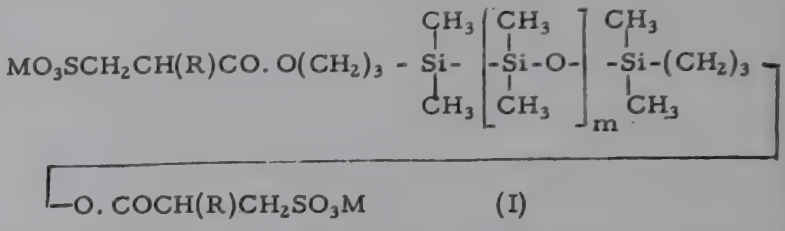
Coloured specks for use in soap- and washing powders are comprised of fine particles sepd. from a gas stream resulting from the prodn. of spray dried soap- or washing powder, and agglomerated with a coloured agglomerating agent

Pref. the fine particles have a particle size of <200μ and are sepd. in a cyclone separator. The agglomerating agent used is e.g. Na silicate, a non-ionic surfactant, a fatty acid, a cellulose deriv. or a mixt. of these, and the agglomerated particles have a dia. of 400-1500μ.

Process is economical to operate and uses cyclone dust from the washing powder prodn. process. The specks formed are evenly coloured, are visually detectable and do not separate out of the prod. 22.8.78 as 008640 (11pp513)

GOLD/ ★ D25 21339B/11 ★SU -548-60
Bis(sulphoacyloxypropyl)-poly-di:methyl-siloxane derivs. - prepc in three stages from acrylic acid and di:methyl-siloxane derivs, used as surfactants
GOLDIN G S 19.04.75-SU-125807
A26 E11 (03.11.77) C07f-07/08 C11d-01/82

Omega-bis-(β-sulphoacyloxypropyl)-polydimethylsiloxane salt derivs. (I, where R = H or Me, M= K, Na or NH_4 an m = 4, 8, 12 or 16) are prepd. from acrylic acid or meth acrylic acid by the following reaction stages : (1) esterification with excess of 1,3-bis-γ-hydroxypropyl-1,1,3,3-tetramethyldisiloxane (II) in toluene at 110-120°C with



$$\mathrm{MO_3SCH_2CH(R)CO.O(CH_2)_3}-\underset{\mathrm{CH_3}}{\overset{\mathrm{CH_3}}{\mathrm{Si}}}-\left[-\underset{\mathrm{CH_3}}{\overset{\mathrm{CH_3}}{\mathrm{Si}}}-\mathrm{O}-\right]_m-\underset{\mathrm{CH_3}}{\overset{\mathrm{CH_3}}{\mathrm{Si}}}-\mathrm{(CH_2)_3}-\mathrm{O.COCH(R)CH_2SO_3M}$$

(I)

sulphonated coal catalyst (III), (2) reaction of the bis-(meth)acrylic ester of (II) with 115% of the theoretical qu-tity of $MHSO_3$ in EtOH at 110-120°C/2-5 atmos., and (3) reaction of the bis-sulphonate ester with cyclo-octamethy-tetrasiloxane (IV) (1-4 mols. according to the chain len of (I) required) in aq. EtOH at 80°C with an ion-exchange resin catalyst. (I) are obtd. in 40-60% yield as white crystalline or amorphous materials, freely sol. in water and slightly sol. in EtOH or toluene.

(I) are useful surfactants and reduce the water/air surface tension from 72.5 to 17 dynes/cm and the water/silicone fluid surface tension from 47.7 to 4.3 dynes/cm
Goldin G.S., Averbakh K.O., Musychenko T.A. et al.
Bul. 8/28.2.77 19.4.75 as 125807 (5pp1360)

PROC ★ D25 21602B/11 ★US 4108-60
Fabric conditioning article for clothes washers - comprising receptacle releasably contg. physically sepd. electrolyte and coate conditioner
PROCTER & GAMBLE CO 26.04.77-US-791079
A97 P42 (22.08.78) B05c-11 D06l-01/16

A water-insoluble, closed receptacle having at least a part of one wall comprising a porous material encloses (A) a fabric conditioning compsn. as individual or agglomerated particles coated with a water-soluble or -dispersible material and (B) sufficient solid, particulate electrolyte and/or pH control agent to make the coating of (A) water-insoluble or -indispersible in wash water. (A) and (B) are sepd. physically. Alternatively (A) and (B) can be enclosed separately in two receptacles of the same type.

The prod. is designed for conditioning fabrics in a clothes washer and dryer. The conditioner is released in an effective, controlled manner. 26.4.77 as 791079 (11pp

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PENN ★ D25 21672B/11 ★US 4108-7
Dustless, soil releasing, fabric treating compsn. - comprising spray-dried acrylic resin and 2 hexyl-decyl alcohol or iso-tri:decan
PENNWALT CORP 19.07.77-US-816994
A97 (A14) (22.08.78) D06m-15/08

A powdered or granular compsn. comprises a spray-drie acrylic resin and 2-hexyl-decyl alcohol or isotridecanol, opt. together with a laundry sour, inert filler and fabric finishing agent or sizing.

The compsn. is applied to fabrics for temporary soil release purposes. The alcohol renders the resin dustles It does not impart an objectional odour to the fabrics and does not mar the fabric appearance. 19.7.77 as 816994 (5pp558).

DEER ★ D25 21681B/11 ★US 4108-80
High mol. wt. polyethylene oxide(s) - for addn. to carpet cleanin compsns. to prevent adherence of cleaning powder particles fibres
MILLIKEN RES CORP 30.12.76-US-755751 (26.03.75-US-562245)
A97 (A21 A25) (22.08.78) C11d-01/72

Powdered cleaning compsns. contg. 30-90% particulate polymeric urea-HCHO (I) (particle size 10-105u), and 10-70% fluid consisting of ≤ 100% H_2O, surfactant (II) (to give surface tension < 40 dynes/cm), and ≤ 100% solvent (high b.pt. hydrocarbon, tetrachloroethylene, $MeCCl_3$, Cl_2FCCF_2Cl, or 1-4C alcohol, or mixts.) are improved by including 0.25-5% by wt. of compsn. of a polyethylene oxide (III) of mol.wt. ≮ 20,000, and ≯ ~40 wt.% fluid of solvent.

Addition of (III) to the compsns. prevents the known adherence of fine particles of (I) to the fibres being cleaned. The compsns. are partic. useful for cleaning carpets, etc.. 30.12.76 as 755751 (4pp478).

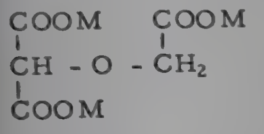
MONS D25 48190A/27 =US 4108-801

Detergent compsn. contg. carboxy-methoxy malonic acid salts as builder - and mixt. of linear alkyl-benzene sulphonate salts

MONSANTO CO 28.12.76-US-755098

*A97 E19 (22.08.78) *DT2758-211 C11d-03/08 +C11d-01/02*

Detergent compsn. comprises a blend of linear alkyl benzene sulphonates in 1·1 wt. ratio, one sulphonate having 13-14C alkyl, the second having 11-12C alkyl, yielding average 12-13C alkyl; ≥5 wt.% blend of cpd. of formula (I) where M is alkali metal, ammonium and $NH^+(CH_2CH_2OH)_3$. Pref. sulphonate blend is present to 15-20 wt.% contg. (I) to 30-35 wt.%, 5-15 wt.% sodium silicate, 0-2 wt.% carboxy methyl cellulose, 30-40 wt.% sodium sulphate and 5-20 wt.% sodium carbonate.



$$\begin{matrix} COOM & & & & COOM \\ | & & & & | \\ CH & - & O & - & CH_2 \\ | & & & & \\ COOM & & & & \end{matrix} \qquad (I)$$

Compsn. is used in laundries as an aq. soln. which may contain other builders, such as sodium carbonate, zeolites and synthetic alumino silicates etc.. 28.12.76 as 755098 (3pp931).

PROC ★ D25 21712B/11 ★US 4108-889

Prepn. of long chain alkane phosphonic acid(s) - from alpha-olefin(s), used as additives for detergent compsns.

PROCTER & GAMBLE CO 19.11.76-US-743186

E11 (22.08.78) C07f-09/38

Long chain alkane phosphonic acids (I) are prepd. by (a) treating an opt. branched 12-22C aliphatic α-olefin (II) with a cation exchange resin at 80-130°C to achieve a 98% conversion of (II) to high yields of an internally unsatd. olefin (III) with min. dimer formation; (b) treating (III) with $(MeO)_2P(O)H$ to afford a non-terminally substd. alkane phosphonic acid di-Me ester (IV); and (c) treating (IV) with anhydrous HCl or HBr to afford (I) and MeCl or MeBr. The resin is a strong acid, macroreticular type in H^+ form, and with H_2O-content 3-15% by wt.

The overall process does not use solvents or γ-radiation, avoids corrosion or foaming problems, and gives high yields of (I) free from terminal alkane phosphonic acids, and dimers, etc. (I) are known additives for detergent compsns., while (III) are general intermediates for non-terminally substd. derivs. 19.11.76 as 743186 (6pp).

PROC ★ D25 21912B/11 ★US 4142-978

Fabric softener for dispensing in automatic clothes dryer - contains a sorbitan ester and a neutralised alkyl sulphate

PROCTER & GAMBLE CO 12.07.77-US-814961 (12.12.74-US-532276)

E17 (06.03.79) D06m-13/16

Fabric softener, contained in a dispenser, for use in an automatic clothes dryer comprises: (a) a fabric softener component, which is free of unneutralised fatty acids and which is a sorbitan ester having ≥1 free OH and a m. pt. of ≥ 38°C, or mixts. of these; and (b) a phase-modifying component which is a water-soluble 10-20C neutralised alkyl sulphate or a mixt. of these, pref. Na tallowalkyl sulphate.

The wt. ratio a:b is 100:1 to 1:1. The mixt. is applied to damp fabric under heat sufficient to melt the mixt. which has a m. pt. 38-100°C. Pref. sorbitan esters are the monolaurate, monomyristate, monopalmitate, monostearate, dilaurate, dimyristate, dipalmitate, distearate, and mixts. of these.

The fabric softener is non-staining. 12.7.77 as 814961 C.i.p. 4049858 (10pp1390)

LIOY D25 35252A/20 =US 4142-984

Non-caking granular detergent compsn. - contg. anionic surfactant and builder, treated with finely divided calcium sulphite

LION FAT & OIL KK 09.11.76-JA-133798

*E33 (06.03.79) *DT2749-762 +C11d-07/56*

Granular detergent is treated contg. 10-40 wt.% organic water-soluble, anionic, synthetic surfactant, 10-80 wt.% water-soluble inorganic detergent builder salts and ≯ 50 wt.% nonionic and amphoteric, organic, water-soluble synthetic surfactants, water-soluble organic detergent builders, water soluble sulphates and their mixts.

Prepn. is by dry mixing with granular detergent and adhering to the surfaces of the granules 0.5-5 wt.% fine particles of calcium sulphite have average particle size 4 μ. Caking property is improved under pressure or under humid conditions giving better flow. 3.11.77 as 848143 (3pp931)

HENK D25 08288A/05 =US 4142-999

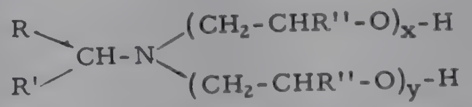
Conc. liquid cleaning compsns. for washing contg. enzymes - with alkoxylated alkylamine as enzyme stabiliser

HENKEL KG AUF AKTIEN 27.07.76-DT-633601

*A97 E16 (A25 D16) (06.03.79) *BE-857-144 C11d-03/26 +C11d-07/32*

A stabilised liq. concentrate, useable as a washing and cleaning agent contains 0.01-5% enzyme prepn. contg. proteases and amylase mixt., 0.5-40% nonionic surfactant, 0-30% anionic surfactant, 20-50% water and 0-50% solvent or additional water-soluble substance to promote enzyme stability, i.e. a 1-3C monovalent or 2-6C polyvalent alcohol contg. 2-6 -OH gps. and their ethers.

• The compsn. also contains 2-500 pts. wt. (per pt. wt. enzyme prepn.) of alkoxylated alkylamine of formula (I), (where R is 4-20C alkyl; R' is H or 1-10C alkyl, such that R=R' has 9-19C; R'' is H, Me, hydroxymethyl; x = 1-5; y = 0-5; and x + y = 1-10).



(I)

The enzyme detergent compsn. is stabilised against enzyme decomposition. 20.7.77 as 817140 (7pp931)

See Also

D17 US 4108891 D21 US 4109094 D22 US 4142985

ACQU/ 08.06.77 ACQUAVIVA A A96 D21 *FR 2393-570
Capillary lotion for the scalp esp. of males - 20329B/11

AGEN 00.00.78 AGENCY OF IND SCI TECH B05 D23 E14 =J5 4016-439
Formyl-substd. phenoxy cpds. from methyl-substd. cpds. - 69027X/37

AGRO- 04.08.76 AGROFERM AG B04 D16 =GB 1542-028
Fermentative prodn. of D-(3)-hydroxybutyric acid - 10273A/06

AJIN 08.06.77 AJINOMOTO KK B05 D16 E19 =FR 2393-848
Enzymatic d-alpha-amino acid prodn. - 91750A/51

AJIN 04.07.77 AJINOMOTO KK D13 *J5 4014-545
Preventing deliquescence of salted sea tangle - 20512B/11

AJIN 07.07.77 AJINOMOTO KK D13 (D16) *J5 4017-167
Yeast extract prepn. - 21007B/11

AJIN 07.07.77 AJINOMOTO KK B05 D16 E16 *J5 4017-183
L-Glutamic acid prepn. - 21011B/11

AJIN 08.07.77 AJINOMOTO KK B05 D23 E11 *J5 4016-429
Silyl enol ether prodn. - 20877B/11

AJIN 11.07.77 AJINOMOTO KK B04 D16 J04 *J5 4017-899
Determining peroxidase activity - 21085B/11

AKIY- 01.07.77 AKIYAMA JOZAI KK B04 D13 *J5 4014-564
Food with antihypertensive, antidiabetic activities etc. - 20518B/11

ALBR 26.07.77 BUSH BOAKE ALLEN LT D16 =DK 7803-330
Isomerising hops extract to form iso-alpha-acids for beer - 08010B/05

ALBR 27.07.77 BUSH BOAKE ALLEN LT D16 =DK 7803-329
Isomerising hops extract to form iso-alpha-acids for beer - 08017B/05,

ALFA 16.02.73 ALFA-LAVAL SPA B04 C03 D13 =IT 1027-519
Catalase determination in biological fluids, pref milk - 47183V/26

ALFA 10.02.75 DE LAVAL SEPARATOR D13 =CA 1049-495
Gas-liquid mixing system for aerating stream of ice cream base - 65257X/35

ALFA 18.04.75 ALFA-LAVAL AB D13 =CA 1049-438
Cylindrical cheese making machine - 83490X/45

ALFA 18.04.75 ALFA-LAVAL AB D13 =US 4108-058
Cylindrical cheese making machine - 83490X/45

ALFA 26.08.77 ALFA-LAVAL STALLTEC D15 J02 =NL 7808-673
Liquid aerating stirrer e.g. for manure or sewage - 18516B/10

ALUM- 14.04.76 ALUMINIUMIPARI TERV D15 J01 =HU T016-044
Sludge settling tank with rake assembly - A/12

AMCA= 20.07.77 AM USSR CARDIOLOGY D16 G06 =GB 2003-603
Forming visible images by ultrasonic irradiation of ferment plate - 12268B/07

AMCY 21.11.73 AMERICAN CYANAMID CO A23 B07 D22 (A96) =CA 1049-695
Bio-decomposable polyesters of diglycolic acid and glycols - 36290W/22

AMCY 22.12.75 AMERICAN CYANAMID CO A41 B03 D15 E13 =US 4109-072
Unsatd. imidazolines and their salts - 11061Y/06

AMCY 16.05.77 AMERICAN CYANAMID CO D22 =US 4142-628
Surgical suture package - 88071A/49

*AMHP 08.11.76 AMERICAN HOME PROD CORP B02 C02 D22 *US 4108-998
1,3-Di:hydro-3,3-di:alkyl-furo-(3,4-b)quinoline cpds. - 21756B/11

*AMOP 18.08.76 AMERICAN OPTICAL CORP D22 *US 4143-116
Contact lens steriliser provided with timer - 21971B/11

ANDC- 07.02.75 ANDCO IND INC D15 J03 (J01) =GB 1542-331
Electrochemical purificn of industrial effluent - 50060X/27

ANDC- 07.02.75 ANDCO IND INC D15 J03 (J01) =GB 1542-332
Electrochemical purificn of industrial effluent - 50060X/27

ANDE/ 06.07.77 ANDERSON D R D15 E33 #J5 4014-531
Removing calcium from raw water - 53909Y/30

ANDP 02.04.76 ANDERSEN HW PROD INC D22 =US 4107-976
Safe storage and supply of medical sterilising gas - 34738W/21

*ANGU/ 03.03.77 ANGULO E D13 *PT --67-717
Olive oil prodn. - B/11

*ANTI= 30.12.75 ANTIBIOTICS RES INS D16 *SU -576-338
Bacterial strain Escherichia coli HA-165 - 21350B/11

ANVR 10.06.77 AGENCE NAT VALORISATION A25 D16 G02 M11 (A82 A96) =FR 2393-835
Polyphenylene oxide films contg. reactive gps. - 88241A/49

*APEX- 11.05.77 APEX DENTAL LAB INC D21 M26 *US 4108-642
Nickel-chromium alloys, esp. for dentistry - 21621B/11

ARMO 29.08.66 ARMOUR CO D13 =IT 1027-504
Poultry prods. prodn. - 62476Z/00

ASAE 20.01.77 ASAHI ELECTROCHEM IND KK D13 =US 4108-879
Hardened vegetable fat compsn. - 55334A/31

ASAG 23.09.75 ASAHI GLASS KK D15 =J7 9003-035
Reducing brine turbidity - 31953Y/18

ASAH 08.07.77 ASAHI CHEMICAL IND KK A88 D15 J01 (A26) =J5 4016-378
Poly:aryl ether sulphone semipermeable membrane - 04536B/03

*ASAH 08.07.77 ASAHI CHEMICAL IND KK D15 *J5 4016-844
Treating waste water by activated sludge and electrolytic oxidn. - 20968B/11

ASAH- 08.06.77 ASAHI CARBON CO C03 D13 =FR 2393-537
Feedstuff for racehorses - 13443B/07

*ASHL 27.06.77 ASHLAND OIL INC D21 E13 F06 (D25) *US 4109-094
Exhaustive quaternisation of imidazoline cpds. - 21784B/11

*ASKO- 02.09.77 ASKO-UPO OY D15 *GB 2003-460
Combined biological dry toilet and waste water purifier - 20411B/11

ATLA- 21.06.76 ATLAS PACIFIC ENG D14 =US 4108-059

ATLA- 11.04.77 ATLAS PACIFIC ENG D14 =US 4108-060
Pineapple peeling device - 45752A/25

ATLA- 11.04.77 ATLAS PACIFIC ENG D14 =US 4109-021
Pineapple peeling device - 45752A/25

*ATLF 10.12.76 ATLANTIC RICHFIELD CO D16 K05 M26 *US 4108-722
Restoration of underground reservoirs - 21649B/11

AUER/ 21.12.73 AUER H H D23 H04 J04 =IT 1027-929
Continuous catalytic hydrogenation under high shear - 46366W/28

*AUHE= 29.02.74 AS UKR HEAT PHYSIC D18 *SU -494-410
Tanning extracts from raw material - 21292B/11

*AUMA= 09.06.75 AS UKR MATLS SCIE PROBL D17 *SU -560-512
Sugar solution concentrator and crystalliser - 21342B/11

AVIC- 29.08.77 AVICON INC D12 (D18 D22) =DT 2835-220
Pyrogen-free collagen prodn. - 18542B/10

*AZOV= 08.02.74 AZOV-BLACK SEA FISH D12 *SU -496-029
Brushes for cleaning abdominal cavities - 21295B/1-1

*AZSU= 21.03.72 AZERB SUMGAIT PETRO A60 D22 E13 *SU -493-468
Organo-tin epoxide polymer stabilisers and biocides prepn. - 21285B/11

BADI 06.03.74 BASF AG C01 D22 E12 F09 (C03 E19) =US 4143-153
Wood-preservative fungicides - 64078W/39

BADI 26.07.76 BASF AG D23 E15 #US 4143-065
Polycyclic Diels Alder adduct perfume cpds. - 19364Y/11

BADI 25.08.77 BASF AG A25 D15 H03 (A97) =DT 2738-268
Oil-absorbing hydrophobic polyurethane foams - 18388B/10

BAKP 22.08.77 BAKER PERKINS HLDG D13 =DT 2830-055
System for hard aerated candy mfr. - 85805A/47

BARH 12.04.76 BARNES HIND PHARM INC D22 =GB 1542-225
Cleaning and disinfecting aq. soln. for soft contact lenses - 77840Y/44

BATT 10.06.77 BATTELLE-INSTITUT EV B04 D16 =FR 2393-849
In vitro biosynthesis of hormones, esp insulin - 02028B/02

*BEAF 24.07.75 BEATRICE FOODS CO D13 *US 4143-174
Stabiliser, thickening agent etc. for food - 21993B/11

BEEC 20.10.71 BEECHAM INC D21 =US 4108-978
Silica-xe rogel polishing agent - 25936U/19

BEEC 28.03.74 BEECHAM GROUP LTD B04 D16 =CA 1049-532
Beta-lactamase inhibitor MM 4550 - 67721W/41

BEGH- 25.07.77 BEGHIN-SAY SA D22 =DK 7803-282
Disposable nappies with integral elastic tie tapes - 72808A/41

BEIE 02.09.71 BEIERSDORF AG D22 E14 #IT 1027-507
Light stabilising urea derivs for cosmetics - 60699S/38

*BELN 17.08.77 LAB BELLON R SA B05 D16 *DT 2834-952
Ubiquinone 8,9 or 10 prodn. - 20252B/11

*BEND- 20.06.77 BEND RES INC D15 *J5 4017-381
Removal of ions from aq. soln. using separating film - B/11

BENI- 19.02.76 BENIER BV D11 =GB 1542-218
Forming dough into balls and kneading them - 57528Y/33

*BERT- 07.06.77 BERTIN AND CIE D13 *FR 2393-540
Treating manioc or cassava to produce a semolina or flour - 20323B/11

BETT- 29.12.76 BETTER BUILT MACH D22 =US 4108-601
Steam steriliser for hospital use - 08099B/05

*BETT/ 30.06.77 BETTI P L D23 *BR 7704-328
Osmotic cell contg. powdered vegetable product - B/11

*BIOP= 20.07.67 BIOPHYSICS INST D21 E16 *SU -241-429
Synthesis of amino-thiol radiation protective agents - 21242B/11

BLAN/ 04.09.72 BLANCHAUD M D13 =US 4143-167
Mushroom preservation plant - 07271V/05

BLUE- 25.08.77 BLUE WING CORP C03 D13 =DT 2837-823
Microencapsulation of lipids in protein to prepare foods - 01951B/02

BLUE- 25.08.77 BLUE WING CORP C03 D13 =NL 7808-810
Microencapsulation of lipids in protein to prepare foods - 01951B/02

*BLUE- 26.08.77 BLUE WING CORP C03 D13 *DT 2837-822
Protein-contg. feed additive for ruminants - 20301B/11

BLUE- 26.08.77 BLUE WING CORP C03 D13 =NL 7808-811
Protein-contg. feed additive for ruminants - 20301B/11

BLUE/ 09.08.76 BLUE M R A82 D25 E19 G02 (D22) #CA 1049-340
Cleaning and polishing floors using recyclable compsn - 68523X/36

*BONG- 18.05.78 FILS BONGARD O CIE D11 *BE -871-779
Bakery multi-tier electric oven of modular construction - 20056B/11

BOSS/ 30.09.75 BOSSERT E D14 =US 4142-541
Food surface cleaning appliance - 23815Y/14

*BPNU- 09.06.77 BP NUTRITION UK C03 D13 *FR 2393-536
Liq. fish protein food prod. for pigs - 20321B/11

BRAN/ 04.09.75 BRANTL V D18 =US 4142-534
Cigar(ette) construction - 74290Y/42

*BREA= 02.04.74 BREAD-BAKING RES D11 *SU -499-870
Dough blanks rolling out equipment - 21303B/11

BRIM 12.12.74 BRISTOL MYERS CO B03 C02 D13 =US 4108-725
Novel antibiotic Bu-2183 - 49994X/27

BRIM 28.08.75 BRISTOL MYERS CO B04 C03 D16 =GB 1539-740
Complex glycopeptide antibiotics Bu-2231 A and B - 14578Y/09

BRIM 13.07.77 BRISTOL MYERS CO B02 D16 =GB 2003-465
Antibiotics Bu-2313A and Bu-2313B - 09321B/05

BRIM 18.07.77 BRISTOL MYERS CO B03 D16 =DT 2831-535
Antibiotic rudolphomycin - 82061A/45

BROV 18.12.76 BROWN BOVERI & CIE D15 J04 =GB 1542-240
Oxygen demand of water determn. using oxygen probe - 30267A/17

BRTA 06.09.77 BAT CIGARETTEN-FAB D18 J01 =DT 2740-011
Eliminating nitric or carbon mon:oxide(s) from tobacco smoke - 04112B/03

BRUI/ 07.06.77 BRUIJN N L D21 =FR 2393-569
Nail varnish remover - 87852A/49

BURN- 02.08.77 BURNS FOODS LTD D12 =SW 7711-458
Food product similar to bacon prepd. by extrusion - 19718A/11

CANA 14.08.74 CANADIAN PAT & DEV LTD A89 D16 =DS 2536-163
Membrane filter for counting microbial colonies - 03558X/02

CARL- 11.04.77 CARLE & MONTANARI D13 #US 4142-847
Automatic prod. wt. control for e.g. chocolate moulding machine - 57578Y/33

*CARS- 09.06.77 CARSON PROD CO D21 E16 *FR 2393-572
Setting hair using guanidine hydroxide as active agent - 20330B/11

CELL- 10.06.76 CELLCOR CORP CANADA A11 D17 F09 G03 (A81 A97) #J5 4017-140
High pressure and temp modification of starch - 79475X/43

CENG 16.06.75 CENTRAL GLASS KK A97 D15 =J7 9002-994
Turbid industrial waste water clarification - 10007Y/06

*CENS 12.01.77 CENTRAL SOYA KK D13 E17 G04 *US 4108-678
Mechanically sprayable release agent for cooking and baking utensils - 21632B/11

CHCC 03.06.75 CHISSO CORP D13 E17 =DS 2623-682
Highly concentrated sorbic acid suspension and emulsions prepn. - 94635X/51

*CHCO- 06.02.74 CHEMICAL CONSULTS D15 *US 4108-771
Elimination of odours from organic wastes - 21666B/11

*CHEC/ 04.01.77 CHECHURA A A D16 *SU -603-658
Microorganisms e.g. yeast culture unit - 21411B/11

CHIN 02.06.75 CHINOIN GYOGYSZER C03 D13 (D16) =HU T016-100
Cultivating yeast for animal consumption - 04320Y/03

*CHIN 03.03.77 CHINOIN GYOGYSZER A91 B04 C03 D16 (A21) *HU T016-101
Chinosporin C isolation from Bacillus coagulants culture broth - B/11

*CHIN 26.05.77 CHINOIN GYOGYSZER A11 D17 (D16) *HU T016-098
Pure beta-cyclodextrin prepn. from starch - B/11

CHIY 26.10.74 CHIYODA KAKO KENSET D15 J04 =J5 1049-174
Continuous countercurrent fluidised bed - 37402X/20

CHIY 26.10.74 CHIYODA KAKO KENSET D15 J04 =J7 9002-915
Continuous countercurrent fluidised bed - 37402X/20

*CHIY 06.07.77 CHIYODA CHEM ENG CO D15 E36 M12 (E37) *J5 4015-496
Hydrogen chloride and metal oxide(s) recovery - 20722B/11

*CHON- 28.10.76 CHON CORP D23 E17 *US 4143-230
Dehydro-jasmonic acid prepn. - 22015B/11

CHPR 16.10.74 CHEMOPETROL D16 =SU -603-662
Cultivating microorganisms pref. yeasts aerobically - 34283X/19

CIBA 22.02.74 CIBA GEIGY AG D22 E19 =CA 1049-531
Preservative and disinfectant (un)satd. nonylamine derivs - 58721W/36

CIBA 02.06.76 CIBA GEIGY AG A60 D25 E23 F06 =GB 1542-188
Bis-stilbenyl-(v)-triazole cpds. - 90490Y/51

CIBA 04.07.77 CIBA GEIGY AG A60 D25 E23 F06 =J5 4014-988
Bis:triazinyl-amino-stilbene derivs. - 01921B/02

CIBA 07.07.77 CIBA GEIGY AG A41 B07 D25 E13 (A18 A81 B04 D21) =J5 4016-473
Monomeric vinyl ether(s) of hydantoin(s) - 04555B/03

*CIUL/ 12.06.78 CIULLA S B C03 D13 *US 4143-161
Coating fishing bait worms - 21989B/11

CNSF 15.06.77 CONSOLIDATED FOODS CORP D15 =J5 4018-149
Drinking water treatment - 03428B/02

*COAF 07.09.77 CREUSOT-LOIRE D15 H03 J01 *DT 2837-491
Treatment for effluent with emulsified hydrocarbon(s) - 20287B/11

COAS 07.09.77 COAST MFG & SUPPLY CO D15 H03 J01 =BE -870-300
Treatment for effluent with emulsified hydrocarbon(s) - 20287B/11

*COAS 07.09.77 COAST MFG & SUPPLY CO D15 H03 J01 *DT 2837-491
Treatment for effluent with emulsified hydrocarbon(s) - 20287B/11

COBT 22.12.75 CONSOL BATHURST LTD D15 F09 =CA 1049-667
Paper mill waste treatment excess sludge disposal - 46738Y/26

*COLG 12.11.71 COLGATE PALMOLIVE CO B05 D21 E11 *US 4143-128
Anti-calculus mouth-wash or dentifrice compsn. - 21975B/11

COLG 11.01.73 COLGATE PALMOLIVE CO D21 E33 =US 4108-980
Toothpaste compsn. - 39947V/22

COLG 12.03.75 COLGATE PALMOLIVE CO D21 E33 (E16) =US 4108-977
Antiperspirant compsn. for use dry or with aerosol - 59697X/32

COLG 09.06.77 COLGATE PALMOLIVE CO B06 D21 E13 =FR 2393-574
Stable dentifrice compsn. for unlined aluminium tube - 74354A/41

*COLG 01.07.77 COLGATE PALMOLIVE CO B05 D21 *US 4143-126
Dental prophylactic paste - 21974B/11

COLL- 06.05.77 COLLARD VALLEY RESE C03 D13 =J5 4015-879
Ruminant feed contg. ppte. dust from Portland cement - 87767A/48

COMB- 20.04.77 COMBE INC D21 E24 =GB 1542-034
Hair dyeing using oxidn. dyes by stages - 68924Y/39

CONO 15.02.74 CONTINENTAL OIL CO D22 E12 =US 4109-010
Microbiocidal ammine-zinc salts of organic sulphonic acids - 57424W/

*CONO 19.01.76 CONTINENTAL OIL CO B05 C03 D22 E14 *US 4108-90
Liquid phase normal alkylation of phenol(s) with alkanol(s) - 21716B/

*CORP 26.10.71 CPC INTERNATIONAL INC D16 *J5 4017-181
Glucose isomerase enzyme prodn. - B/11

CORP 14.12.73 CPC INTERNATIONAL INC D17 (D16) =IT 1027-679
Reducing steeping time of grain in starch prodn. - 63179Y/36

CORP 09.06.76 CPC INTERNATIONAL INC D17 E13 =US 4109-075
Saccharide separation by chromatography - 00403A/01

CORP 04.10.76 CPC INTERNATIONAL INC D17 E13 =GB 1542-167
Powdered beta:dextrose prodn. - 25240A/14

CORP 08.06.77 CPC INT INC D13 =FR 2393-534
Peanut butter additive giving darker colour and roast flavour - 00271B

CORP 08.06.77 CPC INTERNATIONAL INC D13 =US 4143-176
Peanut butter additive giving darker colour and roast flavour - 00271B

CORP 09.06.77 CPC INTERNATIONAL INC D13 =US 4143-175
Acid-stable cheese-like gel, e.g. for pizzas - 00426B/01

CORP 01.09.77 CPC INTERNATIONAL INC D16 (D17) =GB 2003-483
Fixing gluco-amylase on cationic colloidal silica - 01975B/02

CRDC 10.06.77 CORDIS DOW CORP A32 D15 J01 (A88) =FR 2393-662
Moulding resin baffles at intervals along filamentary bundle
89666A/50

*CSAK- 25.07.75 CSAKVARI ALLAMI GAZ C03 D13 (D16) *HU T016-038
Chlorine detoxification of feedstuffs - B/11

CSIR 10.12.75 COMMONWEALTH SCIENT ORG D15 J04 =GB 1542-155

Appts. for analysis of water - 17794B/09

CSIR 02.06.77 COMMONWEALTH SCIENT ORG A91 D15 M25 (A21) =J5 4016-597
Phenol-formaldehyde-di-sec. amino cpd. ion exchange resin
88232A/49

CUMB 17.12.76 CUMBERLAND PACKING B03 D13 E13 (B02) =GB 1542-234
Neohesperidine or naringin di:hydro-chalcone sweetening compsns
42126A/23

*CUNN/ 04.12.75 CUNNINGHAM N T D16 *US 4108-052
Electric cooker for starch slurries - 21541B/11

*DAIK 22.10.76 DAIKIN KOGYO CO D13 *US 4142-372
Controlled atmosphere storage of fruit and vegetables - 21806B/11

DAIL 11.07.77 DAICEL KK D15 J01 =J5 4017-378
Liquid treatment using folded membrane - 00305B/01

*DAIL 19.07.77 DAICEL KK D18 E33 *DT 2830-049
Filter for tobacco smoke - 20245B/11

*DAIR= 15.06.76 DAIRY IND RES INST D16 (D13) *SU -603-660
Bacterial strain Streptococcus thermophilus 28m - 21413B/11

*DAIT 02.07.77 DAITO SHOKKEN KK D12 *J5 4014-559
Prepn. of seasoning soln. for use in spitchcocking - 20514B/11

*DAIT 02.07.77 DAITO SHOKKEN KK D12 *J5 4014-560
Preparing seasoning soln. for spitchcocking - 20515B/11

*DASU- 13.07.76 DANSKE SUKKER-FABRI D17 *GB 1539-553
Chromatographic recovery of fructose rich fraction - 20379B/11

*DAUC 11.07.77 DAIICHI PHARM KK D15 *J5 4017-367
Dripping liq. from e.g. pasteuriser into water tank for flush toilet
21049B/11

DCAF 10.05.77 DCA FOOD INDS INC D11 =J5 4017-145
Yeast fermentable dough contg. soft wheat flour - 88070A/49

*DDSK- 13.07.76 DDS KROYER AS D17 *GB 1539-553
Chromatographic recovery of fructose rich fraction - 20379B/11

*DEER 26.03.75 MILLIKEN RES CORP A97 D25 (A21 A25) *US 4108-800
High mol. wt. polyethylene oxide(s) - 21681B/11

DEGM 12.08.75 DEGREMONT SA D15 =US 4142-977
Sludge recovery device fixed to rotating bridge - 85054X/46

DEGM 11.06.76 DEGREMONT SA D15 J01 =US 4142-971
Band pressure filter for dehydrating waste water sludge etc. - 82895Y/4

DEGS 14.06.75 DEUTSCHE GOLD & SILBER C01 D13 =DS 2526-750
Calcium salts of (bis) hydroxymethyl lysine - 96279X/52

DEGS 26.05.77 DEUTSCHE GOLD & SILBER D22 E16 (E12 E37) =J5 4015-867
Deodorising liquid manure esp. of pigs and poultry - 86111A/48

DEGS 29.07.77 DEUTSCHE GOLD AND SILBE D25 E33 =SW 7807-490
Prepn. of cation-exchanging aluminosilicate(s) - 08024B/05

*DERO- 01.09.77 DEUT ROTEN KREUZ D15 *DT 2739-335
High purity sterile water production - 20194B/11

DEWD/ 10.06.77 DEW D R L D12 =FR 2393-533
Treating poultry carcasses - 00428B/01

DOKO/ 26.11.76 DOKOUPIL J D18 =US 4142-386
Continuous leather embossing machine - 40602A/23

DOUW 24.08.77 DOUWE EGBERTS KON D13 =NL 7709-338
Juices and extracts concn. - 18329B/10

DOWC 23.09.74 DOW CHEMICAL CO D22 E14 =US 4142-943
Pentachloro phenol purificn. - 26764X/15

*DOWC 16.12.76 DOW CHEMICAL CO D15 E17 J01 *US 4143-066
Recovery of lower carboxylic acids from aq. streams - 21947B/11

*DOWC 06.06 77 DOW CHEMICAL CO C02 D22 E13 G02 *US 4108-859
Antimicrobial chloro:pyridyl:aminoalkyl:guanidine derivs - 21702B/11

DRED 24.01.72 VEB ARZNEIMITTEL DRESDEN B01 D16 =DS 2225-039
Conversion of digitoxigenin glycosides into digoxin and gitoxin - 11188U/09
DSOP 10.06.77 DSO PHARMACHIM D21 E11 =FR 2393-571
Collagen-based skin cosmetic compsn. - 00295B/01
DSOP 10.06.77 DSO PHARMACHIM D21 E11 =J5 4017-135
Collagen-based skin cosmetic compsn. - 00295B/01
DUPO 30.03.76 DU PONT DE NEMOURS CO D15 *US 4108-772
Disinfection and flocculation of activated sludge - 21667B/11

EBAI 07.07.77 EBARA INFILCO KK A97 D15 *J5 4016-845
Coagulation of treated aq. organic waste sludge - 20969B/11
EBAI 08.07.77 EBARA INFILCO KK D15 *J5 4016-847
Denitrification of aq. human waste - 20970B/11
ECON 08.07.77 ECONOMICS LAB INC D25 E17 (E14) =J5 4018-159
Washing oil-soiled fabrics in two steps - 06276B/04
ELEL- 01.10.75 ELELMISZERIPARI TER D12 *HU T016-037
Fowl plucking machine - B/11
ELIL 01.07.77 ELI LILLY & CO A97 B04 D16 =J5 4014-580
Genetic exchange in Streptomyces and Nocardia - 01895B/02
ELIL 01.07.77 ELI LILLY & CO B04 D16 =J5 4014-586
Mfr. of Streptomyces protoplast which regenerates viable cells - 01894B/02
ELIL 14.09.77 ELI LILLY & CO B04 D21 (D16) *US 4143-141
Acne treatment - 21981B/11
ELMQ/ 27.07.77 ELMQVIST O A88 D15 =DK 7803-325
Heat exchanger flow elements comprising plastics foils - 15958B/08
ELMQ/ 27.07.77 ELMQVIST O A88 D15 =DK 7803-326
Heat exchanger elements utilising solar energy - 15959B/08
ELSA/ 09.05.77 EL-SAYED RRM D15 =J5 4016-849
Rapid sewage treatment under anaerobic conditions - 86442A/48
ENGH 29.12.75 ENGELHARD MINERALS CORP D21 M26 =CA 1049-201
Particulate alloy mixture for dental amalgams - 97824X/52
ENGH 29.04.77 ENGELHARD MINERALS CORP D16 H04 =J5 4016-403
Removal of aromatics from paraffinic hydrocarbon(s) - 80495A/45
ERAP 08.07.77 ENTR RECH ACTIVIT PETROL A96 D22 E17 =J5 4017-134
Compsns. contg. di:thiol cpds. for protecting the skin against UV - 80241A/45
ERIC/ 16.04.75 ERICKSON L G C03 D13 (D15 D16) =GB 1541-876
Prodn. of protein contg. feedstuff additives from manure - 83461X/45
ESSO 05.07.74 EXXON RES & ENG CO D25 E12 H07 =CA 1049-486
Overbased magnesium phenate detergents for lubricants - 06759X/04
ETHI 10.06.77 ETHICON INC A87 D22 F06 (A25) =FR 2393-582
Poly:alkylene oxalate coating for sutures - 92755A/51
*EXTR= 18.06.76 EXTRAMURAL FOOD IND D14 *SU -601-510
Constant pressure controller for conserves sterilisation - 21387B/11

FARB 14.07.76 BAYER AG A60 B02 C02 D22 =GB 1541-993
(2)-Methyl (3)-amino-methylcarbamoyl quinoxaline 1,4)-dioxides - 04168A/03
FARB 25.06.77 BAYER AG A96 D21 (A14) =J5 4018-193
Two/part dental filling paste compsn. - 87799A/49
FARB 01.07.77 BAYER AG D18 E12 (E16) =J5 4014-598
Smokable prods. based on cellulose and combustion modifiers - 02458B/02
FARB 27.08.77 BAYER AG B03 C02 D13 =DT 2738-717
Tri:hydroxy-piperidine derivs. - 18396B/10
*FARB 03.09.77 BAYER AG D18 *DT 2739-844
Chrome tanning of hides and pelts - 20218B/11
FARB 03.09.77 BAYER AG D18 =GB 2003-498
Chrome tanning of hides and pelts - 20218B/11
*FARB 15.12.77 BAYER AG B07 C03 D16 E19 *BE -870-359
Stable microorganism preparations for degradation of organic material - 20031B/11
FARH 18.12.73 HOECHST AG D18 E21 =IT 1027-728
Trisazo dyes for leather and hides - 42922W/26
FARH 27.03.76 HOECHST AG D15 E36 J03 =US 4108-769
Reducing mercury content of waste water - 70955Y/40
FARH 25.07.77 HOECHST AG A60 D22 E16 M25 (D21) =DK 7803-270
Non-symmetrical sec. ether-amine derivs. - 10263B/06
FARH 25.07.77 HOECHST AG A60 D22 E16 M25 (D21) =NO 7802-544
Non-symmetrical sec. ether-amine derivs. - 10263B/06
FARM- 06.05.74 INST FARMACOC ESPAN D16 =J7 9002-986
Clearing or prevention of clouding of aq liquids e.g. drinks - 78067W/47
FIRE 12.05.77 FIRESTONE TIRE & RUBBER A26 D13 F06 G06 =J5 4016-000
Poly-organo-phosphazene(s) contg. chromophore radicals - 82136A/46
FIRM 15.06.67 FIRMENICH SA D23 =DS 1793-831
Unsat aldehydes with four double bonds - 68033R/38
FIRM 10.10.72 FIRMENICH SA D23 E15 =US 4142-997
Tricyclic undecane derivs - 32038V/17
FIRM 26.08.77 FIRMENICH SA D23 E15 =NL 7808-791
Spiro cpd. prodn. for use in perfumery industry - 18353B/10
*FJIE 07.07.77 FUJI ELECTRIC MFG KK D15 J08 *J5 4016-372
Producing water by condensing atmospheric moisture - 20856B/11
FMCC 16.12.76 FMC CORP D14 =GB 1542-059
Pressure vessel steriliser for batches of canned food prods. - 28857A/16
*FRED/ 24.09.74 FREDETTE V D16 *CA 1049-429
Cider prodn. at reduced temps. - 20087B/11
FUJI 27.07.76 FUJISAWA PHARM IND KK B05 D16 =US 4143-135
Hydroxyamino-alk(en)yl-phosphonic acid (derivs.) - 84781Y/48
*FUNK/ 17.05.71 FUNK R S D15 H03 J01 *US 4142-969
Oil-adsorbing compsn. for removal of oil from water - 21907B/11
*FURU/ 08.07.77 FURUICHI T D16 *J5 4017-191
Alkaline wine prepn. - 21015B/11

GENA 10.06.77 GAF CORP A96 D21 (A14) =FR 2393-573
Hair setting and conditioning compsn. - 00430B/01
GENO 03.04.74 GENERAL FOODS CORP D13 =CA 1049-319
Dried agglomerated cereal mixt. prepn. - 55772Y/31
*GENO 28.05.74 GENERAL FOODS CORP D13 *CA 1049-320
Blistered cereal flakes prepd. from extruded dough - 20081B/11
*GENO 23.12.74 GENERAL FOODS CORP A97 B05 D13 E19 *US 4143-170
Non-foaming low calorie sweetener compsn. - 21992B/11
GENO 26.05.75 GENERAL FOODS CORP D13 =CA 1049-321
Cooked dehydrated rice flakes prodn. - 15669B/08
GENO 25.08.75 GENERAL FOODS CORP D13 =CA 1049-317
Roasted ground coffee having speckled appearance - 75805Y/42
GENO 28.08.75 GENERAL FOODS CORP D13 =CA 1049-316
Freezing coffee extract prior to lyophilisation - 47607X/25
GENO 18.09.75 GENERAL FOODS CORP B02 D13 E13 (E17) =CA 1049-318
Decaffeination of raw coffee beans - 23866Y/14
*GENO 12.08.76 GEN FOODS LTD D13 *GB 1541-895
Prodn. of enriched instant coffee - 20383B/11
GENO 30.12.76 GENERAL FOODS CORP D13 (D12) =US 4143-164
Simulated bacon prodn. with fat and lean phases - 32122A/18
GENO 25.08.77 GENERAL FOODS CORP D13 =GB 2003-374
Sepn. and recovery of aroma constituents - 18350B/10
GENO 29.08.77 GENERAL FOODS CORP D13 E24 =GB 2003-376
Solubilising erythrosine food dye under acid conditions - 01971B/02
GENO 29.08.77 GENERAL FOODS CORP A97 D13 E23 =NL 7808-884
Stabilising erythrosine in acid food prods., esp. drinks - 04084B/03
GERD- 03.02.77 GERDES & CO GMBH D11 =DS 2704-432
Paste portioning device, esp. for pastry dough - 58932A/33
*GESL 10.06.77 KERNFORSCH KARLSRUH D15 E33 *FR 2393-765
Treating waste water using aluminium oxide - 20342B/11
GIVA 05.10.73 GIVAUDAN L & CIE SA B05 D13 E19 (B03) =IT 1027-601
Sweetener mixt. contg. dihydrochalcone - 27809W/17
GOLD 04.01.74 GOLDSCHMIDT TH AG D15 E37 M13 =J7 9003-037
Salts recovery from spent salt hardening baths - 47888W/29
GOLD 04.01.74 GOLDSCHMIDT TH AG D15 E37 M13 =J7 9003-038
Working up waste hardening bath salts - 47889W/29
*GOLD- 27.08.77 GOLDSAA F DORING D14 *DT 2738-698
Refrigerator and fan for preserving granular foodstuffs - 20158B/11
*GOLD/ 19.04.75 GOLDIN G S A26 D25 E11 *SU -548-609
Bis(sulphoacyloxypropyl)-poly-di:methyl-siloxane derivs. - 21339B/11
*GOSE- 19.07.77 GOSEI-KAGAKU INST LTD D18 E33 *DT 2830-049
Filter for tobacco smoke - 20245B/11
*GRAC 28.01.75 GRACE W R CO D13 *CA 1049-315
Chilling food prod. - 20080B/11
GRAC 18.11.76 GRACE W R CO A96 B04 D16 (A25) =GB 1542-009
Fixing protein, esp. enzyme, on polyurethane - 23384A/13
*GREO 09.11.77 GREFCO INC D16 *US 4142-968
Reducing the beer-soluble iron content of diatomaceous earth - 21906B/11
*GUAL/ 14.11.75 GUALINO U D13 *IT 1027-801
Confectionery dough kneader - B/11

*HAAG- 05.09.77 HAAGSE BAKKERIJMACH D11 *DT 2838-430
Dough portion moulding machine - 20310B/11
HAAS/ 30.04.75 HAAS F A88 D11 =GB 1542-066
Door for heat insulating cladding of waffle baker - 89069X/48
HAIM 28.01.76 ALPMA MASCH HAIN D13 #US 4108-057
Curd cutter blade - 63605X/34
*HAIN/ 03.09.77 HAINLEIN K D11 *DS 2739-790
Stencilled dough shapes cutter - 20096B/11
*HAND/ 06.07.77 HANDTMANN A D12 *BR 7704-436
Sausage-making machine distribution calibrator - B/11
*HARR/ 07.06.77 HARRINGTON D E D18 F09 *FR 2393-883
Disposable holder for cigarette is exposed during smoking - 20359B/11
HASH/ 01.10.74 HASHIMOTO S D15 J01 =J7 9002-990
Heavy metals removal from waste water - 38625X/21
HAUN 13.03.71 HAUNI-WERKE KORBER KG D18 =DS 2112-211
Tobacco processing with common treatment adjustment - 19195V/10
HAYA/ 28.03.74 HAYASHI T D11 =IT 1027-675
Appts for rolling out dough - 69142W/42
HAYB 29.03.74 HAYASHIBARA BIOCHEM LABS A87 D17 F06 (A18 D16 F09) =CA 1049-675
Pullulan as dispersant in emulsion polymerisation - 71101W/43

HAYB 29.06.74 HAYASHIBARA BIOCHEM LABS A97 D18 (A11) =CA 1049-245

Tobacco prod for mfg cigars and cigarettes - 05869X/04

HEND- 29.07.76 HENDRICKS & SOMMER D25 =GB 1542-027

General purpose cleaning compsn. - 10687A/06

HENK 28.09.73 HENKEL KG AUF AKTIEN D16 =IT 1027-551

Reverse osmosis to separate tartar from wine - 44812W/27

HENK 24.12.73 HENKEL KG AUF AKTIEN D21 E19 =IT 1027-906

Novel N-polyhydroxyalkyl amino acids - 46388W/28

HENK 29.01.74 HENKEL KG AUF AKTIEN D21 E17 (E12) =US 4143-160

Skin care compsns - 54013W/33

HENK 30.11.74 HENKEL & CIE GMBH D21 E33 =US 4108-961

Stabilising anhydrous monocalcium orthophosphate - 46032X/25

HENK 30.11.74 HENKEL & CIE GMBH D21 E33 =US 4108-962

Stabilising anhydrous monocalcium orthophosphate - 46030X/25

HENK 12.07.76 HENKEL KG AUF AKTIEN D21 E17 =US 4143-159

Cosmetic compsns. for the skin, contg. hydroxy alkanoic acid amides - 04133A/03

HENK 27.07.76 HENKEL KG AUF AKTIEN A97 D25 E16 (A25 D16) =US 4142-999

Conc. liquid cleaning compsns. for washing contg. enzymes - 08288A/05

HENK 27.06.77 HENKEL & CIE GMBH B03 C02 D13 (C03) =J5 4015-880

Animal feeds contg. the antibiotic tylosin - 05435B/03

HENK 29.07.77 HENKEL & CIE GMBH D25 E33 =SW 7807-490

Prepn. of cation-exchanging aluminosilicate(s) - 08024B/05

HENN- 29.08.77 HENNINGSEN FOODS D14 J08 =DT 2836-712

Horizontal spray dryer for food products etc. - 01958B/02

HENN- 29.08.77 HENNINGSEN FOODS D14 J08 =NL 7808-615

Horizontal spray dryer for food products etc. - 01958B/02

HERA 13.09.75 HERAEUS W C GMBH A92 D16 =US 4142-940

Plastic biological cultivation container - 87074X/47

HERA 11.05.76 HERAEUS W C GMBH D21 M26 =GB 1542-181

Using dental training alloys contg. copper, cobalt and tin - 54205Y/31

HERR/ 25.08.77 HERRNDOBLER F D11 =NL 7808-634

Ingredients and processes for mfg. rolled sugar free cakes - 00057B/01

*HERZ/ 23.08.77 HERZOG H A96 D21 *DT 2737-906

Dental prostheses - 20127B/11

*HHRE- 04.08.76 H & H RESEARCH INC A96 D22 *US 4142-522

Paediatric arm restraint - 21821B/11

HIEJ 25.09.75 HITACHI PLANT ENG CONST D15 =J7 9002-997

Purification of waste water contg. soluble salts and heavy metals - 33513Y/19

HIRO/ 14.02.74 HIROSAKI K B04 C03 D16 =DS 2424-762

Tonic contg. purified pyroligneous acid and cellulase - 57407W/35

HIRS/ 26.10.77 HIRSCHMAN S Z D22 F07 =US 4142-476

Feminine hygienic pads - 60241A/33

HITA 15.08.75 HITACHI KK D15 =J7 9002-995

Waste water treatment contg. fluoride ion - 24298Y/14

HITA 06.02.76 HITACHI KK D15 K07 =J7 9003-074

Powdering radioactive liq. waste - 67602Y/38

*HITA 06.07.77 HITACHI KK D15 E35 *J5 4015-361

Appts. for removing ammonium cpds. from water - 20681B/11

*HITA 08.07.77 HITACHI KK D15 E36 J03 *J5 4016-377

Regeneration appts. for ammonium ion absorbent - 20860B/11

*HITA 08.07.77 HITACHI KK D15 J01 *J5 4016-380

Ultrafiltration appts. - 20862B/11

*HITG 07.07.77 BABCOCK-HITACHI KK D15 *J5 4016-369

Treating waste sulphuric acid - 20854B/11

*HITG 07.07.77 BABCOCK-HITACHI KK D15 J01 *J5 4016-376

Waste water treatment tower - 20859B/11

HITK 08.10.75 HITACHI METAL KK D15 =J7 9002-989

Barium ferrite treating agent for waste water - 35527Y/20

HOBA- 06.06.77 HOBART CORP D14 =FR 2393-557

Automatic food mixer with lid - 66998A/37

HOBA- 06.06.77 HOBART CORP D14 =FR 2393-558

Locking food mixer blades to drive shaft - 72304A/40

HOBA- 06.06.77 HOBART CORP D14 =FR 2393-559

Foodstuff mixing bowl and integral motor - 92971A/51

HOBA- 06.06.77 HOBART CORP D14 =FR 2393-560

Hand operated high speed food mixer - 72303A/40

HOFA/ 22.04.77 HOFACKER-FREIFRAU F A96 D21 (A14 D22) =J5 4015-991

Dental and surgical materials - 78561A/44

HOFF 06.08.76 HOFFMANN-LA ROCHE SA B03 C02 D13 (D22) =PT --66-899

Antibiotic obtd. by culturing Streptomyces strain - 10289A/06

HOFF 23.12.76 HOFFMANN-LA ROCHE INC D22 =US 4142-521

Electrostatic cicatrisation of (skin) wounds with electret dressing - 45803A/26

HOFF 18.02.77 HOFFMANN-LA ROCHE AG D16 =DT 2850-147

Microorganism detection by liquid and solid culture media - 62154A/35

*HONS 01.07.77 YAKULT HONSHA KK D13 (D16) *J5 4014-585

Highly acid milk culture with high living bacteria content - 20522B/11

HUBE 22.05.74 HUBER J M CORP D21 E36 =CA 1049-228

Amorphous silicic acid for use in toothpaste - 80588W/49

HUNT- 26.07.77 HUNTER VALLEY CO-OP D13 =DK 7803-222

Prodn. of instant powders, esp. of whole milk - 13588B/07

*ICIL 28.01.72 IMPERIAL CHEM INDS LTD C02 D22 E13 *US 4108-867

Biocidal 2-amino thiophene

ICIL 08.06.76 IMPERIAL CHEM INDS LTD D15 =US 4108-763

Aerobic biological purificn. of polluted effluent - 86609Y/49

ICIL 09.06.77 IMPERIAL CHEM INDS LTD A97 D25 E34 =FR 2393-846

Liquid detergent compsn. used as washing powder substitute - 89619A/

ICIL 09.06.77 IMPERIAL CHEM INDS LTD A97 D25 E34 =J5 4016-514

Liquid detergent compsn. used as washing powder substitute - 89619A

ICIL 23.06.77 IMPERIAL CHEM INDS LTD B06 D21 E33 =J5 4017-137

Cleaning teeth using specified rare earth element cations - 00007B/01

ICIL 09.08.77 IMPERIAL CHEM INDS LTD D16 (D13) =DT 2834-701

Industrial aerobic fermentation - 11897B/07

*ICIL 02.09.77 IMPERIAL CHEM INDS LTD D25 E16 *GB 2003-522

Hypochlorite bleaching and cleaning compsn. - 20424B/11

*IDEK 29.08.77 IDEMITSU INDUSTRIES KK D16 *GB 2003-499

Treating yeast cell suspension with carbon di:oxide - 20419B/11

IIDA/ 24.05.76 IIDA T D15 =J7 9003-077

Desalination plant using solar energy - 05026A/03

IMPT 04.05.76 IMPERIAL GROUP LTD D18 #US 4142-535

Smoking prod. contg. non-tobacco additive - 79015W/48

*INDV 02.08.76 INDIANA UNIVERSITY B06 D21 E37 *US 4108-979

Dentifrice compsn. contg. aluminium salt and an abrasive - 21749B/11

*INDV 02.08.76 INDIANA UNIVERSITY B05 D21 E33 (E17) *US 4108-981

Oral compsn. comprising aluminium salt and a carboxylic acid or sal 21750B/11

INFL 01.05.74 INT FLAVORS & FRAGR INC D23 E13 =CA 1049-538

Isochromans prodn from 3-arylpropan-1-ols - 70510W/42

INFL 04.02.77 INT FLAVORS & FRAGR INC B05 D13 E15 (B07) =US 4143-074

Alpha-substd.-3,3-di:methyl-2-norbornane-methanol cpds. - 21476A/1

INFL 28.07.77 INT FLAVORS & FRAGR INC D23 E15 =US 4108-799

Unsaturated-acetyl-di:methyl-cyclohexane cpds. - 21425A/11

INFL 28.07.77 INT FLAVORS & FRAGR INC D23 E15 =US 4108-899

Unsaturated-acetyl-di:methyl-cyclohexane cpds. - 21425A/11

INFL 15.08.77 INT FLAVORS & FRAGR INC D13 E24 =GB 2003-375

Stabilised red beet dye compsns. - 06001B/03

INFL 24.08.77 INT FLAVORS & FRAGR INC D13 E13 =US 4108-876

Augmenting or enhancing aroma or taste of foodstuff - 01929A/01

INFL 17.03.78 INT FLAVORS & FRAGR INC B07 D23 E13 (B03 D13 D18) =US 4143-173

5-Alkanoyl-2-furfuryl-thio-di:hydro-2,5-di:alkyl- 2H)furan-3-one(s) 53306A/29

*INFL 03.05.78 INT FLAVORS & FRAGR INC D23 E14 (E15) *US 4142-998

Miscible extenders for essential oil perfumery compsns. - 21921B/11

INRG 07.06.77 INST NAT RECH AGRON C03 D13 (D16) =FR 2393-535

Nutritional protein prodn. from Trichoderma album - 89622A/50

INSF 25.07.77 INST FRANCAIS DU PETROLE D17 E34 H01 (D16) =NO 7802-297

Extraction of oil by flooding with bio:polymer solns. - 14436B/08

*INTT 25.04.77 INT TELEPH & TELEG CORP D11 *US 4109-023

Porous yeast leavened dough prod. esp. muffin - 21762B/11

ISBI- 24.08.77 ISRAEL INST BIOLOGICAL R B04 C03 D16 =NL 7808-717

Fowl cholera vaccine against Pasteurella multocida - 18510B/10

ISRA 24.08.77 ISRAEL, STATE OF B04 C03 D16 =DT 2836-507

Fowl cholera vaccine against Pasteurella multocida - 18510B/10

ISRA 24.08.77 ISRAEL, STATE OF B04 C03 D16 =NL 7808-717

Fowl cholera vaccine against Pasteurella multocida - 18510B/10

*JANS/ 21.07.77 JANSSEN J W D14 *US 4108-565

Appts. for forming spherical potatoes - 21593B/11

JAOR 27.03.71 JAPAN ORGANO KK A91 D15 J01 M11 =J4 7033-731

Treating waste soln. from chromium plating - 21163B/11

*JAOR 27.03.71 JAPAN ORGANO KK A91 D15 J01 M11 *J7 9003-141

Treating waste soln. from chromium plating - 21163B/11

*JAPC 06.07.77 NIPPON SHOKUBAI KAGAKU A91 D15 J01 *J5 4015-479

Semipermeable composite membrane for reverse osmosis - 20715B/11

*JAPG 30.06.77 JAPAN GEON KK A32 D15 F01 J01 (A18) *J5 4015-030

Hollow filaments for ultrafiltration and reverse osmosis - 20624B/11

*JOBB 10.06.77 SOC JOB D18 *FR 2393-542

Composite triple filter for cigarettes or cigars - 20325B/11

JOHJ 03.11.75 JOHNSON & JOHNSON A60 D21 E15 =US 4108-880

Totally trans retinoic acid esters and amides - 32746Y/19

*KAJI- 08.07.77 KAJIYAMA KANKYO GIJ D15 F09 *J5 4018-151

Removing iron and manganese from water e.g. for paper mills 21138B/11

*KAKE 01.07.77 KAKEN CHEM KK B04 D16 *J5 4014-595

Antibiotic C19-97 having anticancer activity - 20528B/11

KAKE- 10.06.77 KAKENYAKU KAKO KK B04 D16 =FR 2393-809

Insulin secretion stimulating protein(s) for diabetes treatment 89669A/50

KALI 18.11.76 KALI-CHEMIE AG A97 D25 E37 =DS 2652-488

Granulate builders for cleansing and detergent compsns. - 38650A/22

KALI 10.06.77 KALI-CHEMIE AG B04 D16 =FR 2393-810

Water-insoluble immobilised enzyme prod. prepn. - 63596A/36

KALI 24.08.77 KALI-CHEMIE AG D25 E33 (E34) =DT 2738-085

Sodium sulphate addn. to sodium aluminium silicate - 18367B/10

*KAMA- 01.07.77 KAMA MEDICINE KK B04 D13 *J5 4014-562

Sweetener compsn. contg. dried

KANA/ 06.07.77 KANAI M D15 E35 *J5 4015-355
Removal of ammonium ions from waste water - 20679B/11

KANE 18.06.77 KANEBO KK A96 D21 E17 (E12) *J5 4017-136
Creamy hair dressing compsn. - 20997B/11

KANE 29.06.77 KANEBO KK D21 E16 *J5 4014-526
Skin cosmetic which does not putrefy or give skin disorders - 20507B/11

KANE 29.06.77 KANEBO KK D13 E17 *J5 4014-527
Water-in-oil cream or emulsion composition - 20508B/11

KANE 30.06.77 KANEBO KK D13 *J5 4014-556
Foamed chewing gum prepn. - 20513B/11

KANF 06.07.77 KANEGAFUCHI CHEM KK A97 D15 J01 *J5 4016-381
Ultrafiltration membrane prodn. - 20863B/11

KANF 25.08.77 KANEGAFUCHI CHEM KK A97 B04 D16 =DT 2836-799
Purification of macromomycin antitumour antibiotic - 18537B/10

KANF 25.08.77 KANEGAFUCHI CHEM KK B04 D16 *DT 2836-821
Antibacterial and antitumour protein antibiotic auromomycin - 20269B/11

KANF 25.08.77 KANEGAFUCHI CHEM KK B04 D16 =GB 2003-482
Antibacterial and antitumour protein antibiotic auromomycin - 20269B/11

KAOS 29.11.73 KAO SOAP KK D25 E13 =DS 2456-212
Powdery detergent mixt. for textiles - 39692W/24

KAOS 07.06.74 KAO SOAP KK A97 D25 E15 =DS 2524-785
Coloured liquid cleaning compsn - 00458X/01

KAOS 21.09.76 KAO SOAP KK B03 D17 E13 (D13 D25) =US 4108-891
Oxidn. of monosaccharides to acids - 45304Y/26

KAOS 08.02.78 KAO SOAP KK A96 D22 F07 *BE -871-829
Absorbent article, esp. sanitary towels, with pref. cellulose core - 20067B/11

KASS- 02.07.77 KASSEI SHOKUHIN KK D12 *J5 4014-559
Prepn. of seasoning soln. for use in spitchcocking - 20514B/11

KASS- 02.07.77 KASSEI SHOKUHIN KK D12 *J5 4014-560
Preparing seasoning soln. for spitchcocking - 20515B/11

KAWA- 21.09.76 KAWAKEN FINE CHEM B03 D17 E13 (D13 D25) =US 4108-891
Oxidn. of monosaccharides to acids - 45304Y/26

KAWJ 08.07.71 KAWASAKI HEAVY IND KK D15 =J5 1101-786
Plain water prodn. from sea water - 21160B/11

*KAWJ 08.07.71 KAWASAKI HEAVY IND KK D15 *J7 9003-079
Plain water prodn. from sea water - 21160B/11

KEEN 03.09.74 KEENE CORP A88 D15 J01 =DS 2457-289
Disposable, elongated cylindrical separator of polyester material - 22053X/12

KEND 24.06.77 KENDALL CO D22 E13 =J5 4017-121
Sterilisation using ethylene oxide-contg. gas mixt. - 00433B/01

*KIBU- 08.07.77 KIBUN KK D13 *J5 4017-159
High protein fibrous pastry food prepn. - 21003B/11

*KIKK 04.07.77 KIKKOMAN SHOYU KK D13 *J5 4014-596
Improving the flavour of bean paste - 20529B/11

KIMB 20.12.73 KIMBERLY CLARK CORP A96 D22 F04 =IT 1027-830
Flexible absorbent sanitary pads with soft edges - 33909W/20

*KIMB 22.08.77 KIMBERLY CLARK CORP A96 D22 (A35) *DT 2837-072
Sanitary towel without fastening loops - 20276B/11

KIMB 22.08.77 KIMBERLY CLARK CORP A96 D22 (A35) =GB 2003-389
Sanitary towel without fastening loops - 20276B/11

KIMB 22.08.77 KIMBERLY CLARK CORP A96 D22 (A35) =NL 7808-656
Sanitary towel without fastening loops - 20276B/11

KINK- 31.03.75 KINKAI KAISUI KOGYO D15 E32 =J7 9002-985
Treating sea water contaminated with mercury - 87716X/47

*KLEI- 03.04.76 KLEIN A KG D15 *US 4142-461
Sludge dewatering device with superimposed filter bands - 21814B/11

*KLEI/ 14.02.59 KLEINER G I B03 C02 D04 *SU -136-856
Antifungal, antibiotic nystatin prodn. - 21217B/11

*KOBA- 05.07.77 KOBAYASHI KOSEI KK A96 D21 E11 (A26) *J5 4014-528
Press moulded make/up compsn. - 20509B/11

*KOBA/ 06.07.77 KOBAYASHI M A97 D25 G04 M12 *J5 4015-485
Cream-like compsn. for removing rust from metals, dirt from tiles etc. - 20718B/11

KRUG- 21.04.75 KRUGER I A/S D15 =CA 1049-472
Double drum centrifuge - 84370X/45

KUBI 07.11.75 KUBOTA KK D15 =J7 9003-036
Wet-type waste gas-treating water neutraliser - 44476Y/25

*KUBI 05.07.77 KUBOTA KK D15 *J5 4015-356
Waste water treatment by coagulation - 20680B/11

*KURS 06.07.77 KURARAY KK D21 E17 *J5 4014-902
Squalane prodn. from 13C-ketone - 20559B/11

KYFF- 07.06.77 VEB KYFFHAUSERHUTTE D13 =FR 2393-538
Spreadable, low-fat dairy product mfr. from cream - 56880A/32

*KYOW 01.07.77 KYOWA FERMENTATION KK B03 D16 *J5 4014-593
Therapeutic agent cytidine di:phosphate choline prepn. - 20526B/11

*KYOY 24.08.77 KYORITSU YUKI KK A91 D15 (A21) *DT 2835-876
Cationic flocculant esp. for treating effluents - 20258B/11

LANG- 06.06.77 LANG APPARATEBAU D15 J04 =FR 2394-009
Mechanical-hydraulic doser injecting chemicals into pipeline - 89614A/50

LANG- 26.08.77 LANG APP GMBH D15 =NL 7808-219
Proportional dosing of liq. additive, esp. disinfectant, into water -

*LEEN= 28.09.70 LENGD ENG CONS INST D22 J01 (D15) *SU -369-930
Electric purifier for fluids - 21254B/11

*LEEP 03.01.72 LEE PHARMACEUTICALS A96 D21 G02 (A14) *US 4107-845
Adhesive dental restorative composite - 21527B/11

LEPR- 27.08.75 LEPRINO CHEESE CO D13 =CA 1049-430
Bulk starter media for Italian cheese prodn. - 01828Y/01

LINM 22.12.75 LINDE AG D22 J07 =US 4107-937
Preserving biological substances, esp. blood, by freezing - 43507Y/25

LIOY 09.11.76 LION FAT & OIL KK D25 E33 =US 4142-984
Non-caking granular detergent compsn. - 35252A/20

*LIOY 24.06.77 LION FAT & OIL KK A96 D21 *J5 4015-912
Shampoo compsn. - 20751B/11

*LIOY 31.08.77 LION FAT & OIL KK A17 B07 D21 H07 (A96 A97 B04) *DT 2837-235
Olefin oligomerisation esp. to lubricating oils - 20281B/11

*LIVE= 10.10.73 LIVESTOCK MECHN RES D16 *SU -481-641
Prodn. of nutrient medium for chlorella cultivation - 21271B/11

LONB- 30.05.77 LONDON BRICK CO LTD D15 =J5 4016-850
Treating waste water by contact with mineral material - 70869A/40

*LOTT 04.05.77 LOTTE KK A97 D13 *J5 4017-163
Chewing gum base contg. natural or synthetic rubber - 21004B/11

*LOTT 24.06.77 LOTTE KK D13 E17 *J5 4017-164
Low calorie chewing gum prodn. - 21005B/11

*LOTT 01.07.77 LOTTE KK D13 *J5 4017-165
Porous chewing gum prepn. - 21006B/11

*LOUD/ 23.01.78 LOUDERBACK A L D22 E13 (D25) *US 4142-985
Liq. surgical scrub soap compsn. - 21915B/11

MATS/ 30.08.69 MATSUMOTO T D16 J01 =J7 9003-155
Elutriation of materials from a carrier - 76924R/42

MATU 12.07.74 MATSUSHITA ELEC IND KK D15 =J5 1008-751
Drinking water sterilisation - 21151B/11

*MATU 12.07.74 MATSUSHITA ELEC IND KK D15 *J7 9002-988
Drinking water sterilisation - 21151B/11

*MATW 30.06.77 MATSUSHITA ELEC WORKS A96 D21 E16 *J5 4014-529
Hair curling compsn. contg. cysteine cpd. - 20510B/11

MAXF- 30.06.76 MAXFIBE INC A97 B07 D13 =US 4143-163
Edible fibrous cellulose coated with edible gum - 04723A/03

MAYC 09.06.75 MAYER O & CO INC D12 E34 =GB 1542-080
Precooked bacon slices with low nitrite contents - 81264X/44

MCDD 29.08.77 MCDONNELL DOUGLAS CORP B04 D16 =DT 2822-552
Testing Escherichia coli sensitivity to antibacterials - 84100A/47

MEAC 22.08.77 MEAD CORP A92 D13 =DT 2836-351
Aseptic packaging of acid foodstuffs - 15978B/09

MEAC 22.08.77 MEAD CORP A92 D13 =NL 7808-081
Aseptic packaging of acid foodstuffs - 15978B/09

*MEAT= 04.04.75 MEAT DAIRY IND DES D12 *SU -589-948
Meat cutter to produce lumps for stew-making - 21366B/11

MEDK 25.05.77 MEDICOR MUVEK D14 (D22) #SW 7706-151
Cold chamber esp. meat store, sterilised by negative ions - 20322B/11

*MEDK 06.06.77 MEDICOR MUVEK D14 (D22) *FR 2393-539
Cold chamber esp. meat store, sterilised by negative ions - 20322B/11

MEEH/ 08.11.76 MEE H M L D16 =GB 1542-057
Shaped articles for growing edible tree fungus - 36904A/21

*MEIJ 18.03.77 MEIJI SEIKA KAISHA D13 *J5 4017-193
Barley tea prepn. - 21017B/11

MEIJ 06.07.77 MEIJI KK B03 C02 D16 =J5 4014-983
Tunicamine derivs. prepd. e.g. by acid hydrolysis of tunicamycin - 04557B/03

MEMM- 01.07.77 MEMM SPA B04 C03 D16 =J5 4017-118
Neoplasm diagnosis and treatment - 08311B/05

MERI 10 05.77 MERCK & CO INC D11 =J5 4017-145
Yeast fermentable dough contg. soft wheat flour - 88070A/49

METG 02.07.77 METALLGESELLSCHAFT AG D17 =J5 4014-530
Sugar soln. extn. from plant raw material - 02150B/02

*METG 16.08.77 METALLGESELLSCHAFT AG C03 D13 (D17) *DT 2736-864
Feedstuff and sugars prodn. from vegetable waste - 20108B/11

*MICH/ 22.04.77 MICHEL G H D13 E12 (D21) *J5 3133-645
Oral deodorising compsn. - 20447B/11

*MICR- 06.09.77 MICROLIFE TECHNICS D16 (D13) *DT 2809-759
Bacteria concentrate for fermenting sausages and other meat prods. - 20240B/11

MIFI 25.05.77 MILLIPORE CORP A88 D22 J01 (A32) =J5 4016-383
Continuous casting of microporous membranes - 89960A/50

MILE 23.08.76 MILES LABORATORIES INC A97 B04 D15 J04 (A88 A89 D16) =US 4108-727
Test material for determining density or osmolarity - 50714Y/29

*MILE 09.09.77 MILES LABORATORIES INC D13 *US 4108-847
Bland protein enriched prods. from grain gluten - 21698B/11

*MIPR= 15.07.76 MINSK PRODMASH ETP D12 *SU -589-947
Pig carcass scalding installation - 21365B/11

*MITN 24.08.77 MITSUBISHI GAS CHEM IND A97 D13 E36 G04 *DT 2836-876
Two-component oxygen-absorbing compsn. for food preservation - 20271B/11

*MITO 06.07.77 MITSUBISHI HEAVY IND KK D15 E36 J01 *J5 4015-352
Biologically treating poly:thionic acid-contg. waste water - 20676B/11

*MITO 06.07.77 MITSUBISHI HEAVY IND KK D15 *J5 4015-353
Denitrification of waste water - 20677B/11
*MITP 06.07.77 MITSUBISHI PETROCH KK D13 *J5 4014-563
Natural food colourant prepn. - 20517B/11
MITR 00.00.78 MITSUBISHI RAYON KK A88 D15 J01 (A14) =J5 4015-478
Dryable (co)polyacrylonitrile membrane with reversible properties - 66007W/40
MITU 14.06.74 MITSUBISHI CHEM IND KK A91 D15 (A26) =J5 0159-152
Decolourising and reducing COD of waste water - 19411B/10
*MITU 06.07.77 MITSUBISHI CHEM IND KK D16 *J5 4014-579
Yeast prepn. - 20519B/11
*MITU 06.07.77 MITSUBISHI CHEM IND KK D13 (D16) *J5 4014-583
Culturing yeast having low odd-carbon fatty acid content - 20520B/11
*MITU 24.08.77 MITSUBISHI CHEM IND KK A91 D15 (A21) *DT 2835-876
Cationic flocculant esp. for treating effluents - 20258B/11
*MIUR- 01.07.77 MIURA KOGYO KK D15 E36 J01 (E12 E37) *J5 4015-484
Compsn. for removing dissolved oxygen - 20717B/11
*MIYO 08.07.77 MIYOSHI YUSHI KK D25 *J5 4016-513
Detergent compsn. - 20901B/11
*MODU- 18.08.75 MODULAR CONCEPTUAL D15 *US 4107-795
Self contained toilet station - 21518B/11
*MOEH/ 20.12.76 MOEHRLE D B A96 D22 *US 4108-180
Reusable menstrual tampon - 21564B/11
*MOFO= 30.12.76 MOSC FOOD IND TECHN B05 D13 E12 (D16) *SU ;603-659
Calcium 2-keto-D-gluconate food antioxidant prodn. - 21412B/11
MOLM 28.07.71 MOLINS LTD D18 =DS 2265-322
Air separator for tobacco feed system - 58177V/32
*MOLN 31.08.77 MOLNLYCKE AB D22 *DT 2837-490
Sanitary towel - 20286B/11
MOLN 31.08.77 MOLNLYCKE AB D22 =GB 2003-390
Sanitary towel - 20286B/11
MOLN 31.08.77 MOLNLYCKE AB D22 =NL 7808-447
Sanitary towel - 20286B/11
*MOMD 21.12.76 MOSCOW MEAT DAIRY INST D12 *SU -603-901
Extruded meat deformation kinetics test apparatus - 21509B/11
MOMD 31.08.77 MOSCOW MEAT DAIRY INST D16 (D12 D15) #DT 2739-221
Nutritious medium for fodder yeast mfd. from manure, etc. - 66864Y/38
MONS 19.12.73 MONSANTO CO D25 E19 (D15) =IT 1027-778
Hydroxyether tricarboxylate complexing agents and detergents - 44386W/27
MONS 01.04.74 MONSANTO CO A97 D15 J01 =US 4142-966
Sepn of water from aqueous mixts - 67733W/41
MONS 27.12.76 MONSANTO CO B05 D21 E17 =US 4143-125
Oral tartar inhibitor compsns. - 36938A/21
MONS 28.12.76 MONSANTO CO A97 D25 E19 =US 4108-801
Detergent compsn. contg. carboxy-methoxy malonic acid salts as builder - 48190A/27
MONS 05.07.77 MONSANTO CO D25 E13 (E12) =J5 4014-990
Chloro-s-triazine-tri:one cpd. prodn. - 45706A/25
*MOOR/ 18.11.75 MOORE W P C03 D13 *US 4109-019
Ruminant feed having increased protein content prepn. - 21760B/11
MORG 26.05.77 MORINAGA MILK KK D17 E13 =US 4142-916
Non-hygroscopic lactulose powder prodn. - 67108A/38
*MOVE= 14.02.74 MOSC VETERINARY A97 D18 E14 (A14) *SU -494-409
Preservative for animal pelts - 21291B/11
MRSC 11.04.74 MARS LTD C03 D13 =US 4143-171
Meat like substitute comprising protein in jelly - 58763W/36
MRSC 08.10.74 MARS LTD C03 D13 =US 4143-172
Pectate thickener or gelifying agent for foods - 60378W/37
*MULL/ 24.08.77 MULLER F D21 *DT 2738-072
Floatable bath soap - 20138B/11
MUNT 31.08.77 MUNTERS C AB D15 J08 =GB 2003-402
Spray device for distribution of liquid over a treatment bed - 21212B/11
*MUNT 31.08.77 MUNTERS C AB D15 J08 *NL 7808-974
Spray device for distribution of liquid over a treatment bed - 21212B/11
MUZZ/ 06.12.68 MUZZARELLI W M G F A91 D15 J01 (A11) =IT 1027-501
Collection of transition metal ions from aq solns - 12549T/08

*NAGA- 18.03.77 NAGAKURA SEIBAKU KK D13 *J5 4017-193
Barley tea prepn. - 21017B/11
*NAGY/ 18.03.76 NAGYPATAKI I D16 (D17) *HU T016-070
Purification of aq. industrial effluents - B/11
NATR 29.11.73 NATIONAL RES DEV CORP A14 D22 F08 (A96) =US 4108-169
Bandage for orthopaedic splints - 39686W/24
*NATR 03.09.75 NATIONAL RES DEV CORP D14 *GB 1542-257
Cylindrical press with perforated walls and pressing piston - 20396B/11
NEST 02.06.76 SOC PROD NESTLE SA D16 E24 (D13) =GB 1539-494
Orange pigment from Monascus species prepn. - 88588Y/50
NEST 03.08.77 SOC PROD NESTLE SA D13 =SW 7808-342
Vegetable protein extracts - 14456B/08
NIEM/ 07.06.77 NIEMI A J D15 J04 =FR 2394-125
Control of pH in continuous flow using hydrogen ion evaluation - 00282B/01
*NIIG 29.06.77 NIIGATA ENG KK D12 *J5 4017-150
Proteinaceous marine animal meat grains prodn. - 21000B/11
NIIG 29.06.77 NIIGATA ENG KK D12 =J5 4017-155
Denaturing flesh of aquatic animals esp. fish - 02459B/02
*NIIG 06.07.77 NIIGATA ENG KK D12 *J5 4017-158
Colouring ham or sausage - 21002B/11
*NIKA- 02.07.77 NIHON KANKO SHIKIS D21 E13 *J5 4014-524
Cosmetic, e.g. cream, milk or face lotion, make/up, etc. - 20505B/11
NIKN 08.05.75 NIPPON KOKAN KK D15 F09 J02 =GB 1542-301
Distribution of gases in liquid - 87292X/47
*NIKS 06.07.77 NIPPON KASEI KK A91 D15 J01 *J5 4016-368
Deodorisation appts. for treating e.g. human waste - 20853B/11
*NIOF 08.07.77 NIPPON OILS & FATS KK D23 *J5 4016-512
Purification of fats and oils - 20900B/11
*NIPE 06.07.77 NIPPON PETROCHEM KK D15 *J5 4015-473
Neutralising acidic and alkali effluents - 20712B/11
*NIPK 06.06.77 NIPPON KAYAKU KK A96 D22 E37 (A14) *J5 4017-113
Gelatin type cataplasm - 20992B/11
NIRA 13.01.76 UNITIKA D15 =J7 9003-073
Treating waste emulsion to obtain clear liquid - 62113Y/35
*NISA- 07.07.77 NIPPON SANGYO GIJUT D15 *J5 4015-354
Appts. for purificn. of cyanide contg. waste water - 20678B/11
*NISB 06.07.77 JAPAN TOBACCO & SALT PUB D18 E13 *J5 4015-000
3'-Hydroxy-4'-methoxy-3-phenyl-3,4 di:hydro:iso:coumarin D-glucos
20604B/11
NISH- 17.09.75 NIPPON SHORYOKUKI D15 M25 =J7 9002-996
Waste water cleaning agent - 30158Y/17
*NISW 11.07.77 NISSHIN OIL MILLS KK D23 *J5 4017-905
Purifying colza oil - 21088B/11
NISY 01.07.77 NIPPON SYNTH CHEM IND B05 C03 D22 E17 (D13 D21) =J5 4014-915
Powdered sorbic acid of improved handling properties - 27268A/15
NITT 04.07.74 NITTO CHEM IND KK A41 C04 D15 E16 (E35) =J7 9002
914
Treating waste liquor contg. organic cpds. and ammonium sulphat
15837X/09
NOVO 23.08.77 NOVO IND A/S D16 (D17) =NL 7808-495
Glucose isomerase activated by water-soluble iron salt - 15971B/09
*NTBI- 26.08.77 NTB INT BV D14 *NL 7709-474
Steriliser for cylindrical containers - 21202B/11

*OJIP 04.07.77 OJI PAPER KK D16 *J5 4014-584
Cephalosporium or Trichoderma fungal body prodn. - 20521B/11
*OKAD- 26.11.75 OKADA SEIMEN YUGEN B04 C04 D13 (C03) *US 4108-625
Worm faeces fertiliser prodn. - 21617B/11
*OLIN 10.12.75 OLIN CORP D18 E33 F09 *US 4108-151
Gamma alumina filler for cigarette paper - 21554B/11
OLYU 05.04.77 OLYMPUS OPTICAL KK A88 D16 (A26) =DT 2849-565
Fluid feed device for automatic incubator - 65664A/37
*ORCH= 14.10.74 ORCHARD VINE EQUIP D14 *SU -545-324
Fruit and vegetable sorting conveyor - 21337B/11
OREA 12.05.72 L'OREAL SA B03 D21 E12 =J5 4016-477
Bis (n-oxypyrid-2-ylthio)aluminium derivs - 31427U/22
OREA 22.02.74 L'OREAL SA D21 E24 =CA 1049-412
Dyeing human hair in luminous shades - 59140W/36
OREA 19.01.76 L'OREAL SA D21 E14 =GB 1541-973
Hair dyeing compsns. contg. easily oxidised diphenylamines - 50431Y/
OREA 28.01.76 L'OREAL SA A96 D21 =US 4108-185
Fat free make-up element esp. for eyelids - 81520Y/46
OREA 19.08.77 L'OREAL SA D25 E14 (E12) =GB 2003-511
Hair colouring compsn. contg. direct colourants - 14188B/08
*OREA 07.09.77 L'OREAL SA A96 D21 E19 *BE -870-248
Hair dyeing compsn. contg. specified cationic polymer - 20012B/11
OREG- 31.03.76 OREGON HIGHER EDUC A97 B04 D16 =US 4142-939
Inhibiting or identifying bacteria - 74416Y/42
ORON- 30.10.73 ORONZIO DE NORA IMP D15 J03 =US 4108-756
Vertical electrolytic cell battery for water sterilisation - 34542W/21
*OSAG 09.07.77 OSAKA GAS KK D13 *J5 4017-151
Calcium and phosphorus-rich food prodn. - 21001B/11
*OTAN/ 11.07.77 OTANI T D15 *J5 4017-371
Forming hollow ice block e.g. for addn. to whisky - 21053B/11

*PALM- 06.06.77 SOC PALMIER HUILE D14 *FR 2393-541
Fluidised bed to dry coconut kernel for copra - 20324B/11
*PALM- 07.06.77 SOC PALMIER HUILE D13 *FR 2393-540
Treating manioc or cassava to produce a semolina or flour - 20323B/11
*PALM/ 02.09.77 PALMER W F A88 D15 *DT 2739-690
Communal and industrial wastes treatment - 20214B/11
PASE 12.10.71 PASSAVANT-WERKE D15 =US 4142-970
Effluent treatment - 15497U/11
*PATP- 02.09.77 PATPAN INC D18 J08 *DT 2837-571
Flat material drying machine - 20291B/11
PENN 06.07.77 PENNWALT CORP D21 M26 =J5 4017-320
Non-staining, silver-free, dental gold alloy - 81902A 45
*PENN 19.07 77 PENNWALT CORP A97 D25 (A14) *US 4108-780
Dustless, soil releasing, fabric treating compsn. - 21672B/11

PENT- 02.07.74 PENTAPHARM AG B04 D16 =CA 1049-506
Peptides contg. chromogenic or fluorescent groups - 80267W/49

• PETE/ 22.08.77 PETER S D13 *DT 2737-793
Decaffeination of raw coffee - 20116B/11

• PETE/ 22.08.77 PETER S D13 *DT 2737-794
Decaffeination of coffee - 20117B/11

• PETI/ 01.07.76 PETIN C D14 *US 4108-138
Oven with base supporting food and fuel - 21550B/11

PETL 01.07.77 PETROLITE CORP D23 (D13) #BR 7704-340
Colour improvement of organic liquid - 70460Y/39

• PETZ/ 04.08.77 PETZINGER M W A D16 *US 4108-609
Compost container - 21609B/11

PFIZ 17.10.73 PFIZER INC B02 C02 D13 E13 (D22) =US 4109-083
(4)-Substd. benzylcarbamoyl-cephem derivs. - 57368Y/32

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(4)-Substd. benzylcarbamoyl-cephem derivs. - 57368Y/32

PHAA 29.01.73 PHARMACIA AB A96 D22 =CA 1049-407
Hydrophilic polymeric powder dressing - 43509V/24

PIEV 16.02.77 PIELKENROOD-VINITEX NV D15 =PT --67-653
Aerobic sewage purificn. using air bubbles to float sludge - 60802A/34

PIKO- 09.06.77 PIKOK INT TRADING A96 D22 =FR 2393-581
Porous wound dressing mfd. from collagen gel - 74475A/42

• PILL 31.10.77 PILLSBURY CO D11 *US 4142-460
Feed hopper with rotating cutter for comminuting dough - 21813B/1]

PITC/ 27.04.77 PITCHER F L D15 =J5 4015-468
Desalination of water by distn. employing natural or waste heat - 08459B/05

• PLAK 15.08.64 PLASTICS RES INST D17 *SU -218-751
Prodn. of granulated sugar from sugar liquor - 21235B/11

POGC 06.07.77 DAVY POWER GAS LTD D15 E37 J01 M25 =J5 4017-372
Recovering e.g. copper or cyanide from aq. soln. - 80227A/45

• POKK 05.07.77 POLA KASEI KOGYO KK D21 E17 *J5 4014-525
Bis(alkylglyceryl)-alkylene ether - 20506B/11

POLA 26.10.72 P F W BEHEER BV D13 E15 (D23) =US 4109-022
1-Crotonyl 2,2,6-trimethylcyclohexene stereoisomers - 34570V/19

POLA 12.06.73 POLAK'S FRUTAL WORKS INC B07 C03 D21 J04 (D25) =CA 1049-335
Encapsulated oil globules - 00919W/01

• PRIN 26.01.78 PRINCETON APPLIED R D15 J04 *US 4142-944
Effluent stream analysis appts. using mercury drop electrode - 21891B/11

• PROC 26.12.73 PROCTER & GAMBLE CO D13 *US 4109-012
Prepn. of chips from potato dough - 21759B/11

PROC 21.06.74 PROCTER & GAMBLE CO A97 D25 =CA 1049-366
Liq. detergent compsn. contg. nonionic and anionic agents - 01997X/02

PROC 25.06.74 PROCTER & GAMBLE CO A97 D25 E19 =CA 1049-367
Liq washing agents with good dirt solubilizing effect - 04891X/03

• PROC 12.12.74 PROCTER & GAMBLE CO D25 E17 *US 4142-978
Fabric softener for dispensing in automatic clothes dryer - 21912B/11

• PROC 19.11.76 PROCTER & GAMBLE CO D25 E11 *US 4108-889
Prepn. of long chain alkane phosphonic acid(s) - 21712B/11

• PROC 26.04.77 PROCTER & GAMBLE CO A97 D25 *US 4108-600
Fabric conditioning article for clothes washers - 21602B/11

PROC 09.05.77 PROCTER & GAMBLE CO D13 =J5 4014-541
Modified soya protein prepn. by heating soya in aq. alkali - 82084A/46

PROC 23.05.77 PROCTER & GAMBLE CO C03 D12 (D13) =J5 4017-152
Rapidly rehydratable simulated meat prod. - 86090A/48

• PROC- 26.08.77 PROCHEM-ENG BV D14 *NL 7709-474
Steriliser for cylindrical containers - 21202B/11

PROJ- 17.08.77 PROJEKT CHEM VERFA D17 =GB 2003-478
Sugars and opt. cellulose and lignin extn. from vegetable material - 14176B/08

• PROT= 31.01.66 PROTEIN BIOSYNTH B02 D16 H04 *SU -211-031
Vitamin/b2 microbiological synthesis - 21232B/11

• PRVA= 19.06.73 PERM VACCINE SERUMS B04 D16 *SU -603-661
Protein based nutrient for diphtheria microbes culturing prepn. - 21414B/11

• PURD 27.01.76 PURDUE RESEARCH FOUNDATI D15 J01 *US 4108-718
Vapour filtration system for recovering impurities in water - 21647B/11

PUTS- 26.10.76 PUTSCH H & CO D17 =GB 1542-351
Cutting machine for treating sugar cane tubers - 53929A/30

• QUAK 08.12.75 QUAKER OATS CO A97 C03 D13 *US 4143-168
Stabilised blood chunks contg. gum - 21990B/11

• RAFT 13.02.67 RAFFINERIE TIRLEMONTOISE D17 *IT 1027-505
Sugar juice treatment appts. - B/11

RAIK= 31.08.77 RAIKOLKHOLKHOZZIVPROM TRU D16 (D12 D15) #DT 2739-221
Nutritious medium for fodder yeast mfd. from manure, etc. - 66864Y/38

• RALS 26.05.77 RALSTON PURINA CO C03 D13 *US 4143-169
Prodn. of high fat dry feed for mink - 21991B/11

RENA 09.06.77 REGIE NAT RENAULT D15 =FR 2393-764
Incinerator for industrial waste water treatment sludge - 70839A/40

• RETO 02.01.73 REYNOLDS R J IND INC D16 *SU -544-380
Fermentation process using immobilised microbial cells - 21336B/11

• REVR 11.07.75 REVERE COPPER BRASS INC D15 E31 F06 M25 (F09) *US 4108-596
Chromium recovery from acid waste soln. - 21599B/11

• RHEE 04.11.77 RHEEM MFG CO D12 *US 4142-273
Stuffing horn assembly with separate horns - 21796B/11

• RHEH 26.08.77 VKI-RHEINHOLD & MAH D15 H03 J01 *DT 2738-528
Removal of oil from contaminated surfaces - 20153B/11

RHEI- 28.02.75 RHEINTECH WEILAND K D15 =HU H002-407
Biological converter for faecal matter in water - 56085X/30

RHON 17.02.76 RHONE-POULENC INDUSTRIES D25 E17 =GB 1541-982
Hydrogenation of citral to citronellal and/or citronellol - 45149Y/25

RHON 16.02.77 RHONE-POULENC INDUSTRIES D25 E34 =PT --67-657
Dust-free stabilisation of anhydrous sodium metasilicate - 60856A/34

RHON 03.06.77 RHONE-POULENC INDUSTRIES D25 E33 =J5 4016-399
Type 4A aluminosilicate prepn., esp. as detergent additive - 87857A/49

RHON 04.07.77 RHONE-POULENC INDUSTRIES D23 E17 =J5 4014-911
Optically active citronellal synthesis - 02383B/02

RHON 25.07.77 RHONE POULENC IND D17 E34 H01 (D16) =NO 7802-297
Extraction of oil by flooding with bio:polymer solns. - 14436B/08

RHON 27.07.77 RHONE-POULENC INDUSTRIES A97 D16 E13 (A11 D17) =DK 7803-332
Cells contg. glucose-isomerase enclosed in cellulose ester - 08012B/05

RHON 31.08.77 RHONE-POULENC INDUSTRIES B02 C02 D16 #NL 7709-600
Antifungal di:amino-carboxy-alkyl purine deriv. - 16148B/09

RICT 25.08.77 RICHTER GEDEON VEGY C03 D15 (D13 D15) =GB 2003-459
Sewage sludge used to mfr. nutritious animal feed - 16007B/09

RICT 25.08.77 RICHTER GEDEON VEGY C03 D15 (D13 D15) =NL 7808-793
Sewage sludge used to mfr. nutritious animal feed - 16007B/09

RIES/ 23.07.77 RIESS G A96 D21 =NO 7800-308
Artificial tooth root of plastic loaded with a bioactive phosphate - 47821A/27

RIGA- 21.06.76 RIGA INC D15 J01 =GB 1541-953
Liq. clarifying appts. - 81092Y/45

• RIKL 19.12.77 RIKER LABS INC B02 C02 D22 *US 4143-152
Antimicrobial 2-nitro-benzofuran(s) - 21986B/11

• RIKL 19.12.77 RIKER LABS INC B02 C02 D22 *US 4143-154
Antimicrobial 2-nitro-3-phenyl-benzofuran carboxylic acids - 21987B/11

RISD 23.07.76 RISDON MFG CO D22 =GB 1542-177
Device producing air stream contg. vaporised cpds., e.g. deodorant - 52074Y/29

RITP 08.09.75 SYBRON CORP D15 J01 =GB 1541-897
Distribution system for sand bed filters - 18533Y/11

ROHG 25.02.76 ROHM GMBH D13 =US 4109-017
Rapidly clarifying fruit juice, esp. that of apples - 63226Y/36

ROHM 09.10.74 ROHM & HAAS CO A91 D15 J01 (A13 A14) =IT 1027-766
Deionising liquids contg. metal salts, esp. brine - 48830W/29

ROMO- 03.08.77 ROMO NP D15 =SW 7808-345
Multicompartment activated sludge treatment tank - 87870A/49

• ROYC/ 10.12.70 ROY C H D15 E31 *US 4108-770
Removal of hexavalent chromium from industrial waters - 21665B/11

• SABA- 18.08.76 SABARIA CIPOGYAR SZ D18 *HU T016-127
Drying installation for leather industry - B/11

SAIK/ 16.06.76 SAI K D15 =J7 9003-078
Water distilling device using solar energy - 10939A/06

• SAIT/ 06.06.77 SAITO S D15 E31 *J5 4016-840
Removing iron from water - 20967B/11

• SAIZ/ 03.01.77 SAIZON F S D12 *US 4107-819
Hand held electrically operated fish scaler - 21520B/11

• SANE 12.05.75 SAN EI CHEM IND KK D13 E19 *J5 4017-142
Preserving food e.g. cereals, frozen prods. etc. - 20998B/11

• SANI- 26.09.77 SANILOGICAL CORP D15 *US 4142-975
Sewage treatment appts. with series treatment chambers - 21910B/11

SANN 24.02.75 SANYO KK A35 D15 E19 =J7 9002-992
Treatment of waste water contg. cationic polymer coagulant - 76704X/41

SANO 14.01.74 SANDOZ LTD B04 D16 =CA 1049-406
Extn. of immunogens hemagglutine and neuraminase - 50924W/31

SANO 04.11.75 SANDOZ LTD B03 D16 =US 4108-985
(Dihydro)cyclosporin C immunosuppressant and antiarhtritic prepn. - 32745Y/19

SANO 23.06.77 SANDOZ AG B04 D16 =J5 4017-189
Antibiotic S 53210/A-I-III active against Gram positive bacteria - 00456B/01

SANO 29.08.77 SANDOZ-PATENT-GMBH A97 D25 E19 (A25 A26) =DT 2836-567
Liq. detergent compsn. for cleaning hard surfaces - 17999B/10

SANO 29.08.77 SANDOZ AG A97 D25 E19 (A25 A26) =NL 7808-788
Liq. detergent compsn. for cleaning hard surfaces - 17999B/10

• SANY 08.07.77 SANKYO KK B04 D16 *J5 4017-179
Powdered enzyme prodn. - 21008B/11

SATA- 09.08.76 SATAKE ENG CO LTD D13 =GB 1542-052
Rice polishing machine - 18048A/10

SCHD 14.06.75 SCHERING AG A60 C01 D22 F06 =US 4108-990
Biocidal compsns. contg. (new) diptycho tin cpds. - 96287X/52

SCHR- 03.03.76 SCHREIBER-KLARANLAG D15 =GB 1542-338
Cleaning rake arrangement for a drain channel grid - 65175Y/37
SCHW- 28.07.77 VEB SYNTHESEW SCHWA A96 D22 (A25) =DK 7803-295
Medical dressing prepd. from soft polyurethane foam - 86171A/48
•SEKI 06.07.77 SEKISUI CHEMI IND KK C03 D13 (D16) *J5 4014-587
Prepn. of fungal body from pseudomonas wakayamaensis - 20523B/11
•SEKI 06.07.77 SEKISUI CHEMI IND KK C03 D13 (D16) *J5 4014-588
Protein rich fungus body prepn. - 20524B/11
•SEKI 06.07.77 SEKISUI CHEMI IND KK C03 D13 (D16) *J5 4014-589
Fungus body prepn. from new microorganism - 20525B/11
SHEL 11.06.76 SHELL INT RES MIJ BV D23 E14 =GB 1542-112
Preparing phenyl ethanol derivs. - 00423A/01
SHIK- 24.12.75 SHIKISHIMA SPINNING A35 D15 (A14) =J7 9003-309
Regeneration of polyvinyl alcohol absorption liq. - 58457Y/33
SHIO 14.05.75 SHIONOGI KK B02 D16 =CA 1049-431
Penicillins and cephalosporins prodn. - 90987X/49
SHIO 12.11.75 SHIONOGI KK B02 C02 D22 =US 4143-038
Antibacterial oxadethia cephalosporins - 20012Y/12
SHIO 18.12.76 SHIONOGI KK A96 D21 (A14 A17) =US 4108-823
Denture stabilising compsn. - 57775A/32
SHIO 18.12.76 SHIONOGI KK A96 D21 (A14 A17) =US 4108-823
Denture stabilising compsn. - 57775A/32
SHIO 25.08.77 SHIONOGI KK B02 C02 D22 E13 =NL 7808-802
3-Thiadiazolyl-thiomethyl-oxa-de:thia-cephem derivs. - 01945B/02 ,
SHIS 26.08.77 SHISEIDO KK A96 D21 (A18) =NL 7804-055
Make/up compsn. for use around eyes - 18297B/10
SILV/ 20.05.75 SILVERSTEIN E B04 D16 =CA 1049-405
Detection of pulmonary thromboembolisms - 90614X/49
•SIMC 29.01.77 SIMON-ROSEDOWNS LTD D14 *GB 1542-214
Press with two eccentrically mounted perforated drums - 20392B/11
SITR 20.12.74 SOC ITALIANA RESINE SPA D15 =J7 9003-076
Water desalting process - 69630X/37
SMIT- 15.04.76 SMITH-BERGER MFG D12 =CA 1049-208
Fish e.g. salmon beheading device - 41909A/23
SNAM 03.12.75 SNAMPROGETTI SPA D15 H03 =GB 1542-154
Biological treatment of oil pollution in sea water etc. - 39853Y/23
SNAM 05.07.77 SNAMPROGETTI SPA D17 E13 (D16) =J5 4014-592
Fructose prepn. from glucose solns. - 01939B/02
SNLE 28.00.75 STANLEY ELEC KK D15 =J7 9002-991
Treatment of waste water contg. heavy metals - 64111X/34
SNPA 30.01.75 SOC PETROLES AQUITAINE D21 E19 #US 4108-866
Organic sulphoxides prepn. - 31036W/19
SODA- 29.07.77 SODASTREAM LTD D15 =DK 7803-351
Portable water carbonator for sparkling drinks - 84161A/47
SOLL- 31.07.75 SOLLICH KG D13 =US 4107-938
Boiled sugar mass cooling - 09621Y/06
•SOLL- 29.08.77 SOLLICH SPEZIALMASC D13 *DT 2738-894
Applicator for coatings such as chocolate on confectionery - 20177B/11
SPOF 15.11.72 SPOFA SPOFENE FARM NP C03 D13 =DS 2357-119
Animal fodder concentrate contg. essential biofactors - 40332V/22
SQUI 08.06.77 SQUIBB E R & SONS INC A96 D22 G04 (A18) =FR 2393-566
Formable compsn. used as protective layer for stoma in surgery - 89644A/50
SQUI 08.06.77 SQUIBB E R & SONS INC A81 D22 G03 (A18 A96) =FR 2393-838
Adhesive used partic. for abdominal stoma - 89643A/50
•SSIC 29.01.63 STRUTHERS SCI & INT CORP D15 *IT 1027-503
Converting salt water into potable water - B/11
•STAD 09.03.77 STANDARD OIL CO (IND) A97 D16 H01 (A11 D17) *US 4142-595
Clay-free shale stabilising drilling fluids - 21831B/11
STAK- 24.01.77 STAKE TECHNOLOGY D13 =DS 2714-995
Lignocellulose material conversion to forage - 55333A/31
STAL 04.11.69 STALEY A E MFG CO D13 =US 4109-024
French fried potatoes of good quality and freeze thaw stability - 82930X/44
STAL 05.07.77 STALEY A E MFG CO D13 =J5 4014-548
Protein concentrates prepn. from defatted solvent contg. protein - 84118A/47
STAL 05.07.77 STALEY A E MFG CO D13 =J5 4014-555
Aerated confections requiring no crystallisable sugars - 78262A/43
•STAL 09.09.77 STALEY A E MFG CO C03 D13 *BE -870-250
Animal foodstuff block of good stability - 20013B/11
•STAR/ 13.11.64 STARKOV A V B04 C03 D16 *SU -195-056
Bactericidal compsn. for veterinary use - 21228B/11
•STAU 15.12.76 STAUFFER CHEMICAL CO D11 *US 4109-025
Whey protein concentrate to replace shortening - 21763B/11
STBR 19.04.77 STANDARD BRANDS INC A91 D16 (A18 A97 D17) =J5 4015-488
Agglomerated fibrous ion-exchange cellulose - 74435A/42
STEI 30.08.77 STEINECKER A MASCH GMBH D16 =DT 2739-049
Plant to mfr. beer wort by hydrating crushed malt - 74492A/42
STEI 30.08.77 STEINECKER A MASCH GMBH D16 =GB 2003-399
Plant to mfr. beer wort by hydrating crushed malt - 74492A/42
•STEM- 29.08.77 STEMMLER M & H GMBH D12 *DT 2738-790
Coating meat and sausage prods. continuously - 20172B/11
•STER 15.09.77 STERLING DRUG INC D22 J01 (D15) *BE -870-281
Purifying odorous waste gases, esp. from water treatment - 20017B/11
•STER 19.09.77 STERLING DRUG INC D15 *BE -870-285
Treating aq. effluent contg. organic matter with oxygen - 20019B/11
STLW 01.09.77 STILLE WERNER AB D22 =DT 2837-679
Easy removal of tubular surgical splint from encased limb - 01976B/02
STLW 01.09.77 STILLE WERNER AB D22 =GB 2003-391
Easy removal of tubular surgical splint from encased limb - 01976B/02
STOF/ 07.02.72 STOFFEY D G A32 D22 (A14 A96) =CA 1049-344
Rigid casing prodn - 50807U/36
•STRK 23.08.77 STORK APP BV D13 *NL 7709-303
Heat treatment process for liquid products - 21198B/11
•SUGA= 09.06.75 SUGAR IND RES INST D17 *SU -560-512
Sugar solution concentrator and crystalliser - 21342B/11
•SUGI- 05.07.77 SUGIYAMA SHOJI KK D13 *J5 4017-147
Rapid cooking enriched unpolished rice - 20999B/11
SUMO 29.03.74 SUMITOMO CHEMICAL KK A87 D17 F06 (A18 D16 F09) =CA 1049-675
Pullulan as dispersant in emulsion polymerisation - 71101W/43
SUMO 29.06.74 SUMITOMO CHEMICAL KK A97 D18 (A11) =CA 1049-245
Tobacco prod for mfg cigars and cigarettes - 05869X/04
SUMO 08.09.76 SUMITOMO CHEMICAL KK B05 D16 E16 =US 4108-723
Prepn. of L-lysine from DL-lysine alkyl ester - 21861A/12
•SUMO 07.07.77 SUMITOMO CHEMICAL KK D15 E35 J04 *J5 4017-088
Analysis of ammonium ion in water - 20991B/11
SUMO 00.00.78 SUMITOMO CHEMICAL KK D15 E35 J01 (E36) =J5 4015-494
Reducing nitrogen oxides in waste gases - 72717W/44
•SUNN- 04.07.77 SUNNY MAIZE KK D13 *J5 4014-539
Artificial rice prodn. for use as koji - 20511B/11
SVRA- 15.04.77 SVENSKA RAYON AB D15 J01 =J5 4015-470
Liq. extn. process - 79387A/44
•SZIL- 12.11.76 SZILASMENTI EGYESUL D21 *HU T016-041
Skin-care cosmetic prepn. - B/11

TAKE 11.04.75 TAKEDA CHEMICAL IND KK B04 D16 =US 4108-724
Biotics, P-2568 prodn. - 93385X/50
TAKE 21.10.75 TAKEDA CHEMICAL IND KK A96 B04 D16 J04 =US 4143-201
Beads of water insoluble beta-(1,3)-glucan gel - 29100Y/17
TAKE 29.06.77 TAKEDA CHEMICAL IND KK B02 D16 =J5 4014-511
Maytansine-group antitumour antibiotic C-15003 - 73051A/41
TAKG 21.07.75 TAKI CHEMICAL KK D15 =J7 9002-987
Water-purifying agent esp. for fluorine and phosphoric acid removal - 18763Y/11
•TAKI- 08.07.77 TAKIRON KK D15 F09 *J5 4018-151
Removing iron and manganese from water e.g. for paper mills - 21138B/11
TAKS 10.06.77 TAKASAGO PERFUMERY KK D23 E13 =FR 2393-575
Perfumes with natural aroma - 01335B/01
•TANA 08.07.77 TANABE PHARMACEUTICAL KK A96 B04 D16 *J5 4017-180
Purificn. of human urinary urokinase by gel filtration - 21009B/11
•TANA 08.07.77 TANABE PHARMACEUTICAL KK D13 (D16) *J5 4017-192
Brewing syoyu using defatted soybean and wheat - 21016B/11
TANA/ 13.09.75 TANAKA Y D13 =US 4143-162
Encapsulated foodstuff - 22156Y/13
•TAPP 12.04.76 TAPPAN CO D11 *US 4108-139
Connection oven with recirculating heated gases - 21551B/11
TECN- 19.07.77 TECNICOMPLEX SPA D16 =GB 2003-458
Mechanised digester used to produce fertiliser from organic waste - 84173A/47
TEIJ 08.06.77 TEIJIN KK A88 D15 J01 (A26) =FR 2393-594
Composite permselective membranes - 91751A/51
•TEIJ 12.07.77 TEIJIN KK D15 J01 *J5 4018-152
Treating agent for waste water contg. emulsified oil - 21139B/11
TERM/ 05.08.68 TERMET P D12 =DS 1939-801
Industrial pistol with magazine - 92755R/50
TETR 21.12.73 TETRA PAK DEV SA D14 =IT 1027-944
Sterilisation of liqs., esp. milk, cream or fruit juices - 44784W/27
TEXC 22.12.73 DEUTSCHE TEXACO AG B07 D13 H08 (D16 D21) =IT 1027-784
Purification of slack wax - 46376W/28
TEXC 26.12.73 TEXACO DEV CORP A25 B05 D25 E16 =IT 1027-986
Primary sec. alkylamines prepn. from N-paraffins - 46057W/28
TEXC 26.12.73 TEXACO DEV CORP A25 B05 D25 E16 =IT 1027-988
Prim. sec.-alkylamines prepd. from paraffins continuously - 46059W/28
TEXC 20.12.74 TEXACO DEV CORP A97 D15 E14 H01 (A25 E12) =CA 1049-368
Scale inhibitors for aq systems - 72017X/38
•TEXC 12.09.77 TEXACO DEV CORP A97 D25 E16 (A25) *BE -870-412
Surface active agents prepd. from specified alkanol - 20043B/11
THOM/ 25.02.74 THOMAS A A96 B04 D21 (D22) =US 4108-849
Glyco protein and mucopolysaccharides extraction - 46135W/28
THOM/ 27.05.76 THOMPSON J B A97 D11 =US 4109-018
Low calorie diet bread - 16358B/09
•TOLE 08.12.76 RELIANCE ELECTRIC CO D13 J04 *US 4109-314
Automatic analysis of fruit and juice - 21792B/11
TOMK/ 26.01.77 GEZA M C03 D13 E36 =HU T016-039
Polydisperse solid phosphoric acid feed additive - 57133A/32
•TORA 30.06.77 TORAY INDS INC A97 B04 D16 F06 (A13 A17) *J5 4015-019
Immobilising enzymes on fibre - 20613B/11

TORA 11.07.77 TORAY INDS INC A88 D15 F07 J01 =J5 4017-383
Semipermeable membrane liq. separator - 04529B/03
TOSC- 09.01.74 TOSCARA ANSTALT D13 =IT 1028-000
Cream cheese and yoghurt prodn. - 40955W/25
TOSY 13.01.76 TOSHIN SCIENCE KK D15 =J7 9003-073
Treating waste emulsion to obtain clear liquid - 62113Y/35
•TOWN 06.11.78 TOWNSEND ENG CO D12 *BE -871-798
Machine to inject brine, etc. into meat - 20059B/11
•TOYJ 05.08.75 TOYO SODA KK D15 E33 *J5 4015-497
Concentrating dil. aq. aluminium sulphate - 20723B/11
TOYJ 07.11.75 TOYO SODA KK D15 M12 =J7 9002-998
Removing iron from acid-washed waste water - 53286Y/30
•TOYM 07.07.77 TOYOBO KK B04 D16 *J5 4017-182
Choline oxidase prepd. by cultivating strain of Alcaligenes - 21010B/11
TRIO- 24.06.76 TRIO ENGG LTD D12 =US 4107-904
Automatic fish box packing machine - 04637A/03
TRIP- 26.08.77 TRIPLUS SJUKVARDSPR D22 =NL 7808-603
Surgical drape with central hole - 18511B/10
TUNO/ 09.09.76 TUNODA T D13 =DS 2700-791
Fine deodorised soybean powder - 21474A/11

•UEDA- 08.07.77 UEDA KAGAKU KOG KK D13 (D16) *J5 4017-192
Brewing syoyu using defatted soybean and wheat - 21016B/11
UGIN 19.12.73 UGINE KUHLMANN D18 E21 F06 =IT 1027-767
Watersol disaxo dyes derived from diamino benzene sulphanilides - 44388W/27
UGIN 08.07.77 PROD CHIM UGINE KUH D15 =BR 7804-409
Denitrification of biological effluents - 08436B/05
UGIN 29.07.77 UGINE KUHLMANN D15 J01 =DK 7803-364
Continuous prepn. of zeolite-A of uniform quality - 06080B/04
UGIN 29.07.77 UGINE KUHLMANN D15 J01 =SW 7808-201
Continuous prepn. of zeolite-A of uniform quality - 06080B/04
UNGE- 02.02.77 UNION GEN SAVON A97 D25 E19 =J5 4015-911
Washing powder esp. for automatic machines - 57211A/32
UNIC 14.10.76 UNION CARBIDE CORP A97 D12 =GB 1539-483
Collagen compsns. for prepn. of tubular food wrappers - 28775A/16
UNIC 27.06.77 UNION CARBIDE CORP D15 =J5 4017-387
Sequestration of calcium and magnesium ions - 58574A/32
UNIC 25.08.77 UNION CARBIDE CORP D22 =NL 7808-750
Shrink wrapped stick of concertina folded tubular sausage casing - 15999B/09
UNIL 22.03.74 UNILEVER LTD D23 (D13) =CA 1049-551
Purificn of crude phosphatides - 67306W/41
UNIL 22.08.77 UNILEVER NV D25 E34 =NL 7808-161
Aq. liq. detergent compsn. prepn. for washing clothes etc. - 14186B/08
•UNIL 22.08.77 UNILEVER NV A97 D25 *NL 7808-640
Coloured specks for addn. to washing powders - 21208B/11
•UNIL 26.08.77 UNILEVER NV A96 D21 *DT 2837-088
Non-irritant, non-tacky antiperspiration compsn. - 20277B/11
UNIL 26.08.77 UNILEVER NV A96 D21 =NL 7808-831
Non-irritant, non-tacky antiperspiration compsn. - 20277B/11
UNIL 30.08.77 UNILEVER NV D13 =NL 7808-870
Iced confectionery esp. ice lollipops - 18000B/10
•UNIL 15.09.77 UNILEVER NV D24 E17 *BE -870-376
Soap tablets contg. at least one per cent free carboxylic acid - 20034B/11
•UNIT- 09.06.77 UNITEC D15 *FR 2393-955
Submersible positive pump for sewage sludge etc. - 20362B/11
•USNA 18.07.77 US SEC OF NAVY A89 D15 K04 K14 *US 4108-604
Detecting tri:nitrotoluene in effluent water - 21605B/11
•USSA 01.07.77 US SEC OF THE ARMY D13 *US 4109-020
Prodn. of crisp reheated french fried potatoes - 21761B/11
•USSA 25.07.77 US SEC OF THE ARMY A97 D13 (A25) *US 4109-026
Compacted, dehydrated, uncooked cabbage - 21764B/11
•UYDN= 12.12.73 DNEPR UNIV D16 M25 *SU -498-338
Bacterial strain Achromobacter delicatulus 25 - 21300B/11

VAES 06.12.72 VAESSEN-SCHOEMAKER D12 =DS 2360-557
Stable meat preservative powders - 45322V/25
VAJN/ 10.02.64 VAJNA S D15 J01 =US 4108-766
Ion exchange apparatus - 34922R/20
VARI 16.06.69 VARIAN ASSOCIATES D15 J04 =DS 2022-958
Detection of organic traces in liquids - 94176R/51
•VIME= 04.01.77 VILIN MECHAN AUTOM D15 E31 J03 *SU -603-704
Electrolytic cell for product separation from electrolyte - 21452B/11
VINE 24.08.77 VINELAND LABS LTD B04 C03 D16 =DT 2836-507
Fowl cholera vaccine against Pasteurella multocida - 18510B/10
VINE 24.08.77 VINELAND LABS INC B04 C03 D16 =NL 7808-717
Fowl cholera vaccine against Pasteurella multocida - 18510B/10
•VLPO= 03.05.76 VOLG POLY A97 D15 J01 *SU -603-635
Petroleum processing waste prods. removal from waste water - 21390B/11
VORH- 27.06.77 VORHAUER LABS INC A96 B07 D22 E14 =J5 4018-196
Contraceptive biologically compatible tampon sponge - 01868B/01

•WEIL- 25.03.77 WEILER & CO D14 *US 4108-387
Food grinder with external adjuster - 21586B/11
•WEIS- 06.02.74 WEISS & CO D15 *US 4108-771
Elimination of odours from organic wastes - 21666B/11
•WERN 27.08.77 WERNER & PFLEIDERER D11 *DT 2738-737
Confectionery chamber in multistage baking oven - 20162B/11
WERN 27.08.77 WERNER & PFLEIDERER D11 =NL 7806-698
Confectionery chamber in multistage baking oven - 20162B/11
WILL/ 02.02.76 WILLEMSEN W H D13 =CA 1049-329
Extrusion plate for potato sticks prodn. - 19742Y/11
•WINC- 27.08.76 WINCHESTER CHEM CO A97 D15 *US 4108-768
Clarifying waste water contg. soluble impurities - 21664B/11
WIST- 01.06.76 WISTAR INST B04 D16 =US 4108-983
Antitumour viral oncolysate vaccine - 90419Y/51
WIST- 15.06.77 WISTAIR INST B04 D16 =J5 4017-185
Viral antibody prodn. using hybrid cells - 74495A/42
WORL- 29.08.77 WORLD DEV LAB D15 J01 =NL 7808-856
Reducing impurity concn. of solution by reverse osmosis - 18520B/10

YAHI/ 31.03.75 YAHIKOZAWA K D15 E31 =J7 9002-993
Chromium sepn. from waste liquor - 87720X/47
•YAMA/ 25.12.75 YAMAMOTO H B04 D16 *J5 4017-186
Carcinostatic emitanin prepn. - 21012B/11
•YAMA/ 25.12.75 YAMAMOTO H B04 D16 *J5 4017-187
Prepn. of carcinostatic emitanin - 21013B/11
•YAMA/ 25.12.75 YAMAMOTO H B04 D16 *J5 4017-188
Prepn. of carcinostatic emitanin - 21014B/11
•YOUS/ 06.09.77 YOUSSEF K A D16 E14 *DT 2740-013
Suppressing bacteria growth in fungus or yeast cultures - 20222B/11

•ZAID 29.06.77 ZH BISEIBUTSU KAGAKU KEN B04 D16 *J5 4014-594
Beta-lactamase inhibitor prodn. - 20527B/11
ZAID 25.08.77 ZAIDAN HOJIN BISEIB A97 B04 D16 =DT 2836-799
Purification of macromomycin antitumour antibiotic - 18537B/10
•ZAID 25.08.77 ZAIDAN HOJIN BISEIB B04 D16 *DT 2836-821
Antibacterial and antitumour protein antibiotic auromomycin - 20269B/11
ZAID 25.08.77 ZAIDAN HOJIN BISEIB B04 D16 =GB 2003-482
Antibacterial and antitumour protein antibiotic auromomycin - 20269B/11
ZAID 26.08.77 ZH BISEIBUTSU KAGAKU KEN B03 D16 (B04) #DT 2738-656
Antitumour rhodirubins A and B - 14004A/08

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CA -841-662 R20
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NL -152-458 Y15
US 4108-766 B11

68033-R D
DL --74-269 R38+
GB 1227-245 S13
GB 1227-244 S13
GB 1227-243 S13
DL --78-043 S15
CH -501-609 S16
GB 1232-960 S20
CA -889-880 T03
J7 2015-807 T20
CA -905-422 T31
DT 1793-710 T44
DT 1793-711 T45
CA -914-686 T48
J7 2047-365 T50
FR 1605-017 U28
NL 7405-246 V28+
NL -143-548 V45+
NL 7411-376 V50+
NL 7411-375 V50+
US 3963-783 X26+
US 3979-425 X38+
DS 1768-659 X50+
DS 1793-710 Y22
NL -158-842 B02+
NL -159-138 B06+
DS 1793-831 B11+

76924-R DJ
DT 2015-818 R42+
GB 1313-115 U15
DT 2015-818 U32
J7 6008-117 X15
J7 8004-067 A10
J7 9003-155 B11

92755-R D
FR 1600-417 R50
CH -520-475 T26
GB 1282-902 T30
CA -952-251 V34
CA -961-202 W06
DS 1939-801 B11

94176-R DJ
DT 2022-958 R51
GB 1317-912 U21
CA -991-439 X28
DS 2022-958 B11

60699-S DE
DT 2009-600 S38
BE -772-101 T11
DT 2009-600 T37
ZA 7108-005 T41
CA -914-213 T47
NL 7111-982 U12
GB 1314-926 U17
FR 2151-503 U25
J4 8033-038 U33
US 3799-969 V14
CH -560-679 W21
IT 1027-507 B11+

12549-T ADJ
US 3635-818 T08
IT 1027-501 B11

11188-U BD
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NL 7207-714 U33
DT 2225-039 U35
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HU T015-331 A36
DS 2225-039 B11

15497-U D
BE -789-974 U11+
NL 7213-303 U18
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CH -542-791 U51
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CA -993-806 X34
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DT 2265-262 Y24
NL -156-932 A26+
US 4142-970 B11

25936-U D
DT 2250-078 U19
NL 7214-126 U19
ZA 7207-380 U27
FR 2156-731 U33
J4 8049-936 U37
GB 1397-248 W24
CA -989-740 X24
US 4108-978 B11

31427-U BDE
BE -789-487 U22
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NL 7213-308 U49
FR 2183-647 V07
J4 9026-437 V19
GB 1364-141 V34
CH -555-676 V52
CA -974-523 W40
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SW 7508-607 X22
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US 4143-167 B11

15979-V DJ
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J7 8030-672 A38
J7 9003-079 B11

19195-V D
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GB 1382-277 W05
CA -963-342 W11
DS 2112-211 B11

32038-V DE
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FR 2201-841 V28
J4 9093-547 V45
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CH -576-238 X29
CH -579-008 X39
US 4142-997 B11

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CA 1020-582 Y47
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US 4109-022 B11

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DK 7504-855 X11
DK 7504-854 X11
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GB 1477-823 Y26
SW 7702-038 Y31
US 4048-300 Y38
CA 1023-667 A04
CA 1028-826 A16
US 4139-599 B08
US 4108-980 B11+

40332-V CD
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NL 7315-706 V22
FR 2217-347 V49
DL -110-426 W11
OE 7309-585 X07
DS 2357-119 B11

43509-V AD
BE -810-274 V24
NL 7401-063 V33
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SF 7400-230 V45
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PT --61-246 W08
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CA 1049-407 B11

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PT --60-980 W25
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NL -152-743 Y20
DS 2360-557 B11

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SF 7400-426 V49+
FR 2218-566 V50+
SW 7302-201 V42
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SW 7310-077 W11
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ZA 7400-849 W42
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IL --44-125 Y20+
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CA 1013-656 Y30+
CH -591-696 Y41+
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IT 1027-519 B11+

58177-V D
US 3826-065 V32
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NL 7407-788 W01
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FR 2233-095 W13
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US 3971-852 X32
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CA 1049-335 B11

27809-W BDE
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CH -592-418 Y48
CA 1033-613 A28
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31036-W DE
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NL 7413-925 W19
FR 2249-077 W33
J5 0088-027 W37
CH -590-831 Y36
GB 1488-818 Y41
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CA 1047-505 B07
US 4108-866 B11+

33909-W ADF
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DT 2460-712 W27
NL 7416-252 W28
FR 2255-046 W45
ZA 7408-125 X13
BR 7410-060 X24
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CA 1031-503 A23
IT 1027-830 B11

34542-W DJ
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SW 7413-457 W25
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SF 7403-142 W32
FR 2249-182 W33
J5 0079-484 W34
ZA 7406-241 X03
GB 1451-400 X40
GB 1451-399 X40
US 4032-426 Y27
SW 7702-427 Y30
NO 7800-940 A22
US 4108-756 B11

34738-W D
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GB 1414-435 W47
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CA -998-820 X46
US 4107-976 B11+

36290-W ABD
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NL 7415-187 W23
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DK 7406-024 W34
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FR 2251-584 W36
ZA 7406-283 W51
DL -119-132 X24
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HU T012-533 X50
GB 1465-376 Y08
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US 4080-969 A20+
CA 1049-695 B11

39686-W ADF
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SW 7414-956 W29
J5 0089-458 W37
FR 2252-837 W38
ZA 7407-391 X06
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GB 1504-972 A12+
IT 1024-928 A39
IL --46-121 A39
US 4102-338 A44
CA 1046-873 B06
US 4108-169 B11

39692-W DE
DT 2456-212 W24
FR 2253-088 W38
J5 0084-606 W48
US 3960-744 X24
GB 1448-899 X37
J7 8045-808 B02
DS 2456-212 B11

40955-W D
BE -822-974 W25+
NL 7500-275 W30+
DT 2500-224 W30+
SW 7415-116 W35+
DK 7406-323 W39+
FR 2267-031 X05+
FR 2275-144 X15
GB 1458-760 X51+
US 4003-490 Y05+
US 4058-630 Y47
CH -597-767 A19+
OE 7500-090 B09+
IT 1028-000 B11+

42922-W DE
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J5 0092-928 W38
FR 2254-611 W40
DS 2362-881 X05
GB 1491-693 Y45
IT 1027-728 B11

44386-W DE
BE -823-526 W27
NL 7416-351 W27
DT 2459-894 W28
US 3897-490 W32
SW 7415-897 W33
J5 0092-909 W38
FR 2255-283 W41
GB 1455-676 X47
DS 2459-894 A38
CA 1039-304 A41
CH -605-422 A41
IT 1027-778 B11

44388-W DEF
BE -823-537 W27
NL 7415-447 W27
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FR 2255-356 W41
GB 1485-056 Y36
CH -603-755 A37
IT 1027-767 B11

44784-W D
DT 2460-566 W27
FR 2255-019 W41
CH -573-716 X19
US 3973-048 X33
IT 1027-944 B11

44812-W D
FR 2245-396 W27+
DT 2438-170 X09
DT 2438-627 X10
DT 2438-694 X10+
US 3988-486 X45+
US 4070-291 A06+
IT 1027-551 B11+

46057-W ABDE
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NL 7415-508 W29
FR 2256-149 W42
US 3917-705 W47
GB 1437-893 X23
CA 1029-042 A16
IT 1027-986 B11

46059-W ABDE
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NL 7414-654 W29
DT 2461-075 W29
J5 0095-212 W39
FR 2256-148 W42
US 3917-706 W47
GB 1438-216 X23
CA 1029-040 A16
IT 1027-988 B11

46135-W ABD
BE -825-857 W28+
NL 7502-236 W37+
DT 2508-082 W41+
SW 7502-053 W43
DK 7500-696 W48+
FR 2261-755 W50
J5 0160-413 X05+
ZA 7501-124 X13
FR 2281-130 X22
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US 3953-571 X19
J7 9003-038 B11

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SW 7504-448 W50+
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J5 0142-744 X02+
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DK 7501-657 X06+
NL 7511-824 X17
DT 2544-902 X19
SW 7511-205 X21
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SW 7503-140 W46
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SU -576-965 A36
CA 1049-532 B11

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CA 1035-705 A33
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CA 1013-618 Y30
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CA 1049-538 B11

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CA 1049-675 B11

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SW 7505-259 W52
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ZA 7502-869 X24
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ZA 7502-835 X
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CA 1049-228 B

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J5 1033-103 X19+
GB 1502-185 A08+
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CA 1049-366 B11+

03558-X AD
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CA 1032-453 A25
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05869-X AD
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J7 9002-914 B11

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7 9002-915 B41

625-X DJ
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9002-990 B11

030-X DE
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7512-864 X25
1078-800 X34
2456-693 X34
2292-667 X41
7509-062 Y18

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FR 2292-669 X41
OE 7509-065 Y13
GB 1522-160 A34
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47607-X D
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CA 1049-316 B11

49994-X BCD
BE -836-588 X27+
NL 7514-507 X27+
DT 2556-043 X29+
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SW 7514-033 X33+
SF 7503-476 X35+
DK 7505-642 X38+
J5 1091-389 X39+
FR 2293-942 X43+
ZA 7507-736 Y01
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J5 2057-112 Y25
DS 2556-043 A06+
IL --48-635 A33+
GB 1525-977 A39+
J7 8043-589 A50+
US 4108-725 B11+

50060-X DJ
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DT 2604-371 X36
SW 7601-213 X39
BR 7600-800 X44
J5 1103-672 X44
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US 4123-339 A45
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GB 1542-331 B11

56085-X D
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DT 2508-749 X38
NL 7601-914 X38+
SW 7602-033 X42+
DK 7600-650 X47+
FR 2302-280 Y01+
DT 2544-177 Y15
US 4028-245 Y24
DT 2559-900 A14
OE 7600-774 A18+
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GB 1522-412 A34+
IL --49-117 B08+
HU H002-407 B11+

59697-X DE
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DK 7601-034 X49+
FR 2303-527 Y03
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US 4113-852 A38
GB 1533-048 A47+
US 4108-977 B11

63605-X D
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FR 2292-422 X41
US 4108-057 B11+

64111-X D
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J7 9002-991 B11

65257-X D
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DK 7500-484 X44
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CA 1049-495 B11

68523-X ADEG
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J5 3026-804 A17+
CA 1049-340 B11+

69027-X BDE
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J5 1098-232 X42

US 4113-782 A38
CA 1041-543 A46
J5 4016-439 B11+

69630-X D
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GB 1537-468 B01
J7 9003-076 B11

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GB 1462-000 Y03+
CA 1049-368 B11+

76704-X ADE
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J7 9002-992 B11

79475-X ADFG
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SW 7606-495 Y04
BR 7603-642 Y06
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SF 7601-671 Y08
FR 2314-253 Y13
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GB 1528-851 A42
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81264-X DE
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SW 7606-352 Y04
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SF 7601-660 Y08
FR 2313-873 Y13
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US 4109-024 B11+

83461-X CD
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85054-X D
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87074-X AD
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87292-X DFJ
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87716-X DE
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J7 9002-985 B11

87720-X DE
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J7 9002-993 B11

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BR 7602-632 X50
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DL -124-099 Y21
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GB 1542-066 B11

90614-X BD
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NL 7605-393 X50+
DT 2622-588 X51+
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GB 1514-639 A24+
CA 1049-405 B11+

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J5 1142-533 Y04
DS 2623-682 B11

96279-X CD
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BR 7603-679 Y05
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SW 7602-501 Y05+
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04320-Y CD
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FR 2313-446 Y12
HU T016-100 B11

09621-Y D
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10007-Y AD
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J7 9002-994 B11

11061-Y ABDE
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US 4109-072 B11+

14578-Y BCD
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SW 7609-425 Y15
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DK 7603-840 Y20
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GB 1539-740 B11

18533-Y DJ
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FR 2322-647 Y23+
BR 7605-734 Y37+
US 4065-391 A02+
GB 1541-897 B11+

18763-Y D
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J7 9002-987 B11

19364-Y DE
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J5 2033-665 Y17
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US 4143-065 B11+

19742-Y D
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NL 7601-006 Y33
GB 1534-329 A48
CA 1049-329 B11

20012-Y BCD
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NL 7612-638 Y22+
DT 2651-771 Y22+
J5 2065-292 Y28+
ZA 7606-822 Y46+
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22156-Y D
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FR 2323-339 Y24
GB 1489-539 Y42
US 4143-162 B11

23815-Y D
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US 4142-541 B11

23866-Y BDE
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CA 1049-318 B11

24298-Y D
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J7 9002-995 B11

29100-Y ABDJ
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SW 7611-646 Y22+
DK 7604-706 Y28+
FR 2328-732 Y30+
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30158-Y DM
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DK 7604-831 Y31
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FR 2338-251 Y44
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35527-Y D
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J7 9002-989 B11

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SW 7613-626 Y28
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DK 7605-355 Y34
ZA 7606-542 Y46
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GB 1542-154 B11

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GB 1519-710 A31
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44476-Y D
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J7 9003-036 B11

45149-Y DE
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GB 1541-982 B11

45304-Y BDE
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46738-Y DF
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CA 1049-667 B11

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GB 1541-973 B11

50714-Y ABDJ
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SW 7700-075 Y33+
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GB 1542-177 B11

53286-Y DM
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J7 9002-998 B11

53909-Y DE
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J5 4014-531 B11+

54205-Y DM
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GB 1542-181 B11

55772-Y D
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CA 1049-319 B11

57368-Y BCDE
US 4039-532 Y32+
US 4109-085 B11+
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57528-Y D
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NL 7601-680 Y36
FR 2342-779 Y51
SW 7705-158 A50+
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SF 7701-415 B04+
GB 1542-218 B11

57578-Y D
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FR 2348-478 A06+
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58457-Y AD
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62113-Y D
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63179-Y D
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63226-Y D
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DT 2838
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DT 2849
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• 541 20324B D14
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FR 2394
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=483 01975B D16
=498 20218B D18
• 499 20419B D16
=511 14188B D25E14
• 522 20424B D25E16
=603 12268B D16G06R2+P3

HU H002
=407 56085X D15+P1

HU T016
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• 038 B C03D13
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• 041 B D21
=044 A D15J01
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IT 1027
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=601 27809W B05D13E19
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=766 48830W A91D15J01+R1
=767 44388W D18E21F06
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• 801 B D13
=830 33909W A96D22F04P3+P7
=906 46388W D21E19+P3
=929 46366W D23H04J04
=944 44784W D14P3
=986 46057W A25B05D25E16
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IT 1028
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J4 7033
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J5 1008
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J5 1049
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J5 1101
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J5 3133
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J5 4005
=055 20321B C03D13

J5 4014
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• 524 20505B D21E13
• 525 20506B D21E17
• 526 20507B D21E16
• 527 20508B D13E17
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J5 4014
• 559 20514B D12
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• 562 20516B B04D13
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• 564 20518B B04D13
• 579 20519B D16
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• 584 20521B D16
• 585 20522B D13
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• 587 20523B C03D13
• 588 20524B C03D13
• 589 20525B C03D13
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• 593 20526B B03D16
• 594 20527B B04D16
• 595 20528B B04D16
• 596 20529B D13
=598 02458B D18E12P1
• 902 20559B D21E17
=911 02383B D23E17
=915 27268A B05C03D22E17
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=988 01921B A60D25E23F06
=990 45706A D25E13

J5 4015
• 000 20604B D18E13
• 019 20613B A97B04D16F06
• 030 20624B A32D15F01J01
• 352 20676B D15E36J01
• 353 20677B D15
• 354 20678B D15
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• 356 20680B D15
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• 484 20717B D15E36J01
• 485 20718B A97D25G04M12
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• 496 20722B D15E36M12
• 497 20723B D15E33
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J5 4016
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• 368 20853B A91D15J01
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• 513 20901B D25
=514 89619A A97D25E34
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• 844 20968B D15
• 845 20969B A97D15
• 847 20970B D15
=849 86442A D15
=850 70869A D15

J5 4017
• 088 20991B D15E35J04R1
• 113 20992B A96D22E37
=118 08311B B04C03D16
=121 00433B D22E13P3
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J5 4017
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• 159 21003B D13
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• 164 21005B D13E17
• 165 21006B D13
• 167 21007B D13
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• 180 21009B A96B04D16
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• 182 21010B B04D16
• 183 21011B B05D16E16
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• 186 21012B B04D16
• 187 21013B B04D16
• 188 21014B B04D16
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• 191 21015B D16
• 192 21016B D13
• 193 21017B D13
=320 81902A D21M26
• 367 21049B D15
• 371 21053B D15
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=378 00305B D15J01
• 381 B D15
=383 04529B A88D15F07J01
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• 899 21085B B04D16J04R1
• 905 21088B D23

J5 4018
=149 03428B D15
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• 152 21139B D15J01
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NL 7709
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NL 7800
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NL 7804
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NL 7806
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NL 7808
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=219 16003B D15P3+Q4
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=615 01958B D14J08Q7+P6
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=717 18510B B04C03D16
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NL 7808
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=856 18520B D15J01
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PT --67
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• 717 B D13

SF 7801
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SU -136
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SU -195
• 056 21228B B04C03D16P3

SU -211
• 031 21232B B02D16H04

SU -218
• 751 21235B D17

SU -241
• 429 21242B D21E16

SU -369
• 930 21254B D22J01P4

SU -481
• 641 21271B D16P1

SU -493
• 468 21285B A60D22E13

SU -494
• 409 21291B A97D18E14
• 410 21292B D18

SU -496
• 029 21295B D12

SU -498
• 338 21300B D16M25

SU -499
• 870 21303B D11

SU -544
• 380 21336B D16

SU -545
• 324 21337B D14P4

SU -548
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SU -560
• 512 21342B D17

SU -576
• 338 21350B D16

SU -589
• 947 21365B D12
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SU -601
• 510 21387B D14Q6

SU -603
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• 658 21411B D16
• 659 21412B B05D13E12
• 660 21413B D16
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SU -603
• 901 21509B D12R1

SW 7706
#151 20322B D14+P3

SW 7711
=458 19718A D12

SW 7805
=774 20321B C03D13

SW 7806
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SW 7807
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SW 7808
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US 4107
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US 4108
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• 609 21609B D16
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• 771 21666B D15
• 772 21667B D15
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• 867 21705B C02D22E13
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• 889 21712B D25E11
=891 45304Y B03D17E13
=899 21425A D23E15
• 909 21716B B05C03D22E14
=961 46032X D21E33
=962 46030X D21E33
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S 4109

018	16358B	A97D11
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023	21762B	D11
=024	82930X	D13
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• 026	21764B	A97D13
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=075	00403A	D17E13
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=085	57368Y	B02C02D13E13
• 094	21784B	D21E13F06
• 314	21792B	D13J04R1

US 4142

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• 372	21806B	D13Q7
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• 460	21813B	D11
• 461	21814B	D15P7
=476	60241A	D22F07P3
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=534	74290Y	D18P1
#535	79015W	D18P1
=541	23815Y	D14P2+P4
• 595	21831B	A97D16H01
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=916	67108A	D17E13
=939	74416Y	A97B04D16+P3R1
=940	87074X	A92D16
=943	26764X	D22E14+P3
• 944	21891B	D15J04R1
=966	67733W	A97D15J01
• 968	21906B	D16
• 969	21907B	D15H03J01
=970	15497U	D15
=971	82895Y	D15J01+P7
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• 978	21912B	D25E17
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• 985	21915B	D22E13
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US 4143

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=153	64078W	C01D22E12F09P6
• 154	21987B	B02C02D22
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• 161	21989B	C03D13P1
=162	22156Y	D13
=163	04723A	A97B07D13
=164	32122A	D13
=167	07271V	D13
• 168	21990B	A97C03D13
• 169	21991B	C03D13
• 170	21992B	A97B05D13E19
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=172	60378W	C03D13
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=175	00426B	D13
=176	00271B	D13
=201	29100Y	A96B04D16J04+P7
• 230	22015B	D23E17

5
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WEEK B12
10 MAY 79
22034B - 23944B

CENTRAL PATENTS INDEX

CLASSIFIED ALERTING BULLETIN

Section D:

FOOD
DETERGENTS

ABSTRACTS

INDEXES

II - PATENTEE

V - BASIC NUMBER

VII - PATENT NUMBER

COUNTRY	PUB. DATE(S)	NUMBER RANGE
BELGIUM		
-Delayed	13 MAR - 19 MAR 79	870,418 - 870,607
-Non Delayed	1 MAR 79	871,898 - 872,025
CANADA	6 MAR 79	1,049,701 - 1,050,200
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DENMARK	26 FEB 79	7,703,447 - 7,803,484
W.GERMANY		
-DAS	15 MAR 79	1,470,426 - 2,836,445
-OLS	15 MAR 79	2,717,563 - 2,480,078
EUROPE	21 MAR 79	01,035 - 01,200
FRANCE*	12 JAN 79 (BOPI 16 FEB 79)	2,394,233 - 2,394,970
UNITED KINGDOM	21 MAR 79	1,542,371 - 1,542,760 2,003,711 - 2,004,170
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-Unexamined	—	47,017,806 - 52,156,759
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-Examined	22 FEB - 28 FEB 79	79,003,361 - 79,004,000
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RES.DISCLOSURE	MARCH 79	179,001 - 179,059
FINLAND	28 FEB 79	7,701,848 - 7,803,334
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SWEDEN	5 MAR 79	7,610,813 - 7,811,890
UNITED STATES		
-Reissues	13 MAR 79	Re29,928 - Re29,935
-Patents	13 MAR 79	4,143,422 - 4,144,591
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Arrangement of Abstracts

See Appendix I for definition of 'Major' and 'Minor' Countries.

'MAJOR' COUNTRIES – An alerting abstract of every basic and examined equivalent document is provided except for equivalents from Canada, East Germany and Switzerland. The abstracts are arranged in CPI class order and within any one of the 135 classes are in country and patent number order.

'MINOR' COUNTRIES – Basic headings are included in sequence with the entries from the 'Major' countries.

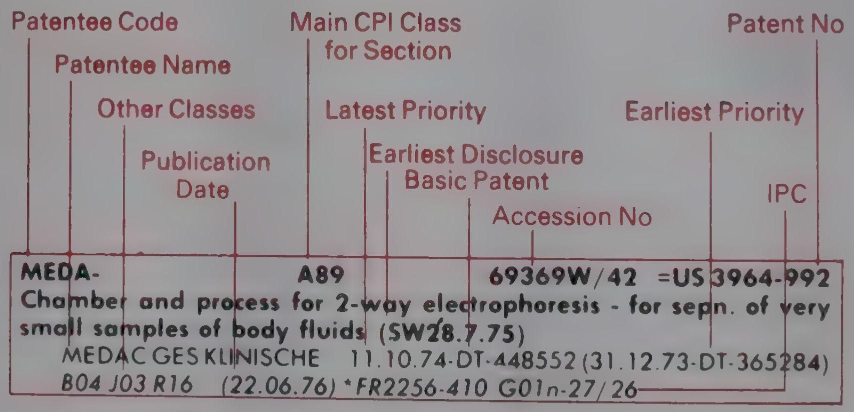
CPI Section Headings

See inside cover for further details.

A	Polymer Chemistry
A+	Polymer Applns.
AE	Polymer & General Chemistry
B	Pharmaceuticals
C	Agricultural Chemistry
D	Food, Disinfectants, Detergents
E	General Chemistry
E+	General Chemistry Applns.
F	Textiles, Paper, Cellulose
G	Printing, Coating, Photographic Chemistry
H	Petroleum
J	Chemical Engineering
K	Nucleonics, Explosives, Protection
L	Refractories, Ceramics
M	Metallurgy

Typical Abstract Heading

See CPI/WPI Instruction Manual No. 1A for explanation of the various flagged descriptors.


Patentee Code
Patentee Name
Other Classes
Publication Date
Main CPI Class for Section
Latest Priority
Earliest Disclosure
Basic Patent
Accession No
Patent No
Earliest Priority
IPC

MEDA- **A89** **69369W/42 =US 3964-992**
Chamber and process for 2-way electrophoresis - for sepn. of very small samples of body fluids (SW28.7.75)
MEDAC GES KLINISCHE 11.10.74-DT-448552 (31.12.73-DT-365284)
*B04 J03 R16 (22.06.76) *FR2256-410 G01n-27/26*

Copies of Specifications may be ordered from our PATENTS SUPPLY DIVISION.

D1: FOOD; FERMENTATION

D11: BAKING

CHRI/ ★ D11 B/12 ★CS 7802-749
Thermal energy recovery from bakery products
CHRIASTEL L 28.04.78-CS-002749
(29.12.78) A21b-03 A21d-08

CHRI/ ★ D11 B/12 ★CS 7802-757
Vacuum cooling of bakery products
CHRIASTEL L 28.04.78-CS-002757
(29.12.78) A21b-03

PAUL/ D11 74430Y/42 =DS 2714-761
Rotary oven for heating prepd. pizzas - has helical path and coaxial rotor to propel and rotate pizzas
PAULUCCI J F 02.04.76-US-672849
*+P28 (15.03.79) *DT2714-761 A21b-01/42*

A high temp. oven for baking pizzas in hot air consists of a structure in which a helical strip with a small outer rim is fixed to form a spiral chute. The width of the strip is smaller than the dia. of the baking tin for a pizza so that the tins protrude into the central free space. A drive mechanism, arranged in the latter, consists of three vertical rods which keep three pizza tins pressed close to the outer rim as they move them along the spiral. Internal blockages are prevented. 1.4.77. as 714761 Div. in 2759302 (10pp39)

HAFE/ ★ D11 22153B/12 ★DS 2804-795
Brine treated pastry baking - with one of two non-greased baking plates for dipping and one for baking
HAFELE J 04.02.78-DT-804795
(15.03.79) A21d-08/06

Pastry articles such as crusty rolls are dipped into a brine solution on a perforated baking plate and allowed to drip. After covering by a sheet of baking paper a second baking plate, like the first not coated with fat, is laid over and the plates are turned over to transfer the rolls to the second plate for insertion in the oven.

This prevents the contamination of the brine bath by the fat coating of the baking plate in the conventional system. Brine cannot enter the oven and contaminate it. 4.2.78. as 804795 (4pp39)

MCDA/ ★ D11 23906B/12 ★US 4144-356
Deep fried doughnut on stick - with dough remaining tacky and uncooked to retain adhesion to stick
MCDANIEL D G 25.04.77-US-790548
(13.03.79) A21d-08

A holding stick is inserted into tacky dough which adheres tothe stick when uncooked, then the dough is immersed in hot deep fat so that the dough exterior fries quickly while dough contacting the stick remains uncooked and adherent.

The dough on the stick is pref. proofed in moist air at 115°F for 45 min. before frying in fat at 375°F. The dough is pref. cooled after frying and is then iced. The dough may be of elongate shape or a number of dough portions may be carried on the stick. 25.4.77 as 790548 (4pp)

See Also

D13 DT 2812920 D13 DT 2837294

D12: MEAT; FISH PROCESSING

TIVE- ★ D12 22039B/12 ★BE -870-429
Moulding sausages etc. with coherent skin-like surfaces - not requiring either edible or inedible casings
TIVET DEVELOPMENTS 14.09.77-GB-038395
(13.03.79) A22c A23p

In the mfr. of a food prod. moulded from a paste contg. meat or similar protein material, and of which the surface is treated with a fluid. Moulding is carried out under pressure in a rigid mould cavity having a permeable wall through which the fluid for surface treatment is introduced. The permeable wall is pref. contained inside an impermeable casing in which the fluid is pressurised to drive it through the permeable wall.

Introduction of pressurised fluid to the mould cavity is pref. simultaneous with compression moulding of the prod. The fluid pref. reacts with the surface of the prod. to form a coherent, skin-like surface. The fluid is pref. an edible acid, e.g. an organic acid such as acetic, malic, ascorbic, citric or an inorganic acid such as hydrochloric or phosphoric. The acid is used as an aqueous soln. with a pH value of 1.0-3.0, pref. 1.5-2.5. Mould pressure is pref. applied by a piston moving into the mould cavity. 13.9.78 as 870429 (30pp448)

BECK- D12 53170V/29 =DS 2358-560
Laminated tubular film for packaging cookable sausage - having inner layer of thermoplastic material with low water absorbtion, and outer water absorbing layer
NATURIN-WERK BECKER (NATW) 24.11.73-DT-358560
*A97 P73 (A94) (15.03.79) *NL7317-788 A22c-13*

A double layered casing for sausage is made using 11 or 12 for the inner layer which does not absorb water and polyamide 6, polyamide 6,6, polyamide 4 or polyvinyl for the outer layer which does absorb water. The polymers are coextruded to a tube with a thickness ratio of inner to outer layer of 1:1-6. The outside of the finished tube is treated with acid, e.g. dil. HCl, to increase water absorption.

The sausage shape is fault free after heating and cooling. 24.11.73. as 358560 (6pp068)

NMHB ★ D12 22154B/12 ★DS 2832-329
Fish filleting machine - saves topping operation by rib cutters producing inclined cut
NORDISCH MASCH R BAADER 22.07.78-DT-832329
(15.03.79) A22c-25/16

Fillets are prepd. from fish which have not been topped or are complete with supraclavicula by central fillet cuts, dorsal fillet cuts and rib cuts. Head and/or collar bone are left on the fishbone framework when the fillets are cut free by parting cuts which run close behind the supraclavicula and at an angle to the roof of the cranium.

Process saves the cost for a topping machine and the labour cost for its operator. This has an economical effect specially for the processing of small fish. 22.7.78. as 832329 (4pp39)

NMHB ★ D12 22248B/12 ★DT 2740-459
Fish position device - with pivoted guide rod pair for contra-rotating endless belts
NORDISCH MASCH R BAADER 08.09.77-DT-740459
(15.03.79) A22c-25/12

A device to position fish at the same height for a following processing machine consists of two parallel guide rods which leave a gap between them and are opened out at the incoming end. They run for a short distance just below the bottom edge of the contrarotating belt conveyors to which the fish is transferred.

This device can deal with plump as well as with slender and gutted fish which are fed to the processing machine in the same uniform height. 8.9.77 as 740459. (10pp39)

LABA/ ★ D12 22434B/12 ★FR 2394-249

Poultry feather plucking machine - eliminates manual operation without damage to skin or flesh of prod.

LABADIE G 14.10.76-FR-031798

(16.02.79) A22c-21/02

The machine comprises rotors turning at about 160rpm to pull out and dispose of the feathers. A first set of rotors pref. comprises a pair of parallel shafts, contra-rotating at 160 rpm. Flexible beater blades extend from each shaft to overlap radially those of the other shaft. The neck and head of a bird is pushed between the sets of blades.

A second set of rotors pref. comprises a resilient, e.g. rubber, flat band lapping a roller and nipped against it by a similar, contra-rotating roller. Body feathers are pulled out by the nip and conveyed away by the band.

Used in plucking poultry for meat, partic. for canning factories. 14.10.76 as 031798 (8pp448)

YOUN- ★ D12 22474B/12 ★GB 1542-403

Appts. for deveining crustacea clamped in indexable holders - by application of suction to deveining needles with subsequent ejection of meat from shells

YOUNGS SEAFOODS LTD 15.07.75-GB-029631

(21.03.79) A22c-29/02

Appts. for deveining crustacea includes a device for holding a crustacean and a pilot needle for insertion into the crustacean. A hollow deveining needle can be guided through the pilot needle for the applicn. of suction in order to remove a vein.

Pressurised air and water is used to blow out the meat from the shell after the deveining needle has been withdrawn. Each holder is cam-actuated in its operation and has two clamping jaws, one of which being a spring-urged foam pad. The other has a recess corresponding in shape to the crustacean.

Used in obtaining edible meat from shrimps and prawns e.g. scampi. The sand vein removal is efficient and the meat is generally ejected as an integral piece rather than in bits or shreds. The holders are arranged to clamp the crustacea under different pressures depending upon the operation concerned. Very few manual operations are required. 15.7.75 as 029631 (9pp1044)

TEKH= ★ D12 23443B/12 ★SU -568-427

Fish-washing equipment - has U/shaped pipe through which water and fish pass before being ejected on to water separating trough

TEKHRYBPROM 30.12.75-SU-307605

(18.01.78) A22c-25/02

Washing device for fish and other sea-prods., including fish cut into pieces, krill and krill pastes, for ship and shore use, comprise vertically-positioned U-shaped pipe with the unloading end below the loading end. In the latter is a water-feed pipe and a sloping water-separator.

Process is intensified and damage to product is avoided by putting a cylindrical insert into the loading section, the end being lower than the water-feed pipe.

The unloading end of the pipe is bevelled, with an angle equal to the angle at which the water-separator slopes. The water-feed pipe is above the bevelled end and deflectors are added to the unloading pipe as two flaps at 60-90° to one another in the direction the flow is moving.

Piletskii M.M., Svoyanovskii V.I., Subbotin A.A. et al Bul. 30/15.8.77 30.12.75 as 307605 (3pp29)

LERO= ★ D12 23468B/12 ★SU -604-549

Pedal operated sausage filling injector - has combined feeding equipment and rotating stopper in injection head, to hold the mea when filled skin is removed

LENGD ROSREMMEKHPRO 04.01.76-SU-309099

(25.04.78) A22c-11/08

Injector to fill sausage skins with meat, etc., includes a screw displacer with loading hopper, sausage meat pipe with end teat, vacuum system, meat cut-off and drive. Outflow of meat from the teat, on completion of skin filling, is prevented by adding a container which abuts against the meat cut-off. Inside the container is a shaft with a disc and a magazine with a helical spring. The cut-off is a cylindrical plug with a hole which is mounted between the meat pipe and the end teat. The plug can rotate and one end of the spring is connected to the shaft and the other end to the magazine.

Odintsov V.P., Kornyushko L.M., Bul. 16/30.4.78 4.1.76 as 309099 (4pp29)

KCEN- ★ D12 23683B/12 ★US 4143-444

Opening oyster shells - using appts. which applies opposed shearing forces adjacent shell joint

KC ENTERPRISES 01.03.77-US-773187

(13.03.79) A22c-29/04

Appts. for opening an oyster includes an oyster-carrying flight which has a leading edge engaging one half of the oyster shell. The flight moves to transport the oyster towards a concussion barrier. The barrier spans the path of the flight so that the barrier is struck by the other half of the oyster shell. This applies an abrupt shearing jolt to the oyster.

The barrier may be raised relative to the flight path. A sensor is activated by the advancing oyster so that the barrier is moving away from the flight path while it is engaged by the oyster.

The apparatus can be adjusted to accommodate oysters of different types. The appts. provided minimum mutilation of the oyster meat. 1.3.77 as 773187 (15pp295).

PROV= D12 04701A/03 =US 4143-591

Solid particles condensed from fish roe soln. or suspension - with thorough cooling and forced circulation of cooling liquid

PROVISIONS EQUIP 28.06.76-SU-378188

*(13.03.79) *DT2729-094 +A23c-09/02*

Granular food prods. are produced from solns. or suspensions using a device including a heated chamber for keeping the suspension under pressure and having circumferentially spaced holes in the bottom; a rotatable disc in the chamber bottom having corresp. holes; an insulating spacer under the chamber having corresp. nozzles; a cooled liquid-contg. vessel under the spacer in the form of a heat exchanger for receiving granules the tubes of which each contact one nozzle; a pipe for feeding the liquid through annular gaps between the nozzles and tubes to the tubes, and a pipe for removing the liquid and granules from the vessel. 20.6.77 as 808389 (8pp1376).

See Also

D13 J5 4020167

D13: OTHER FOODSTUFFS

CHEN/ ★ D13 22119B/12 ★CA 1049-799

Freezing food while suspended in cold gas stream - moving up column while food descends

CHENEY P L 23.03.77-CA-274535 (28.07.75-CA-232384)

Q75 (06.03.79) F25d-13/06

Food is frozen by introducing it at the top of a hollow column up which a stream of refrigerating gas is passed. The gas velocity is insufficient to support the food and this drops through the column and collects on an annular transfer trough at the base of the column. Concentric with the first column is a second column and refrigerating gas moves upwards through the second column at a higher vel city to raise food from the transfer trough and carry upwards through the column.

In an embodiment the apparatus includes a third column ncentric with the others and having a low velocity gas ow. Food from the top of the second column is transfe- red to the top of the third column and descends against n upwards gas stream.

The apparatus freezes food eg peas. 23.3.77 as 274535 iv. ex 28.7.75-232384 (31pp295)

OEN- ★ D13 22129B/12 ★CH -608-938

oad distributor for cheese moulds in press - ensures uniform ressing of two or more cheese blocks

KOENIG KESSELSCHMIE 09.03.76-CH-002914

P13 (15.02.79) A01j-25/15

cheese press has an arrangement by which load can be pplied simultaneously to ⩾2 cheese blocks. Between two heese moulds one above the other, there is a mechanism entralised and held by them, which includes guides for the xial displacement of a member applying a load against the wo blocks.

The load applying member consists of two parallel plat- es connected by guide rods. The centrallised mechanism is ormed by a disc with guide bushes for the rods of the pre- ssing member.

Pref. the disc is centralised by blocks on its edge which fit in flanges on the moulds. The guides for the pressing plates may be hinged and be positioned between the disc and the bottom plate on one hand and the top plate on the other. 9.3.76 as 002914 (4pp1045)

ZAPL/ ★ D13 B/12 ★CS 7703-655

Bait for vertebrate pests

ZAPLETAL O 03.06.77-CS-003655

C03 (29.12.78) A01n-09/02

KOTA/ ★ D13 B/12 ★CS 7705-523

Enzymatic hydrolysate prepn. - from starch substrate and for feedstuff use

KOTAL V 23.08.77-CS-005523

C03 (D16 D17) (29.12.78) C13l-01/08

MACK/ ★ D13 B/12 ★CS 7800-175

Feedstuff contg. nutritional elements

MACKO O 09.01.78-CS-000175

C03 (29.12.78) A23k-01/12

BARA/ ★ D13 B/12 ★CS 7800-976

Casein prodn. from milk protein

BARABAS J 15.02.78-CS-000976

(29.12.78) A23c-23

BARA/ ★ D13 B/12 ★CS 7801-151

Liquid concentrates of milk protein - which are easier to digest

BARABAS J 23.02.78-CS-001151

(29.12.78) A23c-21

BURD/ ★ D13 B/12 ★CS 7801-512

Dry milk mixtures prepn.

BURDOVA V 10.03.78-CS-001512

(29.12.78) A23c-23

MILE D13 29162Y/17 =DS 2657-913

Glycinamide salt food seasoning compsns. - esp. with sodium glutamate, inosinate or guanylate, as salt replacement

MILES LABORATORIES INC 18.10.76-US-733156 (22.12.75-US-643016)

*E16 (15.03.79) *BE-849-487 A23l-01/23*

Salts of glycine amide (I) are used as substitutes for sodium chloride, e.g. in food for patients on a low salt diet.

Cpds. (I) are pref. used with e.g. salts of glutamic acid to improve the taste. 21.12.76. as 657913 (4pp068)

VOSS/ ★ .D13 22220B/12 ★DT 2739-849

Confectionery contg. guarana - esp. filling or coating compsns., has new aroma and brown colour appeal

VOSS G M 03.09.77-DT-739849

(15.03.79) A21d-02/36 A23g-01 A23g-03 A23g-09

Confectionery having a new aroma contains 0.1-5(0.6-3)% guaraná, a caffeine-contg. drug extracted from the seeds of Paullinia sorbilis Martius, a tropical South American plant of the Sapindaceae family.

Confectionery comprises ice-cream, sweets, jellies, pastry, snacks and chocolates. In combination with saccharose or dextrose, guaraná taste changes from bitter and astringent to aromatic and refreshing. The dyes in guaraná impart a pleasant brown shade which enhances prod. "appeal". 3.9.77 as 739849. (8pp200)

NEUM/ ★ D13 22276B/12 ★DT 2759-347

Animal feedstuff prodn. by fermentation of straw - uses moistening soln. contg. yeast and starch contg. material(s)

NEUMAIER R 30.08.77-DT-759347 (00.00.77-DT-717193)

C03 (15.03.79) A23k-01/12

Fermentation of straw to produce animal foodstuffs comprises moistening the straw with a 3-5% soln. of yeast, as in the parent patent. The moistening soln. also contains starch contg. materials (I). Pref. it contains molasses and/or sugar.

(I) reduces the fermentation time. After 24 hrs. a digestible protein content of 7.5% is obtd., 90% of this value is reached after 12 hrs. 30.8.77 as 759347, Add. to 2717193. (4pp903)

FARM- ★ D13 22280B/12 ★DT 2812-920

Whole wheat grain fractionation - to gluten, starch, bran and germ; by soaking, grinding hydration and washing (NL 13.3.79)

FAR-MAR-CO INC 09.09.77-US-831905

(D11) (15.03.79) A21d-06 A23j-01/12

Fractionation of whole wheat grains into a gluten- and non-gluten component of endosperm comprises first soaking in water to moisture content 14wt.% up to satn. pt., pref. 14-22(14-18)wt.%. The grains are then ground to flakes of thickness 0.0013-0.64mm.

The flakes are then ground to bran-, germ- and endosperm-particles, provided the bran and germ particles are larger than the endosperm particles. Size distribution of the bran, germ and endosperm particles is such that 25-75(40-60) esp. 50% of particles are retained by a 50 mesh screen.

The particles are hydrated in an additional water quantity, corresponding to 65-85wt.% of particles and which is just sufficient to achieve a satn. moisture content. Particles and water are moved to form a stiff dough. Most of endosperm particles are washed out from dough with water e.g. at 15-32°C, to leave a gluten agglomerate. Finally biological active wheat gluten is sepd. and recovered from the agglomerate.

Gluten, starch, bran and germ material are recovered in good yields and quality, with min. damage to the physical, chemical and biological properties of the grain constituents. 9.9.77 as 23.3.78. (38pp200)

SODE- ★ D13 22304B/12 ★DT 2837-294

Food prods contg. bran, gluten and flour - prepd. continuously by extruding mixt. with water; used in diet bread, cereals, etc.

SODES SA 09.08.78-FR-024066 (29.08.77-FR-026782)

(D11) (15.03.79) A21d-13/06 A23l-01/30

Food prod. is prepd. from a mixt. contg., by wt., 20-80% bran, 5-20% gluten, balance, to 100%, flour or starch. After adding 5-20wt.% water, the mixt. is cooked and extruded.

Process comprises (a) continuously charging the mixt. to the first part of an extruder cylinder, esp. contg. 2 screws; (b) adding the water; (c) pre-heating to 80-120°C in 2nd part of cylinder and compressing; (d) heating to 130-220°C and mixing and (e) extruding.

Compsns. can be used for the prepn. of special, e.g. diet breads, sugared or salted biscuits, breakfast foods, cereals, porridge-type flours and soup bases. The prods. have a low calorie content and prevent constipation. 26.8.78 as 837294. (16pp200)

HOFF ★ D13 22403B/12 ★EP ---1-122

D-Arabitol prepn. by Pichia haplophila microorganism fermentation - in nutrient medium contg. hydrocarbon or ethanol as carbon source

HOFFMANN-LA ROCHE AG 12.09.77-LU-078114

B05 E17 (D16) (21.03.79) C07c-31/18 C12d-13/02

D/S: CH, DT, FR, GB.

D-Arabitol is prepd. by culturing Pichia haplophila or its mutants, esp. Pichia haplophila NRRL 11175 (FERM P-

3955) (Ia) or -NRRL 11176 (FERM P-3956) (Ib), in a nutrient medium consisting of hydrocarbons or EtOH as C source.

D-Arabitol is used as sweetener and organic intermediate.

High D-arabitol yields are obtd., e.g. 10 mg/ml culture medium with (Ib) and 4 mg/ml culture medium with (Ia). 08.09.78 as 100855 (10pp200).
ISR: DT1926178; JP3545162; 3 Journal References.

CECA- ★ D13 22429B/12 ★EP ---1-192
Aq. gels based on de:acetylated xanthan and galactomannan - are stronger than those obtd. with acetylated xanthan, useful in foodstuffs, explosives, air treating compsns. etc.
CECA SA 12.09.77-FR-027467
A11 K04 P34 (D17 D22) (21.03.79) A23l-01/04 A61l-09/ C06b-47/14 C08l-05*
D/S: CH, DT, GB, NL.

Prodn. of aq. gels based on galactomannan (I) and xanthan (II) uses (partially) deacetylated xanthan (IIa) and a (IIa): (I) ratio of 15:85 to 90:10. Pref. (I) is obtd. from carob, guar, tara and/or Espina corona gums. Carob gum when used pref. has a degree of polymsn. sufficient to give a viscosity of 20-6000 cP (1% soln. at 20°C; Brookfield viscometer at 20 rpm). (IIa) may be obtd. as in US3000790.

Gelling compsns. based on (I) and (II a) are also claimed, as are gels obtd. as above contg. 0.1-4% of (I) + (IIa)).

Prods. are stronger than previously possible using (II). They can be used in foodstuffs, e.g. in aspics or gelled desserts, and in explosive gels and air-treatment prods. 30.8.78 as 400084 (25pp949)
ISR:US3384498; US3677961.

STEN- ★ D13 22435B/12 ★FR 2394-251
Dietetic fermented milk products esp. yoghurt, cheese and milk drink - using specified ferments for each product
STENVAL SA 17.06.77-FR-018747 (17.12.75-FR-038701)
(D16) (16.02.79) A23c-09/12

Prepn. of a fermented milk comprises using ferments with a low acidification gradient Lactobacillus bulgaricus (LB) and Streptococcus thermophilus (ST) in proportion LB:ST of form 1:10 to 1:4. Prepn. of a cheese comprises using as acidifying ferments at least one Streptococcus lactus and Streptococcus cremoris and at least one flavouring ferment Streptococcus diacetylactis and Leuconostoc citrovorum with a ratio of 20-40 pts. flavouring ferments per 100 pts. ferment.

Prepn. of an acidified milk drink comprises using as yeasts Saccharomyces Lactis, Saccharomyces fragilis, Torula utilis or mixtures of these in amt. 0.2-0.3pts./ 100 pts. product.

The dietetic fermented milk products are used to ensure reconstitution of the human intestinal flora. The above combinations give particularly good results. 17.6.77 as 018747 Add to 17.12.75-038701 (11pp597)

BRPE ★ D13 22436B/12 ★FR 2394-252
Protein-rich animal feed prodn. from dairy by/products - by aerobic fermentation of lactose and lactic acid contg. prods. e.g. whey with Trichosporon cutaneum yeast
SOC FR PETROLES BP 13.06.77-GB-024518
C03 (16.02.79) A23j-01/18 A23k-01/08 C12b-01/14

Production of a protein-rich food from liquid dairy by-prods. contg. lactose and lactic acid, by cultivation, using continuous operation, of a lactose and lactice acid utilising strain of Trichosporon cutaneum yeast in a broth contg. the dairy by-products and a utilisable source of nitrogen under aerobic conditions, maintaining the dissolved oxygen concn. at 10-50% of the satn. concn.

Used as animal feed contg. 40-55 wt.% of proteins, 10-20 wt.% ash and 3-5wt.% of lipids based on the dry product. 12.6.78 as 017557 (9pp395)

BAUQ/ ★ D13 22437B/12 ★FR 2394-25
Ready to cook food prods. based on dehydrated vegetables - esp potato, mixed with rice dispersion in water
BAUQUIS C 15.06.77-FR-018575
(16.02.79) A23l-01/21

Prepn. of the prods. comprises first forming a paste or cream of rice by cooking a dispersion of rice flour in water. Dehydrated vegetable particles are then incorporated opt. with other additives to form a hard paste. The paste is then put into the desired form and the elements obtd. may then be frozen.

The process is esp. applied to fried prods. partic. based on potato. It enables a similar taste and texture to be obtd. in the cooked prod. as is obtained using fresh vegetable. 15.6.77 as 018575 (5pp597)

PROC D13 30080X/16 =GB 1542-69
Frozen dessert product and prepn. process - final prepn. step carrie out by consumer
PROCTER & GAMBLE CO 30.06.75-US-592008
*(21.03.79) *US3949-102 A23g-09/02*

A frozen dessert compsn. is prepd. contg. 2-7% protein solids; 5-25% edible triglyceride; 0.2-2% first emulsifier or sorbitan or edible polyglycerol fatty acid esters contg. 2-10 glycerol units, either contg. 1-3 14-18C fatty acid gps. per sorbitan or polyglycerol moiety; 0.5-15 wt.% (w.r.t. first emulsifier) second emulsifier of edible anionic surfactant; 10-40% saccharides; 45-65% water.

Pref. protein solids are non-fat milk solids. Edible triglyceride is cottonseed oil, soybean oil, corn oil, sunflower oil, palm oil, palm kernel oil, peanut oil, rice oil, safflower oil, coconut oil or a mixt. of these.

Process avoids problems of static freezing to produce prod. of good quality retained even on thawing and re-freezing without agitation. 29.6.76 as 026992 (7pp931)

THOM/ ★ D13 22497B/12 ★GB 2003-711
Treating fish to produce auto-immune response - for impairing gonad system so that fish farming harvest can be controlled by feeding
THOMAS F G 05.09.78-GB-035704 (06.09.77-GB-037168)
C03 P14 (21.03.79) A01k-61

Fish are treated by inducing the presence of antibodies against gonad tissue in them, so as to produce an auto-immune response that impairs the development and/or maintenance of a normal gonad system in the fish.

Treated fish do not become sexually mature, so that the need to harvest fish imposed by sexual maturity (skin diseases etc.) is removed, and their growth to a suitable size can be controlled by feeding. Then in fish farming operations fish may be obtd. at times when wild fish are not available. Expensive pigmented food does not have to be fed to a whole group of salmon in sea water in case of early maturity, but it can be fed just before harvesting. With Pacific salmon now being considered for farming in the UK the sterilisation would ensure that in the event of an escape of such a male salmon, there would be no long term problem with Atlantic salmon. 5.9.78 as 035704 (7pp1248)

FUJI ★ D13 22499B/12 ★GB 2003-727
Aminal feed compsn. contain bicyclomycin - to enhance body weight gain in cattle, pigs, chickens etc.
FUJISAWA PHARM IND KK 14.09.77-JA-110832
B02 C02 (21.03.79) A61k-31/49

Animal feed compsn. comprises bicyclomycin (I) as effective ingredient.

In animals there is very low absorption of (I) into body tissues when it is given orally; also (I) has extremely low toxicity. With repeated dosage of (I) the rate of body wt. gain and feed utilisation are enhanced. (I) is a known antibacterial, being effective only against Gram-negative strains. Dose is 0.1-40 mg/kg daily. 12.9.78 as 036538 (11pp1248)

FUKO ★ D13 22530B/12 ★GB 2003-912
Hard vegetable butter compsn. for chocolate - prepd. from an intermediate palm oil fraction and a shea fat fraction
FUJI OIL KK 08.09.77-JA-108455
(21.03.79) A23d-05

A hard butter compsn. comprises, as principal ts, an intermediate fraction of palm oil with a slip m.pt of 29-32.5°C and a clear pt. ⩽34°C, and a solid fat fraction of shea fat in which the total content of 2-oleo-1,3-distearin and 2-oleo-palmitostearin is ⩽80 wt.%.

The compsn. is used as a cocoa butter substitute. The shea fraction does not have to be specifically purified. The compsn. can be mixed with cocoa butter in a high mixing ratio without lowering the working properties in the tempering step of chocolate manufacture and gives improved snapping properties in the final prod. 6.9.78 as 035854 (9pp1355)

FUKU/ ★ D13 22572B/12 ★J5 3124-644

Electrifying rice to improve taste and flavour - by mixing dry, unpolished rice with polishing agent and opt. calcium ion-contg. water, and passing AC

FUKUMOTO S 05.04.77-JA-039358

(31.10.78) A23l-01/10

The method comprises mixing unpolished rice in excessively dry state with polishing agent and opt. with calcium ion contg. water, polishing it and electrifying it using high voltage a.c. equipment.

Rice can be ionized and made alkaline, thus preventing oxidn. and regenerating old rice. The rice can be preserved for a long time while keeping its fresh state.

The polishing agent is composed of refined vegetable oil 42%, sorbitan fatty acid ester 8%, sucrose fatty acid ester 2%, sorbitan fatty acid ester 8%, glycine 0.2%, propylene-glycol 1% and water 41.8%. The calcium ion-contg. water can be prepd. by adding calcium to ionised water of pH > 10. The electrification can be practiced using high voltage a.c. equipment, 'Healthtron 3000V' (RTM) for 10-15 hrs. 5.4.77 as 039358 (3pp5)

SHER/ ★ D13 22591B/12 ★J5 3139-759

Raw material prodn. for soybean beverage - by removing fatty oil from raw soybean, pressing, immersing in water to inflate and soften, drying and finely crushing

SHERBROWN D 12.05.77-US-796148

(06.12.78) A23c-11 A23j-01/14 A23l-01/20

Prodn. of raw material comprises almost removing a fatty oil component from a raw soyabean by extn.; pressing the defatted soyabean and finely crushing the cellular membrane of the defatted soyabean with a roll mill.

Prior to the crushing step with the roll mill, the defatted soyabean contg. ⩽ 5 wt.% fatty oil component is immersed in water and the soyabean tissue is inflated and softened. The treated soyabean is then completely dried.

The treated soyabean is used for producing a coffee-like beverage. 12.5.78 as 055688 (7pp15)

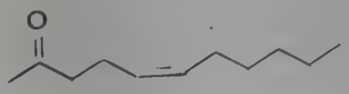
HASE ★ D13 22906B/12 ★J5 4019-908

Cis-5-undecen-2-one prepn. from corresp. undecynone - useful as flavourant in cosmetics, foodstuffs, pharmaceuticals etc.

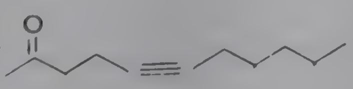
HASEGAWA KK 14.07.77-JA-083508

B05 E17 (D21 D23) (15.02.79) A61k-07/46 B01j-23/44 C07c-49/20 C07d-303/32

Cis-5-undecen-2-one of formula (I) is prepd. by subjecting 5-undecin-2-one of formula (II) to catalytic hydrogenation in the presence of a reducing catalyst.



(I)



(II)

(I) can be used as a long-lasting flavouring agent in the fields of cosmetics, foodstuff (including beverages, table luxuries), hygienic or pharmaceutical prepns. etc. (II) is pref. prepd. by brining 2,3-oxido-2-n. pentyl-8-methyl cyclopentan-1-one to contact with p-tosyl-hydrazide and aliphatic carboxylic acid to cause reductive splitting reaction. Hydrogenation is pref. conducted under conditions as mild as possible. 14.7.77 as 083508 (6pp75)

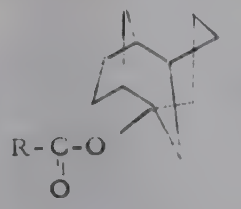
KAOS ★ D13 22934B/12 ★J5 4019-957

Acyloxy-tri:cyclo-undecane used as aromatic material for cosmetics - is prepd. by reacting hydroxy-tri:cyclo-undecane with acyl halide in presence of condensation agent

KAO SOAP KK 11.07.77-JA-082758

E15 (D21 D23) (15.02.79) A61k-07/46 C07c-69/02

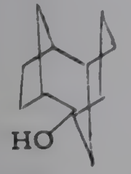
1-Acryloxytricyclo $[4,3,3,1^{2,5}]$undecane of formula (I), where R is 1-5C alkyl, has been prepd. Cpds. where R is methyl, ethyl or propyl are specifically calimed.



(I)

(I) are useful as aromatic materials or their intermediates. Cpd. (I) in which R = methyl has a camphor-like aroma; cpd. (I) in which R= ethyl has a light cineole- and camphor-like aroma. (I) in which R = n-propyl has a sweet butyric acid-like aroma. (I) can be used in household goods or cosmetics.

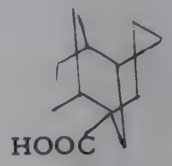
Prepn. of (I) comprises reacting 1-hydroxytricyclo $[4,3,1,1^{2,5}]$undecane of formula (II) with an acyl halide of formula (III) in an inert solvent, e.g. diethyl ether, tetrahydrofuran, benzene, etc., pref. in the presence of a condensing agent, e.g. pyridine, triethylamine, etc. Cpd. (I) in which R = methyl may be prepd. by reacting 1-carboxytricyclo $[4,3,1,1^{2,5}]$undecane of formula (IV) with lead tetraacetate and potassium acetate in acetic acid under refluxing for 4-5 hrs. 11.7.77 as 082758 (5pp140)



(II)

R-COCl

(III)



(IV)

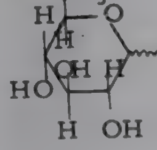
HASE ★ D13 22937B/12 ★J5 4019-962

2,5-Di:methyl-4-hydroxy-2,3,-di:hydrofuran-3-one prepn. - by reacting 6-deoxy-glucose with organic nitrogen base and organic carboxylic acid

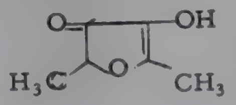
HASEGAWA KK 14.07.77-JA-083507

E13 (15.02.79) C07d-307/60

2,5-Dimethyl-4-hydroxy-2,3-dihydrofuran-3-one of formula (I), having a strawberry-like flavour, is prepd. by reacting 6-deoxy-glucose of formula (II) with an organic nitrogen base (e.g. methylamine, isopropylamine, sec-butylamine, dimethylamine, morpholine, trimethylamine, pyridine, etc.) and an organic carboxylic acid (e.g. formic acid, acetic acid, capronic acid, malonic acid, etc.).



(II)



(I)

(II) is easily prepared at low cost for glucose which is cheap and easily available. Prim. and tert. amines can be used as well as pyridine, and a wide range of organic carboxylic acids, including aromatic carboxylic acids, can be used in addn. to acetic acid.

Pref. the reaction is carried out in a polar solvent, e.g water, dimethyl sulphoxide, methanol, etc., and at 50-150°C; and the organic nitrogen base and organic carboxylic acid are both used in an amt. of 0.2-50, pref. 0.5-20 mol. per mol of (I). 14.7.77 as 083507 (5pp140)

JAOR ★ D13 22953B/12 ★J5 4020-000

Purificn. of stevioside from its aq. extract - by adding slaked lime, carbon di:oxide and phosphoric acid to produce solids to absorb impurities

JAPAN ORGANO KK 18.07.77-JA-085092

B03 E13 (15.02.79) A23l-01/22 C07a-03

Purification of stevioside comprises mixing its aq. extrac with 20-100 wt.% of slaked lime based on the solid matter contained in the extract followed by blowing CO_2 gas into the mixture to adjust to a pH of 10.5-12.5, extracting the mixture, mixing the first extract with phosphoric acid foll owed by extracting, and then subjecting the second extract to further purification treatments.

By blowing CO_2, the filtration resistance is reduced when compared with the conventional treatment using slak ed lime. The calcium ion remaining in the first extract reacts with phosphoric acid to form ppte of calcium phosphate, on which impurities are adsorbed. Hence, purific tion efficiency obtd. in the subsequent treatments using a ion-exchange resin and a synthetic adsorbent is greatly increased. 18.7.77 as 085092 (4pp140)

ASAE ★ D13 22961B/12 ★ J5 4020-010
Foamable water-in-oil compsn. for butter cream prodn. - contains stevioside sweetener, aq. saccharide soln. and plant or animal oil phase contg. an emulsifier
ASAHI ELECTROCHEM IND KK 15.07.77-JA-084884
(15.02.79) A23d-05 A23l-01/19 B01f-03/08

The compsn. comprises 0.05-1% of stevioside as sweetening, 20-40% of an aq. phase contg. monosaccharide and/or disaccharide, e.g. glucose, fructose, sucrose, etc. in an amt. of 10-30% as to adjust the viscosity of the aq. phase at 20-150 c.p., and 80-60% of an oil layer, e.g. rice bran oil, soybean oil, cotton seed oil, corn oil, peanut oil, coconut oil, butter, lard, beef tallow, fishes oil and whale oil, etc., contg. an emulsifier, e.g. glycerin fatty acid ester, sorbitan fatty acid ester, propylene glycol fatty acid ester and sucrose fatty acid ester, etc.

The compsn. exhibits excellent whipping property and sweetness, and is suitable for use in the prodn. of butter cream, and exhibits excellent over run (150-250) even in such case that sweeting is previously contained and excellent shape-keeping property as butter cream. 15.7.77 as 084884 (4pp34)

MIKA ★ D13 23036B/12 ★ J5 4020-139
Muscardine control in silkworms - by feeding with mulberry leaves sprayed with soln. of a bis-di:thiocarbamate and a benzyl ammonium chloride cpd.
MIKASA KAGAKU KOGYO KK 15.07.77-JA-085461
C03 (15.02.79) A23k-01/16 A61k-31/32

Method comprises feeding the silkworms with Japanese mulberry leaves sprayed with a soln. contg. 100-400 ppm of diammonium ethylenebis(dithiocarbamate) (A) and 50-200 ppm of dimethylalkylbenzyl ammonium chloride (B). (A) and (B) act. synergistically.

Typical compsn. comprises 12.5% of (B), 25% of (A), 5% of ethanol, 12.0% surface active agent and 46.5% of water. 15.7.77 as 085461 (3pp108)

MITU ★ D13 23037B/12 ★ J5 4020-141
Preventing gastroentropathy in domestic animals - by applying compsn. contg. magnesium salt and calcium phosphate
MITSUBISHI CHEM IND KK 11.07.77-JA-082817
B05 C03 (15.02.79) A23k-01/17 A61k-33/42

Gastroentropathy of domestic animals is prevented by admin. of Mg salt (I) and Ca phosphate (II). Pref. (II) is applied in amt. of 0.2-15% per 1 g Mg in (I). (II) is esp. Ca sec.-II or tert. phosphate. (I) is esp. Mg CO_3. 11.7.77 as 082817 (3pp69)

YOSH/ ★ D13 23040B/12 ★ J5 4020-149
Preserving perishable, oxidisable materials - using cobalt-salicyl:aldehyde-ethylene:di:imine as oxygen adsorbent
YOSHIKAWA T 15.07.77-JA-084792
E12 Q75 (E36) (15.02.79) A23l-03/34 F25d-23

The method is effected by (a) using Co-salicyl-aldehyde-ethylene-di-imine (abbr. COSAEDI), its deriv. or similar available as the adsorbent for oxygen, (b) preserving perishables, oxidisables, moderately breathing substances, etc., in air tight vessel, (c) installing the vessel including the adsorbent in the path between the air tight vessel and atmosphere, and (d) decreasing the oxygen content in the air tight vessel.

The atmos. of the vessel can be kept under low oxygen content and perishables, oxidisables, moderately breathing substances, etc. which are easily deteriorated by oxygen, can be preserved safely. 15.7.77 as 084792 (4pp5)

KAWA/ ★ D13 23041B/12 ★ J5 4020-152
reatment of foods contg. beta-form rice starch - by impregnating in cid or alkali and heat treating to prevent beta-lysing
KAWAHARA T 14.07.77-JA-084890
(15.02.79) A23l-01/10

oods are prepared by impregnating an aq. soln. of acidic r alkaline substance in a material contg. β-form rice tarch and heat-treating it at >120°C for a short time. he aq. soln. may be of citric acid, tartaric acid, malic cid, lactic acid, their salt, etc. or Na_2CO_3, $KHCO_3$, $aHCO_3$, $(NH_4)_2CO_3$, etc.

The β-lysation of α-lysed starch from e.g. nonglutinous ice, glutinous rice, rice powder, glutinous rice powder, rtificial rice prepared from raw rice powder, etc. can be prevented, thus preventing reduction in taste and flavour, digiestability, etc. The β-form starch in above materials can be α-lysed by boiling, steaming, etc. and the α-lysed starch is likely β-lysed in a short time. Thus hitherto various preventive methods have been proposed, but all of them have been unsatisfactory. The inventor has found that the food obtained by impregnating acidic or alkaline material in rice, starchy material, etc. and heat-treating it above 120°C, is hardly β-lysed even preserving it at normal temperature and is hardly deteriorated in taste and flavour.

The impregnation is practiced at room temperature for 0.5-1 hour or at 90°C for 10 minutes. If necessary prior to the heat-treatment the starchy material may be washed with water to remove acid or alkali remained in it. 14.7.77 as 084890 (3pp5)

HAYA- ★ D13 23042B/12 ★ J5 4020-158
Orange flesh treatment - by removing endocarp chemically with acid and alkali and treating with water contg. e.g. citric or malic acid
HAYASHIKANE KANZUME 18.07.77-JA-084987
(15.02.79) A23b-07 A23l-01/21

The endocarp of an orange is removed by treating orange chemically with acid and alkali and treating with water. Method is characterised by using water contg. some organic acid for the water-treatment. As organic acid, citric acid, malic acid, etc. is applied and usually aq. 0.1-1% citric acid soln. is applied.

The amt. of water required for the water-treatment can be saved to ca. 1/50. The time required for the water-treatment can also be decreased to ca. 1/3, i.e. 30 minutes by conventional method can be shortened to 8-10 minutes. As the result the loss of sugar caused from dissolving out in water from orange flesh can be decreased and the sugar applied for canned orange can also be saved. 18.7.77 as 084987 (4pp5)

YOSH/ ★ D13 23043B/12 ★ J5 4020-159
Deodorising garlic - by mixing the powder with magnesium hydroxide and opt. magnesium oxide
YOSHIKAWA Y 13.07.77-JA-084356
E33 (15.02.79) A23l-01/34

The method comprises combining powdery magnesium hydroxide and opt. a little magnesium oxide in garlic powder. The amt. of powdery magnesium hydroxide is equal or exceeds the amt. of garlic powder. Magnesium hydroxide can not only adsorb the odorous substance in garlic, but also shows medicinal effect on pyrosis and laxative effect on the constipation caused by garlic. The deodourising effect is increased by the addn. of magnesium oxide.

Magnesium hydroxide can be easily obtd. as natural brucite or by reacting lime milk with sea water or brine. It shows little solubility and can keep solid form even under moisture content 50-60%. The magnesium hydroxide and garlic powder mixt. can be solidified and the volatile oily component of aricine which causes the unpleasant odour, can be adsorbed and sealed in magnesium hydroxide. The effect can be further improved by combining a small amt. of magnesium oxide and water in garlic powder and magnesium oxide are reacted to form magnesium hydroxide. Thus aricine can be better sealed in magnesium hydroxide. 13.7.77 as 084356 (4pp5)

EIKE- ★ D13 23044B/12 ★ J5 4020-162
Improving digestibility of edible algae - by cooling below minus 80 degrees and pulverising
EIKEN KAGAKU KK 13.07.77-JA-083031
(D16) (15.02.79) A23l-01/34

Method comprises cooling edible algae e.g. Chlorella, Spirulina, etc. below -80°C with liq. N_2, etc. and pulverizing it while maintaining the temp.

Chlorophyta such as Chlorella, etc. are known to contain large amts. of protein and vitamins and to have excellent amino acid compsn. and thus may be useful as natural nutritive food contg. growth factor for animal and lactic acid bacteria. Because of their strong cellular membrane, they have inferior digestability; this has now been considerably improved. 13.7.77 as 083031 (2pp5)

QPPP ★ D13 23045B/12 ★J5 4020-166
Frozen heat-coagulated egg white prodn. - by adding dextrin alcohol to heat-coagulated egg white and freezing mixt.
Q.P. CORP 11.07.77-JA-083154
(15.02.79) A23l-01/32

Frozen heat-coagulated egg white (I) is prepd. by adding 10-20 pts. wt. of dextrin alcohol to 100 pts. wt. of heat-coagulated egg white and freezing the mixt. Pref. dextrin alcohol of average polymerisation degree [illegible] 11 is used. The frozen heat-coagulated egg white may be prepd. by heat-coagulating the mixt. of egg white and dextrin alcohol and freezing the mixt. Freezing is pref. at $<$ -18°C for $\geq$ 2 weeks.

(I) can be combined in amts. 5-700 pts. wt. per 100 pts. wt. minced fish meat to increase the jelly strength of marine pasty food and to partly substitute minced fish meat with inexpensive egg white. 11. 7. 77 as 083154 (4pp5)

NISW ★ D13 23046B/12 ★J5 4020-167
Frozen minced fish meat prepn. - by mixing soybean protein with aq. alcohol, mixing with fish meat and freezing mixt.
NISSHIN OIL MILLS KK 15.07.77-JA-084198
(D12) (15.02.79) A23l-01/32

Method comprises treating soy bean protein with hydrous alcohol, mixing it with minched fish meat and freezing the mixt. Pref. soy bean protein is treated with aq. alcohol (e.g. methanol, ethanol, propanol, butanol, etc.) of alcohol content $>$ 50 wt.% at 15-60°C for $>$5 mins. The standard of the degree of the alcohol-treatment is that NSI (soluble nitrogen indicator) of soy bean protein is decreased to $<$30. The treated soy bean protein is pref. combined in minced fish meat 10-40 wt.% esp. 20-30 wt.%.

Freeze-denaturation of soy bean protein is prevented by first treating is with aq. alcohol. The treated soy bean protein is mixed with minced fish meat prior to freezing and the conventional defrosting mixing process is simplified. By combining the soy bean protein with the fish meat the dehydration of the minced fish meat is simplified and the loss of fish meat by dehydration is decreased. 15. 7. 77 as 084194 (5pp5)

CALP- ★ D13 23047B/12 ★J5 4020-169
Yogurt prodn. - by heat-treating acidic milk while suppressing vibration
CALPIS SHOKUHIN KOG 15.07.77-JA-084285
(15.02.79) A23c-09/12

Method comprises preparing an acidic milk of pH 5.2-5.9 and non-fat milk solid content 6-15% and heat-treating it at 50-90°C while suppressing the vibration as much as possible.

Pref. the acidic milk is milk made acidic with an organic acid or fruit juice or a mixt. of milk and fermented milk having pH 3.0-4.0 and sugar content of brix 30-60. Fermented milk can be prepd. by inoculating lactic acid bacteria showing strong acid-producing ability, such as Lactobacillus vulgaricus, into skimmed milk, fermenting until the pH of the skimmed milk falls to 3.0-4.0, homogenising and adding sugar to brix. 30-60.

Prods. having a smooth texture and a refreshing sour taste can be easily prepd. without using additives. 15. 7. 77 as 084285 (4pp5)

ROKK- ★ D13 23048B/12 ★J5 4020-173
Curry powder with excellent light resistance - prepd. using safflower yellow as colourant
ROKKO BUTTER KK 14.07.77-JA-084675
E24 (15.02.79) A23c-19/12 A23l-01/27

The method is characterized by using natural yellow pigment, safflower yellow ($C_{21}H_{22}O_{11}$) as the colourant in preparing curry powder instead of turmeric.

The colorant safflower yellow has excellent light resistance and the foods prepd. with the curry powder hardly fades even on exposure to light. Thus they can be packaged in transparent packaging material and the cost of packaging material can be reduced. Safflower yellow also has excellent, salt resistance and microbial resistance. Thus turmeric can be wholly replaced with safflower yellow and usually safflower yellow is combined at 30 w/w% in the objective curry powder. 14. 7. 77 as 084675 (3pp5)

SAKA ★ D13 23049B/12 ★J5 4020-174
Compsn. for supplying nutrients direct to digestion system - contains dry egg and maltose
OTSUKA PHARM KK 14.07.77-JA-084813
B04 (15.02.79) A23l-01/34

Compsn. is characterised by a content of dry egg and maltose. Compsn. is a fluid suitable for direct supply to the digestion system of a patient through a slender tube and is similar to natural nutritive food in amino acid balance, similar as blood plasma in osmotic pressure and is free of malodours due to S-contg. aminoacid. Relatively little excrement is produced by the patient. 14. 7. 77 as 084813 (8pp5)

EIKE- ★ D13 23050B/12 ★J5 4020-175
Preparing water-soluble extract from edible algae - by pulverising at low temp. and extracting with water or aq. alkali
EIKEN KAGAKU KK 15.07.77-JA-084191
(D16) (15.02.79) A23l-01/34

Process comprises (a) pulverising edible algae such as chlorella, spirulina, etc. at ultralow temp. of $<$-80°C; and (b) extracting the powder with water or aq. alkali soln. of pH 8-10 at $<$ 20°C.

Proteins, vitamins, inorganic compounds, tasty ingredients, etc. can be effectively extracted. The extrn. of protein, chlorella, growth factor, vitamin B and vitamin C is greatly improved. 15. 7. 77 as 084191 (2pp5)

ORIY ★ D13 23098B/12 ★J5 4020-871
Culture medium for breeding muscid larva - comprises basic component e.g. rice bran, and e.g. rice or barley husks
ORIENTAL YEAST KK (SUMO) 19.07.77-JA-085631
C03 (16.02.79) A23k-01/18

Culture medium comprises (a) basic omponent such as rice bran, powder feedstuff, dried yeast, etc., and (b) husks of barley or rice, soybean shell, etc.

Medium allows, homogeneous and highly efficient breeding of muscid (sic) and the medium shows high durability. The amt. of husk or shell to be used is 5-25 pts. wt. per 100 pts. wt. other components.

In an example, 5 pts. wt. barley husks, 5 pts. wt. rice husks, 5 pts. wt. of soybeam or shell powder, 70 pts. wt. rice bran, 10 pts. wt. powder feedstuff for mice, 5 pts. wt. dried yeast and 150 pts. wt. water were blended. 19. 7. 77 as 085631 (3pp22)

NIPA ★ D13 23099B/12 ★J5 4020-873
Feedstuff prodn. for livestock, fish, etc. - by cooling or freezing waste sea food e.g. tuna, crushing, and defatting and dehydrating using organic solvent
NIPPON PAINT KK 12.07.77-JA-083674
C03 (16.02.79) A23k-01/10

Wasted marine prods. are cooled or frozen, crushed to give a fine powder, subjected to defatting and dehydration using an organic solvent under cooling to deodorise the powder and then dried. Crushing is conducted to give a fi fine powder having 10 to 50 mesh size. The organic solvent includes n-hexane, ethyl ether, ethyl acetate, toluene, acetone, etc. Drying is at 40-60°C.

The feedstuffs contain 8 wt.% water, 2 wt.% fibrous material, 65 wt.% protein, 18 wt.% ash and 6 wt.% fat.

In an example, waste prod. of tuna is rapidly cooled to -2 to -4°C using liq. N_2 and crushed to 10 to 250 mesh powder under cooling to the above temp. The resultant is contacted with acetone overnight and the solid material is recovered by filtration. The solid is then dried at 70°C to give powder prod. 12. 7. 77 as 083674 (4pp22)

TAKE- ★ D13 23100B/12 ★J5 4020-874
Coloured feedstuff for growing Annelida larva - prepd. by dyeing living or dead Annelida, fish, shellfish, insects or crustacea with protein colouring dye
TAKENI SENKA KK 12.07.77-JA-083809
C03 (16.02.79) A23k-01

The living or dead body is washed with water or water jets and placed in a vessel contg. water and the desired dyestuff at 15 to 20°C. Concn. of dyestuff in the soln. is 0.01 t 10% and amt. of the dyestuff soln. to be used is 0.1 to 80 pts. per pt. of the living or dead body. The dyeing period is 5 to 45 minutes.

In an example, rhodamine is dissolved in water to give a 2% aq. soln. and living earthworm (5 kg) is washed with water and immersed in the above aq. soln. (20 l) at 20°C for 15 minutes. The earthworm is taken out and washed with water. The resulting earthworm is coloured deep pink. 12.7.77 as 083809 (6pp22)

TOYJ ★ D13 23101B/12 ★J5 4020-876

Antifungal compsn. for feedstuff - comprises lower fatty acid, esp. propionic acid, and flavourant e.g. ester, carbinol, orange oil etc.

TOYO SODA KK 15.07.77-JA-084201

C03 (16.02.79) A23k-01/16

The composition comprises lower fatty acid and flavourant. The flavourant includes 1-5C alkyl ester of fatty acid, 1-5C carbinol, orange oil, etc. The amt. of the flavourant to be used is 0.05 to 1 (0.05 to 0.1) wt.% w.r.t. the lower fatty acid and amt. of fatty acid to be incorporated into feedstuff is 0.1 to 5 (0.1-1) wt.% relative to the feedstuff. In an example, 100 pts. wt. of feedstuff for livestock was mixed with 0.2 pts. wt. of propionic acid and 0.0002 pts. wt. orange oil. The mixture was kept at 30°C under relative humidity of 80 percent. Even after 14 days, there was observed no growth of fungi. 15.7.77 as 084201 (5pp22)

NISW ★ D13 23102B/12 ★J5 4020-881

Artificial feedstuff for silkworm - comprises juice obtd. by crushing a mixt. of mulberry leaves and organic acid

NISSHIN OIL MILLS KK 11.07.77-JA-081909

C03 (16.02.79) A23k-01/18

The feedstuff comprises juice obtd. by crushing a mixt. of mullberry leaves and organic acid. The organic acid usable includes citric acid, ascorbic acid, malic acid, gallic acid, sorbic acid, terephthalic acid, and corresp. salts and is used in amt. of 2 to 10 wt.% w.r.t. mulberry leaves.

The feedstuff shows high growth efficiency for silkworm, and it can be prepd. easily without damage of properties of living mulberry leaves.

In an example, 4.0 g of citric acid, 1.0 g of ascorbic acid and 0.2 g of sorbic acid were dissolved in 228 ml of water and mixed with 77 g of mulberry leaves, and the mixt. was crushed to give juice. The resulting juice was further mixed with 35.0 g of defatted soybean, 8.0 g of cornstarch, 7.0 g of cane sugar, 14.0 g of cellulose powder, 2.5 g of inorganic salt, 0.3 g of soybean sterin, 5.0 g of agar, and trace antibiotics, to give a feedstuff for silkworm. 11.7.77 as 081909 (3pp22)

NISW ★ D13 23103B/12 ★J5 4020-882

Synthetic feedstuff for silkworms - comprises juice obtd. by crushing mulberry leaves in the presence of water

NISSHIN OIL MILLS KK 11.07.77-JA-081910

C03 (16.02.79) A23k-01/18

Artificial feedstuff for silkworms comprises the juice obtd. by crushing living mulberry leaves in the presence of water. The feedstuff shows high growing efficiency for silkworm, and can be prepd. easily without damaging the properties of the living mulberry leaves. The crushing is conducted for several seconds to several minutes.

In an example, 77 g of living mulberry leaves were heated and mixed with 228 ml of water and crushed to give a juice. The juice was mixed with 35.0 g of defatted soybean, 8.0 g of inorganic salt, 0.3 g of soybean sterin, 5.0 g of agar, trace amount of antibiotics, 4.0 g of citric acid, 1.0 g of ascorbic acid and 0.2 g of sorbic acid, and the whole mixt. is heated at 100°C in an autoclave for 20 minutes to give the feedstuff. 11.7.77 as 081910 (3pp22)

KATA- ★ D13 23104B/12 ★J5 4020-883

Chemical fishing method - by using substances which generate gas in fish or paralyse fish, the floating fish then being caught

KATAOKA KIKAI SEISA 15.07.77-JA-084126

C03 P14 (16.02.79) A01k-79

Substance which prevents fish from diving but is not toxic to fish is spread over water, and thus the fish eating this substance float on the water, and are caught. Fish can be caught without damage to body of fish and taste or flavour. The substances are (1) cpds. producing gas in the body of fish, e.g. sodium bicarbonate, hydrogen peroxide, etc. and (2) substances which paralyse the neuron of fish, such as phenylamino propane, etc.

These substances are not toxic to fish, and further, o a small amt. of the substance is eaten by fish, and thus n harmful effect is caused to humans on eating it. The sub stance is shaped into granules, or capsulated and spread over the water. The substance may be mixed with e.g. foodstuff, flavouring, attractants, pigment, carrier, dilu ent, etc. 15.7.77 as 084126 (2pp22)

NIPA ★ D13 23105B/12 ★J5 4020-89

Nutritious feedstuff for fish - comprises plant, animal o microorganism protein with hypoxanthine or nicotinic acid (amide)

NIPPON PAINT KK 12.07.77-JA-083675

C03 (16.02.79) A23k-01/18

The feedstuff which comprises (I) natural or synthetic hypoxanthin, nicotinic acid or nicotinic acid amide and (II) protein from plant, animal or microorganisms. (I) can b obtd. by extraction of calcinated rice bran.

In an example, calcinated rice bran is extracted with methanol three times, and the extract is concentrated and subjected to treatment with ion exchange resin. The resu tant is then treated with n-butanol, and mixed with ethyl acetate. The ppts are dissolved in water and subjected to gel filtration to give the desired component. The amt. of hypoxanthin is 1 g to 50 mg, nicotinic acid is 10-500 mg a nicotinic acid amide is 10 mg - 1 g, per kg of solids content. 12.7.77 as 083675 (3pp22)

NIPA ★ D13 23106B/12 ★J5 4020-89

Fish feedstuff prepn. - by extracting feedstuff with water, buffe soln. contg. a salt, or alcohol and mixing with protein

NIPPON PAINT KK 12.07.77-JA-083676

C03 (16.02.79) A23k-01/18

Method comprises extracting a fish feedstuff (e.g. laver) with water, buffer soln. contg. a small amt. of a salt or lower alcohol, and mixing the extracted liquid with a protein originated from a plant, animal or microorganism.

In an example, 10 kg laver is crushed and mixed with three times its volume of 80% aq. methanol soln. and sto overnight. The resulting soln. is centrifuged to recover solids. The resulting solid is extracted with aq. methano soln. once again as above and the two extracted liquids ar combined and concentrated to 5 l. The resulting soln. is mixed with 5 kg of soybean protein and mixed with amino acids and vitamins to give a fish feedstuff. 12.7.77 as 083676 (3pp22)

KYOK- ★ D13 23107B/12 ★J5 4020-89

Fishing bait prepn. from live okiami - by immersing in satd. sodiu chloride and then in reducing agent soln. to inhibit blackening

KYOKUYO KK 15.07.77-JA-084648

C03 (16.02.79) A23k-01/18

Prepn. of fishing bait, comprises immersing living okiam in satd. NaCl soln. to kill the okiami, and immersing in a reducing agent soln. so as to inhibit colour change to blac Water is taken off, dried at low temp. to adjust water con tent to 20-40%. A small amt. of NaCl is added and store under freezing.

Okiami has strong attractive effect to fish, and so the bait is very effective for fishing, and can be stored for a long period of time without changing the properties of the bait. The reducing agent includes Na metasulphite, $NaHSO_3$, $Na_2S_2O_3$, Na ascorbate, etc. Amt. of the agent to b used is 0.1-3 wt.%. 15.7.77 as 084648 (2pp22)

NATT D13 50665V/28 =J7 9003-70

Cross-linked, hydroxy propylated, high amylose, starch prod - used to impartto foodstuffs a rapid heat pengtrability and good texture when cooked atsuperatmos press

NAT STARCH & CHEM CORP 21.12.72-US-317413

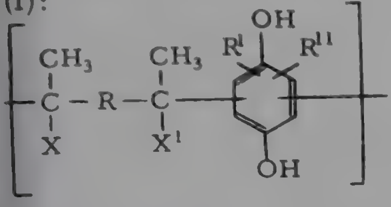
*A11 E16 (A97) (26.02.79) *DT2364-056 C08b-31/12*

A starch contg. ≥50% amylose hydroxypropylated to give a prod. having hydroxypropyl-MS-value 0.10-0.30% and the prod. is reacted with a crosslinking agent, e.g., epichlorhydrin, so that an aq. dispersion having the followin characteristics is obtd.; 5.0wt.% starch content on dry basis. Brookfield viscosity ≤1500cP/23.9°C; after 25 mins. boiling at 82.2°C in a buffered salt-soln., pH value 6.5, after standing at room temp. for 24 hrs., and 1500-10000 cP after 10 mins. boiling at 100°C and standing at room temp. for 24 hrs.; the viscosity after boiling at

121.1°C being $\geqslant$4 times as great as after boiling at 82.[illegible]°C. 21.12.73 as 142537 (clg. 21.12.72-US-317413) C08b 31/12 (26.2.79) NATIONAL STARCH & CHEM. (11pp)(J49125488)

DYNL D13 54246X/29 = J7 9003-798
Polymers having hydroquinone structural units - useful as antioxidants for plastics, rubber and foodstuffs
DYNAPOL 24.02.75-US-552017
*A12 B07 (27.02.79) *BE-838-834 C08g-61/02*

Polymers contg. hydroquinone structural units of formula (I):



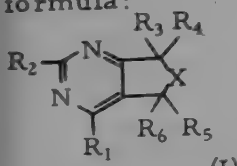
(I)

(where X and X^1 are H or CH_3; R is 1-6C alkyl or 6-14C aralkyl or alkaryl, and R^1 and R^{11} are H, 1-6C alkyl or 8-12C aralkyl) are useful as antioxidants for plastics, rubbers and foodstuffs.

They are used in concns. of e.g. 2-50,000 ppm. by wt. The polymers pref. contain 3-100 units of formula (I). They are pref. practically linear, contg. an average $\ngtr$1 branch per 4 units of formula (I). 24.2.76 as 019363 (clg. 24.2.75-US-552017) C08g 61/02 (27.2.79) DYNAPOL (13pp) (J51110000)

INFL D13 14519T/09 = J7 9003-878
Odoriferous pyrimidine derivs - as additives to foodstuffs and perfum
INT FLAVORS & FRAGR INC 10.03.71-US-123024 (10.03.71-US-123023)
*E13 +P15 (D23) (27.02.79) *BE-771-609 A21d-13 A23c-19 A23f-01/14 A23l-01/22 A24b-03/12 C07d-495/04*

Odoriferous pyrimidine derivs. with odours resembling those of hazelnuts, vanilla, with chocolate, meat juices, fruits, etc. which can be added to a wide variety of food prods., some derivs. i.e. the thienopyrimidines being suitable as perfumes for soap, detergents, etc. have the formula:



(I)

(where X is S, O, -C- or CH_2; R_1 is H, halogen, alkyl, alkoxy, alkylthio or cycloalkylthio; R_2 is H, alkyl or alkylthio; R_3-R_6 are the same or different and are H or alkyl; R_1 and R_2 are not simultaneously alkylthio), and are added in small amts. to modify perfumes or aromas of food substances. 21.8.71 as 024120 (clg. 21.8.70; 10.3.71(2)-US-066110; 123023/4) C07d 495/04; A21d 13/00; A23c 19/00; A23f 1/14; A23l 1/226; A24b 3/12; A61k 7/46; C11b 9/00 (27.2.79) INT.FLAVORS & FRAGRANCES INC. (8pp) (J50131973)

UNIL D13 65971S/41 = J7 9003-882
Edible fat emulsions prodn
UNILEVER NV 01.04.70-LU-060639
*(28.02.79) *BE-765-177 A23c-19/02 A23c-23 A23d-03/02 A23l-01/19 B01f-03/08 +A23d-05*

Emulsions of edible fats, suitable for the mfr. of prods. such as margarine, cheese, cream for coffee and which can also be diluted to a milk drink, are prepd. by injecting a first liq. into a stream of a second liq., there existing between the liqs. immediately before the injection, a difference in pressure $\geqslant$100 atmos., pref. 100-400 atm. and the pressure in the second liq. being at $\geqslant$0.3 atm., esp. 1.5 atm. The two liqs. need not be mutually soluble but must not be entirely immiscible.

The first liq. pref. comprises a fat phase and the second liq. on aq. phase. Suitable fats are any natural or synthetic glyceride, e.g. cocoa butter, olive oil, etc., and from the nutritional angle, it is desirable to incorporate polyunsatd. acids in these fats. The second aq. phase is e.g. skimmed milk, and thus a reconstituted milk may be obtd. by injecting butter fat into skimmed milk. 1.4.71 as 020032 (clg. 1.4.70-LU-060639) B01f 3/08; A23d 5/00, 3/02; A23c 19/02, 23/00; A23l 1/19 (28.2.79) UNILEVER NV (34pp) (J46003973)

FUKO ★ D13 23343B/12 ★ J7 9003-941
Mixing bean protein, oil, starch and water to form a paste - and coating on food and frying to give fried bean curd like coating
FUJI OIL KK 06.12.72-JA-122184
(28.02.79) A23l-01/34

Method comprises mixing bean protein, oil, starch and water, coating food with the paste and frying the food. The method gives coating like fried beancurd in one step, eliminating the need for producing beancurd. 6.12.72 as 122184. A23l 1/34 (28.2.79) FUJI OIL KK (3pp83) (J49080263)

TAKS ★ D13 23344B/12 ★ J7 9003-942
Solvent extn. of plant or animal texture - by grinding plant or animal substance, mixing with silica granulating and stirring in organic solvent
TAKASAGO PERFUMERY KK 11.04.73-JA-040409
(28.02.79) A23l-01 A23l-02

Method comprises grinding plant or animal, mixing with powder of SiO_2-contg. substance, e.g. silica, diatomaceous earth, etc., granulating the mixt., and gently stirring the granules in organic solvent. 11.4.73 as 040409. A23l 1/00, 2/00 (28.2.79) TAKASAGO PERFUMERY KK (2pp83) (J4 9125544)

CORP D13 28164S/16 = J7 9003-943
Peanut butter
CPC INTERNATIONAL INC 30.06.69-US-837862
*(28.02.79) *ZA7003-354*

HIGA- ★ D13 23351B/12 ★ J7 9003-959
Squeezing of soy from unrefined soy - by filtering through stack of filter plates then squeezing the cake formed on the filter cloth
HIGASHIMARU SHOYU 28.02.72-JA-020841
(28.02.79) A23l-01/23

Method comprises stacking several filter plates equipped with filter cloth with spacers between; providing paths (I) and (II) passing through the plates and spacers; holding the assembly tightly in a frame; feeding unrefined soy through (I) into the filter assembly under a pressure of 0.3-1 kg./cm²; withdrawing filtered soy through (II); squeezing the cake formed on the filter by air pressure of 0.3-1 kg./cm²; and washing the cake with water of pressure 0.3-1 kg./cm² fed through (II). 28.2.72 as 020841. A23l 1/238 (28.2.79) HIGASHIMARU SHOYU KK (3pp83) (J48088291)

ANON ★ D13 ✓ 23373B/12 ★ RD-179-012
Sweet fried snack prod. - made from a dough based on hard wheat flour, sugar and shortening
ANONYMOUS 20.02.79-RD-179012
*(10.03.79) A21d-00/**

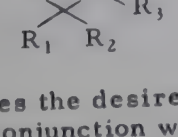
Fried sweet snack prods. are made by (a) forming a dough from hard wheat flour, sugar and shortening ingredients; (b) forming the dough into a sheet, and (c) deep frying portions of the prod. to form a crisp sweet snack prod.

Use of hard wheat flour (i.e. bread flour) e.g. from hard red spring and winter wheats, (red) drum wheats, etc., gives doughs with sufficient cohesiveness to permit subsequent sheet formation and cutting of pieces without breaking apart or sticking to the processing equipment. (513)

ANON ★ D13 ✓ 23378B/12 ★ RD-179-018
Substd. thiazolidine carboxylic acid cpds. - useful meat flavour precursors for foodstuffs
ANONYMOUS 20.02.79-RD-179018
*E13 (10.03.79) C07d-00/**

Foodstuffs are made contg. $\geqslant$1 substd. thiazolidine carboxlic acid cpd. (I) as meat-like flavour and aroma precursor (I) has the formula

(I)



where R_1 is 1-8C alkyl or hydroxyalkyl gp. and R_2 and R_3 are H or 1-8C alkyl or hydroxyalkyl gps.

(I) is added e.g. at 0.1-10% to foods such as synthetic meat substitutes. On heating or cooking, (I) produces the desired meat-like flavour and aroma. When used in conjunction with edible fatty acids (e.g. succinic acid, malic acid, or citric acid) and a fatty acid (e.g. oleic acid, stearic acid, etc.) a cooked beef-like flavour is generated.-(513)

INPR= ★ D13 23448B/12 ★SU -585-832
Tea leaf wilting automatic control - using moisture content difference signal to control air heater fuel supply
IND PROD PROC AUTOM 03.03.76-SU-330162
(28.01.78) A23f-03

The appts. includes a hot air temp. control circuit with temp. sensors for mixed and hot air, a regulator and an operating mechanism linked to a control valve on the fuel line to the air heater. For more accurate control of tea leaf moisture content and improved product quality, moisture meters with integral transmitters are installed at the wilting chamber inlet and outlet and are connected to the regulator.

Mebaduri A.S., Mdzinarishvili V.V., Yasamanov E.A., Bul. 48/30.12.77 3.3.76 as 330162 (3pp1358)

GORS= ★ D13 23469B/12 ★SU -604-551
Soured milk based foodstuff prodn. - using multistage inoculation of milk with specified bacterial strains, with yeast, honey and sugar syrup added
GORSK AGRIC INST 15.09.75-SU-187611
(D16) (03.05.78) A23c-09/12

The dietetic and antibiotic characteristics of such prods. are raised by concentrating the milk stock, cooling, subdividing the bulk into 5 pts., innoculating each separately with Bacterium bulgaricum, B. casei, Streptococcus lactis, cremoris and Bacterium acidophilum and souring at 42-45°, 37-40°, 30-33°, 26-28° and 40-42°C for 18-24 hrs. The 5 pts. are then blended, honey is added followed by 0.1 % Saccharomyces kefiri and 1-3% brewer's yeast each calcd. on initial stock. After fermentation, the liquor is maintained at 22-30°C, sugar syrup is added and the prod. held under 0.2-0.5 atspressure for 2 days.

Patrushev S.V., Bul. 16/30.4.78 15.9.75 as 187611 (3pp835)

FATS= ★ D13 23470B/12 ★SU -604-552
Solid confectionery fat prodn. - by two/stage hydrogenation of oils, ester exchange and blending with untreated hydrogenate
FATS RES INST 09.01.76-SU-313531
(03.05.78) A23d-05/02

The confectionery fat is made by hydrogenating mixts. of palm kernel oil and natural higher fatty acid triglycerides with separate intensive hydrogenation of lauryl triglyceride -free oils, blending the hydrogenates, trans-esterification refining and deodorisation.

The process is accelerated and prods. of improved yield and quality occur, hy hydrogenating the 1st mixt. to I_2-no 14-18 and the remaining oils to I_2-no 1-5. The 1st hydrogenated mixt. alone is then cross-esterified and is mixed with the non-cross-esterified 2nd hydrogenate. The ratio of mixed components is 95-98% to 5-2% by wt. of final prod.

Sergeev A.G., Redko T.S., Vasileva L.V., et al. Bul. 16/30.4.78 9.1.76 as 313531 (3pp835)

SHMU/ ★ D13 23657B/12 ★SU -605-151
Fats hardness controller - has indenter actuated by a membrane drive to which a known compressed air pressure is fed
SHMUKLER M L 05.03.76-SU-334843
R16 (25.04.78) G01n-03/42

Device to control fats hardness, in butter and margarine prodn. comprise an indicator, loading unit, flow-through container with water jacket, and distribution units for the ats, and cold and hot water. There is also a command unit and a secondary instrument. Control precision is increased by adding a plate temp. sensor and switch-over unit made up of a cylinder with spring-loaded piston and eversing valve. The loading unit is two levers, one havng a membrane drive fastened by hinges to a support. The flow-through container membrane drive and support re fixed to the plate. The membrane drive is a closed ontainer and a rod.

hmukler, M.L., Gerashchenko P.E., Tatarly G.N., Bul. 16/30.4.78 5.3.76 as 334843 (3pp29)

CELA D13 52084Y/29 =US RE29-933
Ruminant feed supplement - comprising urea and (alpha)-olefin polymer with carboxy vinyl polymer
CELANESE CORP 14.11.75-US-631806 (16.01.78-US-869472)
*C03 (13.03.79) *US4035-479 A61k-31/74*

Feed supplement compsn. for ruminants comprises an association prod. (I) of a major proportion of urea and a minor proportion of carboxy vinyl polymer together with a minor proportion of an α-olefin polymer (II). Pref. (II) is an ethylene polymer esp. an ethylene-vinyl acetate copolymer.

By incorporation of (II) urea release rates are extended. Pref. compsn. exhibits a urea release rate (Ur$\frac{1}{2}$) of $\geqslant$5 hr. The compsn. enhances protein development and leads to improved weight gain. 16.1.78 as 869472 Reissue of 4035479 (+ 14.11.75 - US - 631806) (6pp927).

DOUW D13 46063X/25 =US 4143-524
Crystallisable matl septd from liq multicomponent system - used eg in freeze drying of coffee extracts
DOUWE EGBERTS KON (DEJI-) 06.12.74-GB-052900
*J01 +Q76 (13.03.79) *BE-836-238 B01d-09/04*

In a batchwise treatment for concentrating fruit juice or coffee extract by freezing and recovering mother liquor formed. (a) a bathc of the liquid is confined at rest within long, narrow tubes having dimensions so that max. conductive distance is 5-25 mm. of a static heat exchanger.

Then (b) heat is withdrawn from the batch to crystallise part of the water creating a coherent matric of ice crystals with mother liquor trapped between the crystals. and (c) the matrix of crystals is released from the tubes to which it is attached by briefly externally heating the tubes so that the matrix including the mother liquor is expelled downwardly out of the heat exchanger.

Next (d) the material expelled in step (c) is broken up by a disc at the lower extremity of the tubes to produce material of a desired size, to permit sepn. of the broken up material and leaving a portion of the matrix held within the tubes by the disc to plug the lower end of the tubes. Finally (e) the crystals in the mass obtained in step (d) are transferred to a wash column to allow sepn. of the crystals from the mother liquor and mother liquor recovery, and (f) the tubes are refilled with additional liquid. 12.5.77 as 796388 (+ 5.12.75 - US - 637933) (10pp990).

CORP D13 15966A/09 =US 4144-087
Sepg. a corn starch milk into protein and starch - using multistage sepn. and washing using hydrocyclones
CPC INTERNATIONAL INC 22.10.76-US-734683
*+P41 (D17) (13.03.79) *BE-859-954 C13l-01 +C13l-03*

The mill starchfraction in a corn wet milling process is divided into a protein-rich portion and a starch-rich portion by passing the fraction through a pair of separation zones arranged in series. Each sepn. zone comprises a series of hydrocyclones only and the protein rich component is drawn from the first zone and the starch rich component from the second zone. A pressure difference of at least 100 p.s.i. is maintained across each hydrocyclone in the first zone, and at least 80 p.s.i. in the second zone.

Each hydrocyclone discharges a protein-rich stream through a vortex member and a starch enriched stream through an apex member. The starch enriched stream from the first of the hydrocyclones in the first zone is fed to the second zone whilst the starch enriched stream from the second of the hydrocyclones in the first zone is fed back into the mill starch fraction. The protein enriched streams from the hydrocyclones of the second zone are also fed back into the mill starch fraction. 22.10.76 as 734683 (12pp525).

METG D13 25276A/14 =US 4144-229
Protein concentrate prodn. by oil seed extraction with alcohol - esp. for soya using two or more stage extractions
DRAVO CORP 26.11.76-US-745469 (08.09.75-US-611066)
*(13.03.79) *BE-861-228 A23j-01/14*

Extn. of oleaginous seed material (I) comprised of non-oil lipids and lipids to prepare a protein flour comprises (a) countercurrently contacting (I) with a 1st. conc. soln. of an alcohol in water to extract water, most of the non l lipids and some of the lipids; (b) withdrawing a miscella from(a); and (c) countercurrently contacting (I) from) with a 2nd conc. soln. of the alcohol in water to exact all of the lipids.

Method further comprises (d) withdrawing a lipid-ch miscella from (c); (e) cooling the lipid rich miscella separate a solvent phase and a lipid phase; (f) returning l or a large portion of the solvent phase to the process nd withdrawing the lipid phase and the remaining solvent hase, if any, from the process; and (g) desolventising (I) rom (c) to yield a low-lipid protein flour.

Pref. (I) is soybean. The prod. is white and free of pids. 26.11.76 as 745469 (7pp393).

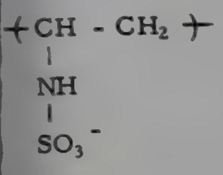
YNL D13 72318Y/40 =US 4144-252

Water soluble amine linked polymeric colourants - having ulphonate or sulphamate solubilising gps. useful as nontoxic food yes

DYNAPOL 08.12.75-US-638730 (07.02.77-US-766298)

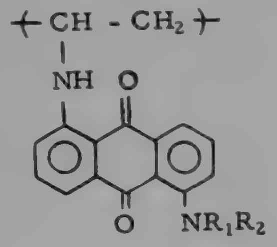
*A60 B04 E24 (A96 A97) (13.03.79) *US4051-138 +C09b-01/16*

Water-soluble polymeric colouring compsn. consists of m gps. of formula (I) and n gps. of formula (II) randomly linked together through covalent carbon-carbon bonds into a polymer having a linear aliphatic hydrocarbon backbone, n and m are integers such that (n+m) is 20-3000 and n is 0.2 to 4 times m. R_1 is H or 1-4C alkyl and R_2 is H; 1-4C alkyl or 6-8C aryl or alkaryl. Pref. R_1 is H and R_2 is methyl.



$-\!\!\!+CH(NHSO_3^-)-CH_2+\!\!\!-$

(I)



(II)

Compsn. is suitable for colouring foods, beverages and medicines, and also paints, inks, polymers, etc.. The Parent Patent claimed a colouring compsn. with broader definitions of units (I) and (II). 7.2.77 as 766298 Div.ex. 4051138 (23pp927).

TAKA- ★ D13 23875B/12 ★US 4144-293

Appts. for forming whipped cream - including two whipping barrels, one with labyrinth passage, other with stirring rod

TAKARABUNE KK (SHAF) 30.03.77-JA-U39447 (30.09.76-JA-117965)

(13.03.79) B01f-03/04

Appts. is used to introduce air into cream to produce a whipped product. Appts. includes a container for the cream and a suction pump. The pump includes a mixing chamber having a suction port through which cream may be drawn from the container. The chamber also has an air inlet and a discharge port which is in communication with a first whipping barrel.

Barrel comprises a labyrinth passage in which the mixture of pressurised cream and air is emulsified. A second whipping barrel is connected to the outlet of the first barrel and this includes a stirrer. The whipped cream is discharged through a shut-off valve. The suction pump and stirring rod are driven by an electrically operated motor which preferably includes a speed changer for controlling the speed of rotation of the motor.

Appts. is used for producing a whipped cream prod. The resulting prod. has a uniform consistency. 26.9.77 as 836716 (+ 28.10.76 - JA - 130158) (10pp295).

ZARA/ ★ D13 23904B/12 ★US 4144-353

Grapes as artificial fish egg bait - prepd. by steeping grapes in fish oil and water

ZARAGOZA J C 10.12.76-US-749395

C03 P14 (13.03.79) A01k-85

A fish bait is prepd. by steeping grapes in a mixt. of fish oil (I) and H_2O. The mixt. is stirred at 87-94°C until the treated grapes rise to the surface.

Steeping compsns. pref. also contain an artificial food colouring, and the fluorescent dye Rhodamine B. Pref. grapes used are Thompson Seedless grapes which have been stored with their stems at 45°F until ready for use. (I) is pref. cod liver oil.

have the consistency, odour, and shape of natural salmon eggs. In addn., the artificial eggs have a skin strong enough to allow them to be retained on a fish hook. 10.12.76 as 749395 (3pp478).

KYOW D13 61469Y/35 =US 4144-354

Promoting milk secretion in dairy animals - with enzyme compsn. prepd. by cultivating Basidiomycetes of Irpex species

KYOWA HAKKO KOGYO 12.02.76-JA-013172

*B04 C03 (D16) (13.03.79) *DT2705-878 A23k-01/18 +A61k-37/48*

The milk yield of livestock is increased by daily admin. of a feedstuff contg. an enzyme compsn. having activities of 20000 - 40000 (μ/g) cellulose, 2000 - 4600 (r/mg-hr) laminarinase, 1600 - 3400 (r/mg-hr) xylanase, 10-120 (r/mg-hr) dextranase, 28-81 (%/0, 3 mg) pectinase, 4-15 (μ/mg) amylase and 2-20 (μ/mg) protease.

The compsn. is obtd. by culturing Basidiomycetes belonging to the genus Irpex in a ratio of ⩾1 units of cellulose activity per g. dry matter of the feedstuff. 9.2.77 as 766863 (5pp974).

BLUE- ★ D13 23905B/12 ★US 4144-355

Recovery of vegetable waste solids from aq. slurry - to give aggregate prod. for feeding ruminant animals

BLUE WING CORP 26.08.77-US-828153 (22.12.75-US-643999)

C03 (13.03.79) A23j-01/16 A23k-01/14

Vegetable waste solids are recovered from an aq. slurry (3.5-18% solids) by first adjusting the slurry to ⩾pH 11.7 to gel it. Then mixing the gel with 2-6% Ca halide and keeping the mixt. so that about 50% of the water is exuded to form an aggregate, which is then sepd..

Efficient, economic and environmentally desirable method of treating waste slurries from vegetable processing plants. Aggregate prod. after treatment with mineral acid gives a feed supplement for ruminants. 26.8.77 as 828153 (+ 21.6.76 - US - 698156) (5pp248).

JOHJ ★ D13 23907B/12 ★US 4144-357

Preventing the Maillard reaction in synthetic dietary compsns. - by sepg. nitrogen cpd. and carbonyl cpd. with starch

JOHNSON & JOHNSON 22.06.77-US-808765

(13.03.79) A23l-01 A23l-02

Non-fluid compsn. consisting of an N-cpd. (I) and a carbonyl cpd. (II) which is capable of undergoing the Maillard-type browning reaction with (I) at room temp. contains a starch (III) of DE ca 0-24 which physically separates (I) from (II) so that the Maillard reaction is prevented or considerably delayed during storage.

Inexpensive, simple method effectively inhibits the known Maillard reaction that occurs between (I) and (II), partic. in solid, synthetic dietary compsns. for supplying nutritional requirements to mammals. Thus the storage life of the compsn. may be increased to e.g. ≮28 months at 30°C. 22.6.77 as 808765 (10pp478).

ASAH D13 09341A/05 =US 4144-358

Cheese-like food prepd. from soybeans - by ripening with natural cheese

ASAHIMATSU KORIDOFU 11.06.76-JA-068409

*(13.03.79) *J52151-760 A23c-19/12*

Food is produced by mixing crushed whole soybeans contg. denatured protein by heating to inactivate trypsin inhibitor and haemaglutanine, with natural cheese, to produce mixt.. Mixt. contains 20-99 pts. soybeans, 1-60 pts. natural cheese and agitating for 20-60 mins. at 35-45°C and fermenting by enzymatic reactions of microorganisms in cheese for 5 days - 2 months at 5-25°C. Pref. soybeans are degreased and in the form of a paste or powder. Pref. ferment is stirred and heated at 80-100°C.

Cheese-like food is free from soybean odour having taste and texture of cheese. 7.6.77 as 804435 (2pp931).

CSIR D13 49081Y/28 =US 4144-373

Absorbent and magnetic particles dispersion in porous polymer matrix - for sepn. of unwanted trace flavours from foods and recovery of vitamins etc.

COMMONWEALTH SCIENT ORG (CAMP-) 24.12.75-AU-004398

*A97 B04 J01 +P73 (13.03.79) *DT2658-633 +B32b-05/18*

Composite adsorbent materials for adsorbing dissolved organic materials of up to a given mol. wt. from soln. are new. They comprise adsorbent particles and magnetic particles embedded in a porous matrix of (partially) cross-linked hydrophilic polymer.

The degree of crosslinking is such as to provide a porosity which excludes molecules of higher mol. wt. than that desired.

Pref. the composite is in the form of beads. Pref. the adsorbent particles are $C_1Al_2O_3$, SiO_2 gel, activated Mg silicate, clay or mineral powders. 23.12.76 as 753908 (8pp974).

See Also

D16 EP- - -1099 D16 J5 4020190 D16 J5 4020195
D16 US 4144132 D21 US 4144324 D23 DT 2837935
D23 US 4144199

D14: FOODSTUFF MACHINERY

NEST ★ D14 22068B/12 ★BE -870-561
Batch steriliser for particulate food or pharmaceutical prodn. - for aseptic transfer to cans without subsequent sterilising
SOC PRODS NESTLE SA 23.12.77-GB-053759
B07 P34 (19.03.79) A23p A61p

Process is of the type in which a batch of particles is loaded into a rotary pressure vessel to be subjected to a tumbling action while heated for sterilisation. A liq. lubricant is now injected under pressure into the vessel after an initial heating phase. The lubricant is injected at a temp. higher than that of the particles. The particles and lubricant are held at sterilising temp. while the tumbling action proceeds.

The heating is pref. with live steam injection with condensation taking place in the vessel. The sterilised particles are pref. extracted from the vessel into an aseptic system. The lubricant can be water, oil or an emulsion of oil-in-water.

The vessel is pref. jacketed for cooking the prod. before discharge. During cooling, steam is evacuated from the vessel and replaced with an inert gas. 18. 9. 78 as 870561 (13pp448)

KRPP ★ D14 22106B/12 ★BE -871-990
Multistage screw press to expel liq. from oil seed etc. - improves extn. by fragmenting pressed material at end of each stage
KRUPP F GMBH 19.11.77-DT-751703
P71 (D23) (01.03.79) A23n B30b

The press has several successive stages, of compression, each followed by a zone of pressure relaxation. In each of the stages pressure is first increased progressively and then relaxed down to ambient pressure. At least part of the material becomes fragmented into small pieces which become redistributed before recompression in the next stage.

The average level of compression pref. increases from one stage to the next. The several stages are pref. provided by several lengths of helical screw spaced in succession along a common axis. At the discharge end of each screw length, the casing has a throat section which allows pressure to drop to ambient.

Fragmentation of the material between stages allows redistribution of particles and better drainage under subsequent recompression. An axially shorter press is suitable for a given output. 14. 11. 78 as 871990 (11pp448)

ULRI/ ★ D14 22235B/12 ★DT 2740-029
Chewing strap for pigs bred under intensive conditions - is of flavoured leather and prevents tail biting
ULRICH F 06.09.77-DT-740029
C03 P14 (15.03.79) A01k-13

The urge of pigs raised under modern intensive conditions in stalls without straw, and fed on bruised grain, etc., to chew something, which results in tail biting and considerable financial loss to the breeder, is satisfied by means of a chewing strap. This consists of a long strap of chrome tanned leather with a slot at one end through which the other end can be threaded so as to fix it hanging from a support bar for the stall.

The leather is made attractive by impregnating it with beet syrup, milk, lard, etc., and quickly produces harmony when the pigs are transferred. 6.9.77 as 740029. (6pp1045)

ODFO= ★ D14 23445B/12 ★SU -578-052
Leaf vegetables washing appts. - has apertured vertical baffles along sides of mesh conveyor
ODESS FOOD IND TECH 23.02.76-SU-327737
(21.02.78) A23n-13

The equipment includes a chamber to be filled with water and a mesh conveyor over a sieve. To intensify washing, there are two- comb-shaped vertical baffles along the sides of the conveyor to form a washing zone, and two horizontal shelves in the upper part of the chamber between the baffles and chamber walls. The shelves have apertures holding the delivery ends of water supply lines. A transverse baffle above the conveyor leaves a gap in which a vaned whirler is mounted.

Gladushnyak A.K., Bul. 40/30.10.77 23.2.76 as 327737 (3pp1358)

MOMD ★ D14 23492B/12 ★SU -604-586
Centrifugal vortex separator - has split flanged inserts compressed to form helical channel
MOSCOW MEAT DAIRY INST 17.10.75-SU-181679
J01 P41 (18.04.78) B04b-01/04

Simplified design, of a vortex centrifuge separator for milk or other inds. is ensured by inserts featuring flanges at the edge with a bearing surface. The inserts are assembled with cutouts in the same longitudinal plane, while the ends of the set of inserts are compressed by projections. The height of the latter is a multiple of the flange height, and the bearing surfaces are staggered and set on different sides of the cutout plane.

The emulsion is fed beneath the inserts holder from where it flows into the helical channel for sepn. by centrifugal forces. The heavy fraction leaves from the lower surface of the inserts and moves towards the flanges, while the light fraction follows the inner surface of the inserts. The separated phases move at right angles to the general flow of emulsion around the rotor axis.

Sokolov V.I., and Zhukov V.G., Bul. 16/30.4.78 17.10.75 as 181679 (4pp89)

KUES/ ★ D14 23700B/12 ★US 4143-592
Domestic appliance for food dehydration or dough raising - comprising cabinet with heaters and fan to control air flow
KUEST J 11.08.77-US-823875
(13.03.79) A23c-03/02

A single appts., used either for food dehydration or dough raising includes a cabinet with a front door which is mounted to provide exhaust vents. The rear wall of the cabinet has air intake ports. Shelves arranged in pairs on the side walls support drying racks between which are formed air passageways. A dough raising shelf may be supported on the shelves.

When used for raising dough the relative humidity of the cabinet may be increased. A constant speed blower motor and fan are mounted on the rear wall for continuously drawing replacement air from the intake ports to exit through the vents. A screen is placed in front of the fan to diffuse the air uniformly throughout the air passageways. The air flow is stopped when used for raising dough. Heaters in the cabinet are used to control the temp within the cabinet to 100 - 160°F for dehydration and to 75 - 100°F for dough raising.

The ventilation flow design minimises cross food flavouring and permits the simultaneous dehydration of diff.-

erent foods. 11.8.77 as 823875 (6pp295).

FINI- D14 ✓ 59474Y/34 = US 4143-593
Vegetable peeling machine with air and water sprays - which double the capacity and improve product preservability
MACH FINIS BV 23.04.76-NL-004310
*+P28 (13.03.79) *BE-853-898 A23n-07/02 A23n-15/08 A47j-17/18*

Vegetable peeling machine has $\geqslant$1 rotary peeling cutter mounted in side walls of a vessel, the vessel having a rotatable bottom to tumble the vegetables; a nozzle near the centre and bottom of the vessel for directing air towards the side walls; and a water spray nozzle near the top and adjacent the side walls.

Pref. the air and water nozzles are selectively actuable depending on the vegetable. Keeping quality is improved due to reduced cleaning and peeling time. Partic. for use with onions and potatoes. 25.4.77 as 790250 (3pp).

GRIF/ ★ D14 ✓ 23710B/12 ★ US 4143-665
Appts. for shelling beans and peas - has rotating wire mesh basket and sepg. devices for removing shells
GRIFFIN L E 21.01.77-US-761004
P12 (13.03.79) A01d-45/24

A pea or bean shelling appts. includes a shelling bin in the form of a wire mesh basket having a closed and an open end. One segment of the basket wall forms a bin door. The basket rotates about its major axis while a beater is simultaneously rotated within the basket. The beater rotates in the same direction as the basket but at a greater velocity. The vegetables are shelled by the action and the shells remain within the basket while the vegetables fall through the mesh.

An inclined conveyor having a knobbled surface carries the vegetables to a product conveyor. A debris conveyor is positioned adjacent the upper end of the inclined conveyor and receives shells removed through the bin door.

The vegetables are sepd. from both the shells and any other debris mixed with them. 21.1.77 as 761004 (16pp).

SWIF D14 73878Y/41 = US 4143-773
Assembling items for packaging - esp. meat patties sliced in logs, using magazines from which patties are discharged in layers
SWIFT & CO 30.01.76-US-653918 (03.02.77-US-765082)
*P62 + Q35 (13.03.79) *US4051-753 + B65g-47/26*

Columns of discrete articles are laterally sepd. the columns initially having been in side by side contact, by appts. including a conveyor to move the columns, runways aligned in the conveyor direction to receive products from the conveyor, and divides between the runways. The runways diverge vertically and then converge to a single level whereby all corresp. points between the entry and exit portions of adjacent runways will be spaced vertically to urge articles in the columns apart laterally while vertically displaced.

Manual handling of food products is reduced. US 4051753 claims an assembling process where items arranged as a column are reassembled as a layer. 3.2.77 as 765082 Div. ex. 4051753 (9pp1376).

D15: WATER TREATMENT

STER ★ D15 22060B/12 ★ BE -870-540
Treating waste water using rotating biological contactor - with addn. of adsorbent material, esp. active carbon
STERLING DRUG INC 19.09.77-US-834231
(19.03.79) C02c

Process comprises (a) contacting the current of water for $\geqslant \frac{1}{2}$ hr. with a biological contactor which comprises a series of surfaces alternately immersed in the liquid and in the gas above; (b) adding an adsorbing agent capable of adsorbing the liquid impurities to the current; and (c) removing the accumulated solid suspended material from the contactor at the rate at which it accumulates in the contactor.

The adsorbent addn. reduces foaming enabling a higher rotation speed of the biological contactor. Also it improves the oxygen transfer by about 25% enabling both slower speeds and hence lower energy costs and a higher efficiency esp. in nitrifying systems in which the dissolved oxygen concn. must be $>$0.5 mg/l. to be effective. 18.9.78 as 870540 (12pp597)

FARH ★ D15 22078B/12 ★ BE -870-598
Anticorrosion compsn. for ferrous metals - contains boric acid-di:ethanolamine reaction prod. and sulphonamide cpd.
HOECHST AG 19.09.77-CH-011419
E19 M14 (19.03.79) C02b C23f

Compsn. comprises a mixt. of (A) reaction prods. of boric acid and diethanolamine; and (B) sulphonamide cpds. of formula: $(R_1)(R_2)$-Ar-$(-SO_2N(R_3)-R_4-COOH)_n$ (I) (where R_1 and R_2 are each H, F, Cl, Br, 1-4C alkyl or alkoxy with the total C atoms of R_1 and R_2 not over 7; Ar is a benzene, naphthalene or anthracene radical; R_3 is H, 1-4C alkyl, 2-4C hydroxyalkyl or β-cyanoethyl; R_4 is ethylene having over 3C atoms opt. substd. by one or more methyl or ethyl radicals and n is 1 or 2); or (II) alkyl and/or cycloalkyl sulphonamido carboxylic acids obtd. by chlorosulphonation of satd. aliphatic and/or cycloaliphatic 12-22C hydrocarbons of b. pt. 200-350°C, followed by reaction with ammonia and then condensn. with chloracetic acid.

The compsn. is used to impede corrosion of ferrous metals in contact with water by addn. to the water or aq. liquid 0.5-10% of the compsn. The compsns. is used in metal working liquids, cooling systems and in aq. liquids under pressure. The mixture gives a synergistic effect. It is very effective even in hard water, has good stability and gives little foam. 19.9.78 as 870598 (13pp597)

BURY/ ★ D15 22127B/12 ★ CA 1050-13
Adding treatment liquid to water - by sensing liquid level fall i reservoir and periodically operating additive pump
BURY J R 10.06.75-CA-228997
R26 (06.03.79) G05d-09/12

An accurate quantity of treating solution is introduced int a water reservoir while make-up water is being added to the reservoir. The reservoir includes a lost-motion floa valve connected to a switch which detects a predetermine drop in the liquid level of the reservoir. Operation of the switch activates a pump to introduce make-up water. at a predetermined flow rate and simultaneously a totaliser clock is driven.

The totaliser includes a cam which operates a valve to introduce treatment solution to the reservoir when the totaliser reaches a preset value.

The system is used to add a water-treatment chemica to a water supply.

The system provides an accurate metering of water treatment liquid to an accuracy of 1ppm. 10.6.75 as 228997 (12pp295)

HUBN/ ★ D15 B/12 ★ CS 7707-18
Ammonia recovery from waste waters
HUBNER P 03.11.77-CS-007180
E35 (29.12.78) C01c-01/10 C02c-05/08

KADL/ ★ D15 B/12 ★ CS 7707-45
Ammonium hydroxide recovery from waste water
KADLEC V 14.11.77-CS-007458
E35 (29.12.78) C01c-01/10 C02c-05/08

HVIZ/ ★ D15 B/12 ★ CS 7708-92
Feed of oxygen into activation vessel - using paper ind. liquid
HVIZDAL Z 28.12.77-CS-008923
F09 (29.12.78) C02c-01/32

TREJ/ ★ D15 B/12 ★CS 7708-969
Water treatment plant
TREJTNAR J 29.12.77-CS-008969
(29.12.78) C02b-01

GROS/ D15 64949R/36 =DS 2010-897
Multi-path valve for water treatment plant
GROSS G (GRO /) 07.03.69-IT-013796
*Q66 (15.03.79) *BE-746-875 +F16k-11*

A new valve unit for industrial water treatment by ion exchanger resins includes two valves for the regeneration and two valves for normal operation. Each of the two former is a three-way valve and consists of a vertical chamber in which a ball can move between a top seat and a bottom seat. These seats lead to two of the three ways; the third is a port which terminates halfway between top and bottom seat.

The valve unit is easy to mfr. and combines a compact design with a high functional reliability. 7.3.70. as 010897 (8pp39)

UNIC D15 52810T/33 #DS 2221-498
Sewage sludge treatment - with activated sludge contg pptd phosphate particles
UNION CARBIDE CORP (BIO -) 11.03.71-US-123309 (02.05.72-DT-221498)
*(15.03.79) *US3681-235 C02c-01/06*

Crude waste water is purified by treatment with activated sludge followed by aeration to reduce B.O.D. and to promote uptake of phosphate by the microorganisms present. Sludge enriched with phosphate is separated from liquid poor in phosphate, which is discharged. The phosphate enriched sludge is lead to a phosphate sepg. zone where an agent, e.g. chalk is added to ppte water soluble phosphates. The sludge still contg. the pptd. phosphate is recycled.

Process simplifies the appts. required and improves capacity. 2.5.72. as 221498 (4pp068)

DHVR- D15 64261U/43 =DS 2316-483
Chemical water treatment - in fluidized bedof grafting material with sodium hydroxide s olution injection
DHV RAADGEVEND INGE 04.04.72-NL-004477
*(15.03.79) *DT2316-483 C02b-01/22*

In a new method for the chemical softening of water, a fluidised bed is produced in the granular grafting material contained in a reactor by an ascending stream of water and of a softening agent. Water and softening agent are sprayed separately from each other, pref. at an angle of 90° to the generally ascending flow. An alkali metal hydroxide soln. such as NaOH is sprayed in radial planes at a level above the water spray nozzles.

This saves the sepn. of any solids such as slurry when milk of lime is used and simplifies the process. 3.4.73. as 316483 (5pp39)

ASEN- D15 30859W/19 =DS 2352-917
Sewage aeration basin - with circulating flow induced by pump and air injector through perforated pipe
ASENDORF-ABWASSER-A 22.10.73-DT-352917
*(15.03.79) *DT2352-917 C02c-01/12*

A high duty aeration basin for the activated sludge treatment of sewage uses an injector to circulate a mixt. of water, sludge and air. The injector is followed by a pipe around the basin bottom which has a length of at least one-third of the periphery in circular or three-quarter of the length in rectangular basins. Holes distributed over the top of the pipe have a dia. of 5-25 mm.

This combines the prodn. of a very intensive air bubble/sludge mixt. with a minimum of energy consumption. 22.10.73. as 352917 (7pp39)

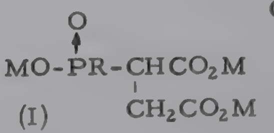
DAMB- D15 04385A/03 =DS 2629-603
Canal cleaning grate - has rake performing compound motion on multi-unit framework (NL 3.1.78)
DAMBACH-INDUSTRIEAN 01.07.76-DT-629603
*Q42 (15.03.79) *DT2629-603 E02b-05/08*

A bar screen cleaning device with a rake for use in sewage channels is mounted on a guide frame on which a moving frame can slide up and down, actuated by a hydraulic cylinder. The rake is attached to a crossbar which can slide on the moving frame by the action of two ropes slung over two pulleys.

This doubles the stroke of the hydraulic cylinder for the rake; the whole rake can be arranged outside the channel when not in use. 1.7.76. as 629603 (7pp39)

NALC D15 86524Y/49 =DS 2720-551
Phosphino substd. aliphatic carboxylic acids prepn. - from corresp. unsaturated acids and hypophosphorous acid or salts
NALCO CHEMICAL CO 02.08.76-US-711010 (01.07.76-US-701785)
*E11 H07 M14 (15.03.79) *BE-855-192 C07f-09/30*

Substd. succinic acid and salts of formula (I) are new (where R is H or $-\underset{\displaystyle CH_2CO_2M}{\underset{|}{CHCO_2M}}$



$$MO-\overset{\displaystyle O}{\overset{\uparrow}{P}}R-\underset{\displaystyle CH_2CO_2M}{\underset{|}{CHCO_2M}}$$

(I)

and m is H, alkali metal, ammonia or amine), e.g. monosodium phosphinico-bis-succinic-acid.

(I) may be prepd. by reacting maleic acid (salt) with hypophosphorous acid (salt) in the presence of a persulphate catalyst. (I) are useful to prevent scale formation in hard water. 5.5.77. as 720551 (6pp068)

GESL D15 84285A/47 =DS 2721-298
Purifying phosphate- contg. waste water - by absorption on alumina while blowing in inert gas, e.g. air, nitrogen, carbon di:oxide or oxygen
KERNFORSCHUNGS KARL 12.05.77-DT-721298
*(15.03.79) *DT2721-298 C02c-05/02*

Waste water contg. phosphates is purified by absorption onto Al_2O_3 granules of size 0.05-0.2 mm in a stirred appts. while passing through an inert gas. The inert gas is pref. air in an amt. of 1-10 litres air per litre waste water.

The gas treatment improves the absorption power of the Al_2O_3. 12.5.77. as 721298 (3pp068)

KOPS ★ D15 22151B/12 ★DS 2755-830
Coke oven gas waste water desulphurisation - by combustion with air and forming waste gas having high hydrogen sulphide to sulphur di:oxide ratio
KRUPP-KOPPERS GMBH 15.12.77-DT-755830 (00.00.73-DT-361910)
H09 (15.03.79) C02c-05

In parent patent, waste waters, obtd. in coke oven gas desulphurisation with an organic O carrier-contg. scrubbing soln., are removed by pyrolytic decomposition using the heat of the evaporating liqs. and of the waste gas formed. The inorganic components of the waste waters, conc. to 70-30% are decomposed in a reducing atmos. generated by the combustion of coke oven gas and of NH_3 vapours formed in coke oven gas treatment in absence of air. S formed is sepd. Waste gas and vapours formed in waste water concn. are added to coke oven gas before pre-cooling. In this addn., waste water decompsn. takes place in a combustion chamber at 1000-1100 (1050)° C. Air quantity added is such that waste gas formed in combustion chamber exhibits mol. ratio $H_2S:SO_2>2:1$ (2.1:1 to 2.6:1).

Waste gas formed is free from N oxides. Air supply control to combustion chamber achieves optimum $H_2S:SO_2$ ratio for S deposition, according to equation $4\ H_2S + 2SO_2 \rightarrow 4\ H_2O + 3\ S_2$. 15.12.77. as 755830 Add to 2361910 (5pp200)

VOLL- ★ D15 22185B/12 ★DT 2739-126
Storm sewage tank emptying system - with fixed displacement pump controlled by high and low water level
FA VOLLMAR O 31.08.77-DT-739126
(15.03.79) C02c-01

A tank for the temporary storage of storm sewage is equipped with a pump which runs always at full capacity when switched ON and feeds the water into the channel upstream of a gate valve. It is switched on and off by a sensor in the channel which responds to an abnormally high water level, and by a sensor which responds to the empty state of the storm sewage tank.

placement pumps and empties the storm sewage tank quickly without risk of overloading the biological and mechanical clarification plant. 31.8.77 as 739126. (22pp39)

DEBB/ ★ D15 22211B/12 ★DT 2739-737
Sewage sludge feeder - with scraper chain conveyor at bottom of storage tank
DEBBELER B 03.09.77-DT-739737
Q35 (15.03.79) B65g-65/42

Sewage sludge must be freed from the bulk of its moisture content before it can be mixed with quicklime to convert it to a solid consistency suitable for dumping or for fertiliser. When this has been done by pressurised endless belt screens, the sludge does not flow freely and a scraper conveyor is used at the bottom of the storage tank to move it to the distributor conveyor.

Such a conveyor loosens the solid sludge. It is simple in design and functions reliably even when agressive media have to be handled. 3.9.77 as 739737. (7pp39)

BOSC ★ D15 22237B/12 ★DT 2740-031
Industrial waste disposal - by evaporation of film on revolving heated horizontal drum
BOSCH R GMBH 06.09.77-DT-740031
(15.03.79) C02c-05

Disposal of effluents with anorganic or organic contaminants or dispersions is based of evapn. The effluent forms a film on the surface of a revolving heated cylinder so that the more readily volatile phase evaporates. The incrustation of residual substance is removed mechanically from the cylinder surface.

Provides a simple and economical method for the disposal of industrial waste, even in large quantities. The dispersing agent can be recovered and the plant has low overall height requirements. 6.9.77 as 740031. (11pp39)

KEEF/ ★ D15 22441B/12 ★FR 2394-319
Reverse osmosis via selective membrane subjected to liq. pressure - recuperates energy by using discharged concentrate to drive turbine wheel
KEEFER B G 15.06.77-US-806704
J01 +Q56 (16.02.79) B01d-13/04 F04b-37/02 F04d-01

A machine and a process in which reverse osmosis via selective membranes is used to separate a feed fluid into a permeate and a concentrate. The system is of the type comprising a first rotor which pumps feed fluid into a second rotor in the form of a pressure vessel contg. the membranes. The concentrate discharged from the second rotor is used in part at least to provide recuperated energy.

The second rotor is fitted coaxially around the first rotor. The second rotor has concentrate outlet nozzles directing the fluid on to impeller blades or a turbine wheel mounted on the shaft of the first rotor. The two rotors are turned at different speeds by a common drive to which the turbine wheel returns recuperated energy. Pref. the first rotor turns in the same direction as but at a higher speed than the first.

Used partic. in the prodn. of drinking water by desalination of sea water, the purificn. of waste waters and dewatering food prods. Power saving by recuperation of energy from discharged concentrate. Reduced pressure on membranes gives them extended life. Relative rotation of toros prevents membranes blocking. Common axis for both rotors simplifies construction. Friction losses reduced by 80% by halving relative speed difference between rotors. 14.6.78 as 017784 (54pp448)

UGIN ★ D15 22457B/12 ★FR 2394-602
Biodegradable cleaning compsn. for hydrocarbon spillages - contg. mixt. of specified mono and di-phosphoric acid ester(s)
UGINE KUHLMANN 25.03.77-FR-008938
A97 E11 H03 (A25 D25) (16.02.79) B01f-17/14 C02b-09/02 C11d-01/34

The compsn. comprises a 35%/65% mol. ratio mixts. of esters of formula R-O(A)-P(O)(OB)(OB) and $[R\text{-}O(A)]_2$=P(O)(OB). In the formulae R is a 6-20C residue of an alcohol or acid; A is either a mixt. of ethoxy and propoxy groups, the ethoxy/propoxy ratio being < 2 and the number of propoxy groups being <10; or A is 1-4 ethoxy groups when R is below 12C, 1-5 ethoxy groups when R is below 16C or 1-6 ethoxy groups when R is over 16C; B is H, an alkali(ne earth) metal, an amine contg. 6-20C or organic cpds. with a high N and low C content. The mol. ratio of each ester type in the mixture is 35-65%.

Compsn. is used for cleaning hydrocarbon spillages on the ground or water. The cpds. have a high biodegradability and form with water a medium enhancing the biodegradation of hydrocarbons. 25.3.77 as 008938 (16pp597)

ZANU ★ D15 22471B/12 ★FR 2394-968
Isolation of washing machine water supplies from contamination - by preventing reverse diffusion of water softener regeneration salts
ZANUSSI INDUSTRIE SPA 16.06.77-IT-045721
F07 P28 (16.02.79) A47l-15/42 D06f-39/08

The water supply for a washing machine is connected with a water softener unit or a salt regeneration reservoir via a three-way cock or via an open branch discharging above an overflow tank. The open branch vents the supply line to prevent any suck-back into the supply if the supply pressure is low. Pref. the overflow head is variable, e.g. by rotation of a cranked outlet.

The valve prevents leaching of the salt stock into the supply leg. 15.6.78 as U17890 (8pp515) (w)

HENK D15 19560W/12 =GB 1483-610
Cation exchanger aluminium silicates - produced by mixing aluminates with silicates contg. tensides
HENKEL KG AUF AKTIEN (DEGS) 03.12.73-OE-010098 (07.09.73-OE-007771)
*J01 (07.03.79) *DT2439-572 C01b-33/28*

A cation exchanging, water insoluble, X-ray amorphous aluminium silicate prod. is prepd. contg. bound water and 0.01-50 wt.% > 1 ionic, hardness-resistant surfactant and 0.7-1.5 mols of $Cat_{2/n}O$ per mol Al_2O_3, where Cat is a cation other than H with valency n, and 0.8-6 mols of SiO_2.

Aluminium silicate has calcium binding capacity of 50-200 mg CaO/g of anhydrous, surfactant-free active substance, a particle size ⩽30 microns, > proportion of surfactant is incorporated within lattice of aluminium silicate.

Prod. has capability of binding the hardening constituents of water, having increased rate of ion exchange and better stability. 6.9.74 as 038971 (+1.10.73-GB-008382) (16pp931)

BRAU- D15 08398A/05 =GB 1542-389
Domestic water supply filter with backwash valve - has second filter element to deliver filtered water while backwashing
BRAUKMANN ARMATUREN 12.10.76-DT-645948
*J01 +Q42 (21.03.79) *BE-859-141 B01d-29/38*

A back-flushing filtering appliance comprises a housing containing a main filter and a back-flushing filter, each in communication with the inlet and outlet of the housing.

A shut-off device allows or prevents liq. flowing back through the back-flushing filter. A closable drain aperture in communication with the inlet side of the main filter is arranged so that closing the aperture opens a valve on the inlet side of the main filter and shuts off the device, and opening the aperture effects the opposite.

The appliance prevents blocking and ensures the supply of filtered liq. during back-flushing. 22.4.77 as 016863 (14pp1379)

HOIS/ D15 50577Y/29 =GB 1542-473
Crude water distillation system - comprising evaporating and condensing in primary circuit and heat pump in secondary circuit for heat input
HOISS J 07.01.76-DT-600398
*(21.03.79) *DT2600-398 B01d-03*

In the continuous prodn. of distilled water, water is passed through a flow-isolated primary flow path in heat exchange with a medium, e.g. water or a halogenated hydrocarbon, in a closed secondary flow path containing a heat pump.

Water evaporates by taking heat from the medium emerging from a compressor of the heat pump, and condenses by giving heat to the uncompressed medium. The water may be preheated by exchange with the medium as it enters the primary flow path.

An exceptionally fine prod. is obtd., whilst avoiding the problems previously encountered when passing distillate through the compressor. 13.12.76 as 051868 (10pp1379)

CHCC D15 85033Y/48 =GB 1542-537
Filter fibre cylinder mfg. - has a heated conveyor and winding rod to shape a cylindrical product without formers
CHISSO CORP 02.11.76-JA-132028 (08.05.76-JA-052323)
*F07 J01 +Q36 Q67 (21.03.79) *DT2719-590 +F16l-09/16*

A hollow fibrous cylinder, e.g. a filter is made by heating a web with at least 10% composite hot-melt adhesive fibres which have lower and higher m.pt. components, so that the lower m.pt. component is melted on one side only of the web. The web is then wound up on a cylindrical former and the prod. is cooled.

The composite fibres are pref. of polyethylene and polypropylene and the web is heated by an infrared lamp. The web is pref. delivered on a conveyer and is wound up on a rotating former resting on but not moving along with the conveyor. The other web face is pref. heated to just below the m.pt. of the lower m.pt. component. 9.5.77 as 019329 (+25.5.76-JA-060499)(9pp1358)

HITA D15 05231A/03 =GB 1542-540
Dialyser with ion exchange membranes - used for treating sea water, brine and waste water contg. salts
HITACHI KK (HIEJ) 26.05.76-JA-060162
*J01 P32 P34 (21.03.79) *J52143-976 B01d-13*

In dialysis, a liq. to be diluted is passed into at least one dilution chamber, and a liq. to be concentrated is passed to at least one concn. chamber, the chambers being arranged alternately in a row.

Adjacent pairs of chambers are separated by alternate anion and cation exchange membranes. Air is introduced into a lower region of each dilution chamber, and pref. each concn. chamber, and passes out from an upper region. The diluted and concentrated liqs. are separately recovered.

The process prevents or reduces contamination or clogging of the membranes and passages of the appts. 26.5.77 as 022241 (9pp1379)

WHEE D15 43671X/23 =GB 1542-658
Multiple hearth furnace operation control - low temp. gases being controllably recirculated from drying zone to combustion zone
WHEELABRATOR INCINE (RUST-) 03.06.75-US-583423
*J09 M28 Q73 Q77 (21.03.79) *US3958-920 F23g-05 F23g-07 F23n-01 F23n-05*

Method of operating a multiple hearth furnace esp. for the combustion of waste (sludge) materials, having an upper drying zone, an intermediate combustion zone and a lower cooling zone.

Gases from the drying zone are recirculated to the combustion zone to absorb excess heat and the circulation is controlled by sensors to ensure that the temp. in the combustion zone remains constant independantly of the heat produced and to give a balance between heat production and heat absorbed.

The method reduces the overall energy requirements for the process which is esp. suitable for the disposal of sludge from waste water treatment plants. 10.5.76 as 019159 (21pp397)

TECN- D15 25588Y/15 =GB 1542-667
Sepn. of metallic mercury from solns. - using activated carbon with high specific surface (BE010477)
TECNECO SPA 03.10.75-IT-027957
*J01 (21.03.79) *DT2643-478 +B01d-37 B01d-39/04*

Mercury is removed from a fluid by contact with activated carbon having a specific surface area of $\geqslant$ 250 m^2/g.

The contact is pref. effected by agitation in a closed vessel, or by passing the fluid through a vessel containing the activated carbon. The process is esp. useful where the Hg is present as small particles, e.g. in sewage water 30.9.76 as 040719 (3pp1379)

DYNO D15 92871X/50 =GB 1542-712
Nitroglycerin recovery from waste liquids in explosives prodn. - comprising liquid liquid extn. with nitroaromatics used in explosive compsn.
DYNO INDUSTRIER A/S 23.05.75-NO-001834
*C03 E16 K04 (21.03.79) *DT2623-107 C07c-77/02*

Blasting oil is recovered from aq. effluent resulting from the prodn. of such oil by (i) passing a nitroaromatic cpd. (I) which forms part of the formulation of a final explosive through a liq./liq. contacting appts. in which the blasting oil-contg. effluent is extracted by using (I), after which the extract contg. the blasting oil is incorporated in the final explosive; and (ii) in order to remove nitroaromatic cpds. from the purified effluent, carrying out a further liq./liq. extraction using a liq. (II) sparingly soluble in water. Pref. (I) is nitrated toluene and/or nitrated xylen and (II) is toluene and/or xylene.

The extracted effluent can be further treated without risk of explosion so that the dissolved nitrates or other chemicals may be recovered. The nitrates are e.g. useful for the prodn. of explosives, as nitrogen additives in biological cleaning plants, or as artificial fertilizers. 20.5.76 as 020862 (5pp990)

DUNK/ D15 25715A/14 =GB 1542-75
Sepg. heavy and lightweight materials e.g. oil, sand etc. from water - by outward and return flow through parallel inclined plates thus controlling multiple pollution
DUNKERS K R 29.09.76-SW-010793 (29.09.76-SW-010792)
*(21.03.79) *DT2743-963 C02c-01/28*

Suspended matter is separated from water by passing the water through a group of parallel horizontal passages and directing the emergent water through a second group of horizontal passages in the reverse direction.

Suspended matter settles in the passages and/or floats, and is thus removed. Settlable material may be recovere as a heavy fraction in the first group of passages, and a light fraction in the second. Air may be introduced to separate floating material.

The process operates uniformly for varying rates of input, and may be used to treat water from drainage systems and sewage water. 29.9.77 as 040606 (11pp1379)

ASAH/ ★ D15 22574B/12 ★J5 3125-99
Ionising stored water - by treating with opt. heated compresse charged air
ASAHINA J 11.04.77-JA-040403
E36 K08 (02.11.78) C01b-05

Method comprises pumping a charged compressed air stream into a storage tank contg. a specified amt. of clean water, while producing bubbles in the clean stored water.

The ionisation chamber is composed e.g. of a large number of thin plates composed of radioactive elements and synthetic resins, whereby fine powder of radioactive elements collides with air molecules to produce radiation causing ionisation. 11.4.77 as 040403 (3pp43)

MITK ★ D15 22647B/12 ★J5 4018-467
Solvent and complexing agent recovery from Ziegler-Natta catalys mfr. - by treating effluent with alkali, distn., rectifying to separate solvent and complexing agent and passing agent through calcine hydrotalcit
MITSUI TOATSU CHEM INC 13.07.77-JA-082901
A60 (10.02.79) C02c-05

Treatment of a waste soln. contg. a hydrocarbon solvent and a complexing agent to recover the solvent and the agent, where the waste soln. is by-produced in the prodn. o a Ziegler-Natta catalyst, and the complexing agent consists of an oxygen-contg. organic cpd., comprises (1) treating the waste soln. with an aq. alkaline soln.; (2) distillin the treated soln. with water vapour to separate an oil phase; (3) rectifying the sepd. oil phase to separate the hydrocarbon solvent from the complexing agent; (4) introducing the sepd. agent into a calcined hydrotalcite adsorbing agent at 200-800°C to remove impurities, and so obtain the regenerated complexing agent.

In an example, a waste soln. contg. 95.7% heptane, 3.4% $TiCl_4$, and 1.9% diisoamylether was mixed with a soln. of NaOH. Water vapour was introduced into the mixed soln. to distil out an oil phase. The oil phase was rectified to separate heptane diisoamylether, used as a complexing agent. The crude diisoamylether was passed through a bed of calcined hydrotalcite to obtain a regenerated complexing agent. 13.7.77 as 082901 (5pp51)

TOKE ★ D15 22648B/12 ★J5 4018-468

Appts. for contacting gas with liq. flowing countercurrently - used to treat domestic waste water with ozone

TOKYO SHIBAURA ELEC LTD 12.07.77-JA-082518

(10.02.79) B01d-53/18 B01j-03/16 B01j-10

Gas is fed through the bottom port of a column to treat the liq. The object is to assure a stable gas-liquid contact effect in all times.

A space closed is formed in an upper section of an ascending drain pipe erected from the bottom of the column to locate above the level of the water in the column and communicated with a space in the column to maintain the level of the water in the column. 12.7.77 as 082518 (3pp26)

SASA- ★ D15 22649B/12 ★J5 4018-469

Multistage flash evaporator for sea water, brine, etc. - has e.g. antifreeze liq. circulating in one part of the system with the brine, etc. circulating in the other

SASAKURA KIKAI SEIS 11.07.77-JA-083111

(10.02.79) B01d-03/06

A liq. different from the raw water to be evaporated, such as antifreeze, is circulated in a route consisting of a condenser pipe, heat radiating line, heat pipe of a heat exchanger, and circulating pump connected to the condenser pipe in the evaporator chambers, while the raw water is circulated in another route consisting of a pipe between ore evaporator chamber to condenser pipes in the other evaporator chamber for heat recovery.

The system produces pure water. It has improved efficiency with reduced power consumption. 11.7.77 as 083111 (4pp26)

NIHA ★ D15 22653B/12 ★J5 4018-473

Neutralising waste soln. obtd. on regenerating ion exchange resins - used in appts. for pure water prodn.

NIPPON MINING KK (JAOR) 13.07.77-JA-082970

(10.02.79) B01j-01/09 C02c-05/02

In mixing a waste acidic soln. exhausted from regeneration of a cation exchange resin packed in a pure water producing appts. with a waste alkaline soln. exhausted from regeneration of an anion exchange resin packed therein, and thereby neutralising both waste solns., the improvement comprises (1) rapidly mixing the waste acidic soln. with the waste alkaline soln., to obtain a waste mixed soln. and (2) contacting the waste mixed soln. with air or degassing it to remove carbonic acid.

pH of the mixed soln. of the first process is controlled so as to adjust pH of the treated soln. exhausted from the second process to 7. 13.7.77 as 082970 (5pp51)

AJIN ★ D15 22657B/12 ★J5 4018-480

Sepn. of oil from water - using soluble metal salt of (N)-acyl aminoacid and inorganic acid to effect flocculation

AJINOMOTO KK 12.07.77-JA-083198

E19 J01 (10.02.79) B01d-17/04 C02c-05/02

The method comprises adding a water soluble salt of N-acylamino acid to an aq. medium contg. oil; mixing in an inorganic acid, such as hydrochloric acid, sulphuric acid, or phosphoric acid, to aggregate the oil; and sepg. the resulting aggregated oil therefrom.

The water soluble salt of N-acrylamino acid is a Na, K, NH_4 or triethanolamine salt. The amino acid of N-acyl amino acid is glycine, α-alanine, β-alanine, leucine, isoleucine, asparic acid, glutamic acid, or ε-amino caproic acid. The N-acyl of N-acyl amino acid is (un)satd. type aromatic or aliphatic acyl gp. of straight or branched chain or alicyclic gp. of 8-22C such as, myristoyl, palmitoyl, or stearoyl group. 12.7.77 as 083198 (2pp51)

AJIN ★ D15 22658B/12 ★J5 4018-481

Sepn. of oil from water - using soluble metal salt of N-acyl aminoacid as flocculating agent

AJINOMOTO KK 12.07.77-JA-083200

E19 J01 (10.02.79) B01d-17/04 C02c-05/02

The method comprises adding a water soluble metal salt of N-acyl amino acid to an aq. medium contg. oil. ; mixing to aggregate the oil; and separating the resulting aggregated oil therefrom.

The metal salt is a salt of metal of above divalent, such as, Ca, Ba, Al, Fe, Ni or Mn. The amino acid is glycine, α-alanine, β-alanine, leucine, isoleucine, asparic acid, glutamic acid or ε-amino caproic acid. The N-acyl is (un)satd. aromatic or aliphatic acyl group with a straight or branched chain or alicyclic group of 8-22C, such as, myristoyl, palmitoyl, or stearoyl group. 12.7.77 as 083200 (3pp51)

MITP ★ D15 22830B/12 ★J5 4019-467

Reduction of nitrogen oxide to nitrogen in waste gas - by treatment with ammonia and a catalyst obtained by electrolysing waste water, contg. heavy metals, with an iron anode

MITSUBISHI PETROCH KK 13.07.77-JA-083003

E36 J01 (J03) (14.02.79) B01d-53/34 B01d-107 B01j-23/74

In reacting a gas contg. nitrogen oxide with ammonia in the presence of a catalyst to reduce nitrogen oxide to nitrogen, the catalyst is obtained by electrolyzing waste water contg. heavy metals with an iron anode during introduction of air to oxidize it, precipitating the heavy metals as spinel type ferrite from the waste water to by-produce a sludge contg. the spinal type ferrite, the ferrite containing iron and at least one kind of heavy metals, and calcining the sludge at 300-600°C. The catalyst consists of iron and at least one kind of Co, Ni, Cr, Zn or Mn.

Waste water contg. 5.73 g/2l of $Na_2Cr_2O_7.2H_2O$ was electrolyzed with iron electrodes at 10v and 2A to dissolve 12g/2l of Fe^{2+} from the electrodes. The electrolyzed waste water was stirred at 40°C for 30 minutes to precipitate a ferrite contg. sludge. The sludge was filtered out, shaped, dried at 100°C for 2 hours, and calcined at 200°C to obtain the catalyst. 13.3.77 as 083003 (6pp)

MITO ★ D15 22837B/12 ★J5 4019-474

Continuous vacuum condensn. appts. - used to produce fresh water from sea-water

MITSUBISHI HEAVY IND KK 13.07.77-JA-083916

(14.02.79) B01d-01/26

Appts. comprises multiple vacuum condenser states each stage comprising a vacuum evaporator where the heated brine is flashed to vaporise, and a condenser for receivin the vapour from the evaporator and cooling and liquefying the same by heat exchange with the brine conducted from the next vacuum-condenser stage.

The condenser coil of the last stage is divided into two isolated sections, one for receiving the brine from the previous stage for the heat exchanging purpose described. Th other is for receiving a cooling water from an outside supply source, whereby the desired heat-balance between the vapour phase and the liquid phase in the last-stage condenser is readily achieved regardless of the temperature of the brine. 13.7.77 as 053916 (6pp47)

TOAG ★ D15 22861B/12 ★J5 4019-549

Treating water from biologically oxidised human waste - by adding acid to adjust pH, treating with iron salt and treating with hydrogen peroxide

TOA GOSEI CHEM IND LTD 14.07.77-JA-083522

(14.02.79) C02c-05/04

Method comprises adjusting the pH to 6.5 to 2.0 by adding a mineral acid, e.g. sulphuric acid, hydrochloric acid or carbonic acid; treating with an iron salt, e.g. iron sulphate, iron chloride, iron nitrate or iron perchlorate; and treating with H_2O_2 added in an amt. of 0.2 to 3 times the COD value of the water to be treated.

Method is capable of concurrently removing colouring substances, suspended solids and dissolved organic substances. 14.7.77 as 083522 (6pp117)

SHOW ★ D15 22862B/12 ★J5 4019-55

Anaerobic fermentation of calcium-contg. waste water - by blowin carbonic acid gas into the sludge from the fermenter to preven bacteria deactivation

SHOWA DENKO KK 14.07.77-JA-083574

(14.02.79) C02c-01/14 C12b-01

An anaerobic fermentation treatment method of calcium-containing waste water was developed.

Waste water is subjected to anaerobic fermentation in a fermenter where organics are decomposed into methan gas and carbonic acid gas by means of methane bacteria; the sludge-contg. waste water is then sent to a sedimentation basin for sepn. of sludge; and the sludge is mostly sent back to the fermenter. Carbonic acid gas is blown into the sludge from the outlet of the fermenter.

This method prevents the deactivation of methane bacteria due to the accumulation of calcium carbonate in the system, as the addn. of excess carbonic acid gas results in the conversion of the calcium carbonate into soluble calcium bicarbonate which is easy removed in soln. The, method is used for various saponification waste water, and other calcium-contg. waste waters, e.g. those from the Wacker process, etc. 14.7.77 as 083574 (2pp117)

EBAI ★ D15 22863B/12 ★J5 4019-551

Biological denitrification of human waste - by adding phosphorus cpd. and magnesium cpd. and sepg. obtd. ppte. using high polymer coagulant before denitrification of liq.

EBARA INFILCO KK 13.07.77-JA-083988

(14.02.79) C02c-01/02

A phosphorus ion-dissociable cpd. e.g. sodium phosphate, and a magnesium ion-dissociable cpd., e.g. magnesium hydroxide, are added to part of the waste water to be treated, the obtd. ppte is subjected to a solid-liquid sepn. using a high polymer coagulant, and the sepd. liquid is introduced to the biological denitrification treatment process following digestion.

This method, using part of the waste water as organic carbon source for denitrifying bacteria after removing ammonia as an ammonium magnesium phosphate ppte., not only obviates the need for valuable materials, e.g. methanol, but also recovers ammonia nitrogen and phosphoric acid present in the waste water as ammonium magnesium phosphate which is useful as a fertiliser. 13.7.77 as 083988 (3pp117)

HACH- ★ D15 22864B/12 ★J5 4019-552

Biological denitrification of human waste, etc. - using nitrifying bacteria, denitrifying bacteria and two/stage sedimentation

HACHIYA KOGYO KK (HITK) 15.07.77-JA-084220

(14.02.79) C02c-01/02

Waste water is introduced into a digestion tank to oxidise the ammoniacal nitrogen into nitrite or nitrate with nitrifying bacteria, into a denitrification tank contg. denitrifying bacteria, and lastly into a sedimentation tank to separate conc. activated sludge from denitrified liquor. The ammoniacal nitrogen-contg. waste water is separately introduced into the digestion tank and the denitrification tank, and the floating sludge in the spare sedimentation tank between the denitrification tank and the sedimentation tank is fed, with the denitrified liquor, back to the digestion tank.

The method ensures the enhancement of sludge sepn. efficiency, the exact removal of floating sludge, and the prevention of discharge of SS components. 15.7.77 as 084220 (3pp117)

KORY- ★ D15 23078B/12 ★J5 4020-451

Water treatment to prevent scaling and sludge formation - using copolymer of acrylic acid and its acrylate ester

KORYU KOGYO KK 15.07.77-JA-085477

A97 Q78 (A14) (15.02.79) F28g-09

A recirculating water system is treated with a copolymer of acrylic acid-acrylate ester or its water soluble salt(s). Pref. the copolymer has a mol. wt. of 1000-10000. The acrylate ester is esp. a lower alkyl ester and the salt may be an Na, K or NH_4 salt. The material is added at 0.5 to 100 ppm.

The treatment prevents pptn. of calcium or magnesium scale or other sludge in the water system, e.g. in heat exchanges. 15.7.77 as 085477 (4pp15)

RACK- ★ D15 23092B/12 ★J5 4020-856

Treating animal excrement - using synthetic wollastonite and, opt., acid and/or alkali

RACK ENG KK 19.07.77-JA-085623

C04 P34 (16.02.79) A61l-09 C05f-03

Treatment of excrement of domestic animals comprises adding synthetic wollastonite and if desired, acid and/or alkali to the excrements of domestic animal.

Pref. acid is added to adjust the pH to < 4 and then sy-

Synthetic wollastonite is pref. added in an amt. of 0.1-30 wt.% based on the excrement. Product is suitably dried to obtain powdered to block-like fertilizer.

Excrement can be readily granulated and any bad small removed due to the reaction of synthetic wollastonite with acid, e.g. H_2SO_4. 19.7.77 as 085623 (7pp)

YASU/ ★ D15 23129B/12 ★J5 4020-958

Sludge dewatering by pneumatic pressure - using a filter cloth immersed in water, and a stream of air blown up to the cloth

YASUMOTO M 15.07.77-JA-085197

J01 (16.02.79) B01d-23 B01d-29 B01j-01

A filter cloth is fixed to a water tank so as to immerse in water in all times. A screw conveyor is disposed in the tank to feed and drain the sludge, while air is blown up to the filter cloth to simultaneously filter and dewater the sludge, so that the air presses the sludge uniformly and avoids clogging of the cloth.

A float chamber is disposed in the tank to maintain the water level in the tank at constant so as to always immerse the filter cloth.

The sludge is homogeneously dewatered at reduced cost and time. 15.7.77 as 085197 (3pp26)

MITQ ★ D15 23130B/12 ★J5 4020-959

Appts. for feeding sludge into treatment tank contg. heat exchangers - allowing each chamber in the tank to be filled to a specified level

MITSUBISHI ELECTRIC CORP 15.07.77-JA-085452

(16.02.79) B01d-43 B01j-01 B01j-04

Planar heat exchangers are disposed in the tank so as to form the small chambers. One side wall of the tank is made of a sludge header having a series of openings for feeding the sludge. The openings are communicated with the small chambers. Specifically, the heat exchangers are held with spaces on heat-insulated buffer plates laid on the inner wall of the tank. 15.7.77 as 085452 (3pp26)

TOKA- ★ D15 23131B/12 ★J5 4020-960

Utilising waste sludge from water purificn. for plastering, etc. - by dehydrating after mixing with fibres and adding clay

TOKAI PULP KK 18.07.77-JA-086199

L02 (16.02.79) B01j-01 C04b-31

Method comprises (1) dehydration of waste sludge (I) after mixing with < 5 wt.% fibres, such as pulp fibre, syntheti fibre and wood fibre to a water content of 30-50 wt.%, (2) addition of 20-60 wt.% of the mixture obtd. into clay and (3) utilization of the obtd. paste-like mixt. for plastering walls or laying tiles on rooves.

In an example, 70 pts. wt. red clay and dehydrate (I) were mixed and 2 pts. wt. straw were added and mixed. To give desired fluidity, water was added. 18.7.77 as 086199 (2pp42)

KURK ★ D15 23133B/12 ★J5 4020-96

Regeneration of ion exchange resin - partic. those used f demineralisation of condensed boiler water in electricity generator

KURITA WATER IND KK 18.07.77-JA-085079

A85 J03 (J01) (16.02.79) B01j-01/09

Regeneration of ion exchange resin (I), comprises (1) purificn. of NaOH (II) soln. obtd by membrane (e.g. PV -electrolysis method, by dialysis; (2) regeneration of anion exchange resin in demineralization-appts. for condensed water, with purified (II)-soln. obtained in (1) and (3) regeneration of ion exchange resin in other demineral zation appts. with (II)-soln. by-produced in the step (1).

Method is used for regeneration of (I), used for demin eralization of condensed water of water of boiler (III) wit electricity generator. For the regeneration of (I) of suc boiler, highly purified (II) must be used and in the prese method, (II)-solution purified by simple treatment can be used for this purpose. 18.7.77 as 085079 (4pp42)

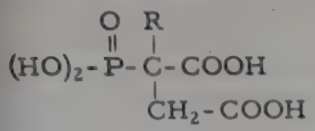
KORY- ★ D15 23143B/12 ★J5 4020-97

Scale removal from metal, e.g. boiler evapn., tubes - using sol contg. phosphono carboxylic acid

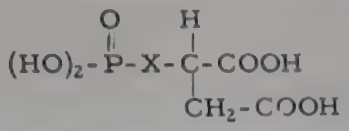
KORYU KOGYO KK 16.07.77-JA-085312

E11 M12 (16.02.79) C02b-05/06 C23f-14/02

Scale is removed by dissolving in a soln. contg. a phosphono carboxylic acid of formula (I) or (II),


(I)

$$(HO)_2\text{-}\overset{\overset{\displaystyle O}{\|}}{P}\text{-}\underset{\displaystyle CH_2\text{-}COOH}{\overset{\displaystyle R}{C}}\text{-}COOH \quad (I)$$


(II)

$$(HO)_2\text{-}\overset{\overset{\displaystyle O}{\|}}{P}\text{-}X\text{-}\underset{\displaystyle CH_2\text{-}COOH}{\overset{\displaystyle H}{C}}\text{-}COOH \quad (II)$$

In the formulae, R is H, ≤4C alkyl, alkenyl, alkynyl or allyl, cycloalkyl or aralkyl or $-CHR^1-CHR^2R^3$. R^1 is H, ≤ 4C alkyl or carboxyl. R^2 is H or CH_3. R^3 is carboxyl. X is $-CH(COOH)-CH_2-$, $-C(Y)(COOH)-$ or $-C(Y)(PO_3H)-$. Y is H or CH_3.

The soln. is effective over a wide temp. range. Typical acids are 1-phosphono propane-2,3-dicarboxylic acid, 1,1-diphosphono propane-2,3-dicarboxylic acid and 2-phosphono butane-1,2-dicarboxylic acid. The salt is pref. an alkali metal salt, ammonium salt or amine salt. The conc. of the acid or salt in the soln. is pref. 0.5-50 wt.%, usually 1-5 wt.%. 16.7.77 as 085312 (3pp42)

NIDE ★ D15 23162B/12 ★J5 4021-051

Heavy metal sepn. from waste water - by adding ferrous salt which is oxidised to form heavy metal-contg. magnetic particles, which can be removed

NIPPON ELECTRIC KK 15.07.77-JA-085345

(16.02.79) C02c-05/02

Waste water contg. < 2000 ppm heavy metal and recycled magnetic particles is added with a ferrous salt in an amt. of 2-100 times the total moles of heavy metal, adjusted to pH 9-12 by the addn. of an alkali, and the ferrous salt is oxidised gradually to form strongly magnetic particles including heavy metal without heating by supplying oxygen at a rate of 600 ml per min. per mole of ferrous salt, without exceeding the amt. of oxygen necessary to oxidise the ferrous salt.

The method creates strongly magnetic particles, contg. heavy metals, which are very hard to redissolve in water, and are applicable as material for wave absorbers or magnetic fluids. 15.7.77 as 085345 (6pp117)

ASAG ★ D15 23163B/12 ★J5 4021-052

Treating waste water contg. nitrogenous cpds. and oxidisable organics - by contacting with microorganism-fixing porous material

ASAHI GLASS KK 19.07.77-JA-085574

(16.02.79) C02c-01/02

Removal of nitrogeneous cpds. and oxidisable organics, partic. NH_3, COD, and BOD components, present in waste water is claimed. Water to be treated is contacted with microorganisms-fixing porous material, e.g. calcined attapulgite, having an apparent specific gravity of 0.5-2.0 an average grain size of 0.1-3.0 mm, and an average bore diameter of 0.008-1 μ in a fluidised or stationary bed.

Process is applicable to the treatment of general refuse, sanitary sewage, general sewage, fish processing waste water, poultry farm waste water, chemical factories, foundry waste gas-treated waste water, etc. contg. ammonia, ammonium salts, urea, amines, nitrites, etc. 19.7.77 as 085574 (5pp117)

HITF ★ D15 23164B/12 ★J5 4021-054

Biological denitrification of organic waste water - utilising carbon di:oxide given off during reaction as carbon source for microorganisms

HITACHI SHIPBLD ENGG KK 18.07.77-JA-086338

(16.02.79) C02c-01/02

Waste water contg. nitrogenous cpds. is supplied through the top of a reactor provided with microorganisms-adhered fillers, e.g. plastics, gravel, sand, or 10-30 mm fibre-brush plate etc. arranged axially 10-20 mm apart, then introduced through the conduit at the bottom of the reactor into a receiving tank the bottom of which is equipped with an O_2 supplying appts. through which O_2 is supplied into the waste water. The waste water supplied with oxygen is partly circled by pump to the reactor where the waste water is passed through an oxidn. zone and a reduction zone, and a portion of the waste water is then sent to a sedimentation tank where sludge is sepd.

The method prevents the shortage of inorganic carbon necessary for nitrification because of the utilisation of CO_2 given off during reaction and also the lowering of pH because of less reduction of alkalinity. It also obviates the need for supplying organic carbon sources in great quantities, because the BOD oxidation-decomposition, nitrification and denitrification can be performed in one reactor. 18.7.77 as 086338 (3pp117)

DORI- ★ D15 23165B/12 ★J5 4021-057

Waste water treatment - using a series of tanks contg. microorganisms fixed to biological membranes

DORIKO KK 16.07.77-JA-084654

(16.02.79) C02c-01/06

Waste water is treated using microorganisms fixed to biological membranes provided in an aeration tank. Water to be treated is passed through a number of aeration tanks arranged in series of which the first aeration tank is provided with 5-40 m^2/m^3 biological membrane and the last tank is provided with 20-40 m^2/m^3 biological membrane fixing material, i.e. equal to or more than that of the first aeration tank.

Method is used to treat organic waste water, e.g. sewage, sanitary waste, etc. in a very short time because of no occurrence of operational trouble with logging, etc. 16.7.77 as 084654 (7pp117)

DORI- ★ D15 23166B/12 ★J5 4021-058

BOD-rich waste water treatment - by mixing liquor contg. activated sludge with waste water, aerating, standing then dividing treated mixt. into two portions, one for reuse

DORIKO KK 16.07.77-JA-084655

(16.02.79) C02c-01/06

Batchwise biological treatment method for BOD-rich waste water comprises mixing a liquor contg. > 600 (pref. 10,000, esp. 15000-20000) mg/l sludge consisting mainly of activated sludge with a thick organic waste water in a 2:1 or 1:2 volume ratio; aerating the mixt. for a predetermined time; allowing the mixt. to stand for a further predetermined time and dividing the mixt. into two parts The upper liquor has same samt. of the thick organic waste water and the lower liquor has the same amt. of the sludge-contg. liquor used in the previous mixing process. The upper liquor is then further sepd. into treated water and slurry contg. sludge, and the lower liquor is reused as the mixing liquor in the first mixing process.

The method is capable of treating great quantities of BOD-rich waste water easily and exactly in a comparatively short time (approx. 4-8 hrs) by using a smaller size aeration tank and without supplying water for dilution. 16.7.77 as 084655 (6pp117)

MANW- D15 76204R/41 =J7 9003-824

Ion-exchange water-softening

MAN WERME & LUFTTEC 15.04.69-DT-918986

*(27.02.79) *BE-748-896*

ASAG ★ D15 23321B/12 ★J7 9003-826

Electrodialyser for concentration and desalination of solns. - has concentrating and diluting chambers with spacer nets shaped and sized according to membrane type

ASAHI GLASS KK 10.05.68-JA-030962

J01 (J03) (27.02.79) B01d-13/02 C02b-01/82

Electrodialyser for concn., desalting or replacement of a soln. such as sea water, comprises concg. and diluting chambers alternately arranged side-by-side. Each former chamber consists of a cation exchange membrane, net spacer and anion exchange membrane, and each latter chamber consists of a cation exchange membrane, frame, spacer and anion exchange membrane. The spacers, each made of a net having rhombic or hexagonal meshes, different in shape and material, are provided to suit the quality of the membrane and depth of each diluting and concg. chambers.

The number of components (mechanical), the weight, and cost are reduced and the spacing between the ion exchange membranes can be changed without replacing the chamber frame. 10.5.68 as 030962. B01d 13/02; C02b 1/82 (27.2.79) ASAHI GLASS KK (7pp26)

MONS D15 19617T/12 =J7 9003-82

Inhibition of pptn from aq soln - with an amine alcohol and phosphonic acid deriv

MONSANTO CO 10.09.70-US-071245

*E11 (27.02.79) *BE-772-405 +C02b-05/06 C09k-03 C23f-14/02*

Pptn. of materials from an aq. system is inhibited by adding less than stoichiometric amts. of a mixt. of (1) an amine alcohol and (2) a phosphonic acid chosen from (a) amino tri(methylene phosphonic) acid, (b) 1-hydroxyethylidene 1,1-diphosphonic acid, (c) ethylent diamine tetra-(methylene phosphonic) acid, (d) hexamethylene diamine tetra(methylene phosphonic) acid, and (e) salts of these acids. (1) is pref. triethanolamine used with the phosphonic acid in acid/alcohol wt. ratio 0.25/1-1/1. Concn. of the additives is 0.1-500 ppm. at pH 6.5-12, and depositing materials may be carbonates, sulphates, hydroxides, etc. The inhibitors are used in hydraulic, etc. systems and prevent scaling, rusting and corrosion. 9.9.71 as 069332 (clg. 10.9.70-US-071245) C02b 5/06; C09k 3/00; C23f 14/02 (27.2.79) MONSANTO CO. (6pp) (J47006256)

MIYO D15 27885A/15 = J7 9003-920
Chelating resin for heavy metal adsorption - prepd. by reacting sulphur cpd. and di:thiocarbamic acid (salt), with aldehyde and/or phenol, heating and hardening
MIYOSHI YUSHI KK 13.08.76-JA-096076
*A91 J01 (A28) (28.02.79) *J53022-600 B01d-15 + C08g-75/10*

Chelating resin is prepd. by reacting $\geqslant$2 S-contg. cpds. selected from (a) S-contg. cpds. with $\geqslant$1 active H atom bonded to N atom and $\geqslant$1 $>$C=S gp.; (b) S-contg. cpds. with $\geqslant$1 thiol gp., and (c) S-contg. cpds. with $\geqslant$1 active H atom bonded to N atom and $\geqslant$1 dithiocarbamic acid (salt) with aldehyde and/or phenol, heating the reaction prod. and hardening.

Resin exhibits a high absorption capacity for heavy metals such as Ha, Cu, Zn, Pb, Cr, V, Cd, Ag, Au, Pt, etc.

Reaction is esp. at 20-60°C for 1-4 hrs. in water or alcohol as solvent. 13.8.76 as 096076. C08g 75/10; B01d 15/00 (28.2.79) MIYOSHI YUSHI KK (4pp)(J53022600)

ANON ★ D05 23372B/12 ★RD -179-011
Fabric conditioner articles - with softener-antistatic particles coated with a controlled solubility film, and uncoated antistatic particles
ANONYMOUS 20.02.79-RD-179011
*A87 E19 F06 (E37) (10.03.79) D06c-00/**

Fabric conditioner articles comprise fabric softener/antistatic particles (I) coated with a film (II) whose solubility is controlled by pH or electrolyte level. The particles are contained in a receptacle of which $\geqslant$1 wall is of water-insoluble, porous material. The receptacle contains sufficient of a pH control agent or electrolyte (III) to insolubilise the film (II).

The particles (I) are sepd. from the agent (III) e.g. by sealing the receptacle into two compartments, coating the film-coated particles with a water soluble film (IV) which is not affected by the (III), or by separating the receptacle into two parts with a wall which may be of a water (in)soluble and (im)permeable material which is not affected by the (III). The water soluble material should not completely dissolve until the (III) has dissolved in the washing water. In addn. to the coated particles (I), the article also contains uncoated particles of a fabric antistat (IV).

The article can be added with a load of fabrics to automatic washing machines and can be left in with the clothes during the wash/rinse and drying cycles. Due to the construction of the article, the softener and antistat agents are released at the correct part of the cycle in each case. (513)

ANON ★ D15 23379B/12 ★RD -179-019
Stable water-in-oil dispersions of polymers - of N-amino-substd. ethylenically unsatd. carboxamide(s)
ANONYMOUS 20.02.79-RD-179019
*A14 (A91) (10.03.79) C02c-00/**

Reasonably stable water-in-oil dispersions of polymers of N-aminosubstd. ethylenically unsatd. carboxamides are prepd. by adding separate aq. solns. of a sec. amine and an aldehyde to a water-in-oil dispersion of a carboxamide polymer.

For e ample, to a water-in-oil emulsion of polyacrylamide prepd. by the method described in US 3284393 is added with stirring an aq. soln. of dimethylamine (60% active) predispersed in an oil phase such as a paraffinic liquid hydrocarbon at an oil aq. wt. ratio of - 1:1. Simultaneously or subsequently, an aq. soln. of formaldehyde (40% active) predispersed in an oil phase at an oil:aq.wt. ratio of - 1:1 is added with stirring to the reaction mixt. contg. dispersed aq. soln. of polyacrylamide and dimeth amine. The amine and formaldehyde are added in amts. which on a mole basis, are in significant excess of available amide moieties in the polyacrylamide. The amt. of amine is also in excess of the amt. of formaldehyde. The reaction is advantageously carried out at <50°C.

It is not necessary to preform the relatively toxic amine-aldehyde adduct prior to contact with the carboxamide polymer and the resulting N-aminosubstd. polymer exhibits > 90 mole % conversion of carboxamide moieties to N-substd. form and greater than expected flocculant activity. (984)

BANE- D15 79860T/50 = SU -604-46
Petrol and cellulosic waste - biodegradable in a medium wit optimum growth conditions
BANEXI BANQUE EXPAN (BAN -) 28.06.71-FR-023459
*F09 H04 (05.04.78) *BE-784-412 B01j-17 C02c-05/10*

Process is used for the removal of organic wastes suspended in water by biodegradation using aerobic micro-organisms, in which (i) the C, N, P and oligo-element demand and the optimum pH are experimentally determined and (ii) the same values as determined in the actual suspensi are adjusted to correspond to those required for the micr -organisms. The compsn. for the biodegradation of wastes consists mainly of vinasses, the content of N, P and C being adjusted by NH_4NO_3, $CaHPO_4$ and $CaCO_3$. It is used for treatment of mineral oil or cellulosic wastes.

For mineral oil wastes, compsn. pref. contains 40-60% vinasse, 10-12% NH_4NO_3, 3-8% $CaHPO_4$, 25-40% $CaCO_3$ and 1-3% glue. 70-200 pts. of the compsn. are pref. used with 100 pts. waste and the mixt. is combined with 10-30 times its wt. of water.
Fusei P., Bul. 15/28.6.71 27.6.72 as 805952 (2pp)

ENGI= ★ D15 23550B/12 ★SU -604-82
Domestic and industrial effluent surface aerator - has rotatin bladed frame which introduces atmospheric air during biologica purification
ENG EQUIPT RES INST 06.04.76-SU-344358
(10.05.78) C02c-01/10

Surface aerator, for biological purificn. of domestic and industrial effluents, includes a working unit with blades, a hub, and shaft with a drive, Aeration is more effective with simultaneous redn. in metal content of the aerator, by adding spokes, rigidly fastened at one end to the hub and at the other to the working unit. The ratio of the internal dia. of the wheel to the outer dia. is 0.65-0.9 : 1.
Repin B.N., Kremnev A.P., Shipkov A.P. et al. Bul. 16/30.4.78 6.4.76 as 344358 (2pp29)

VODG= ★ D15 23551B/12 ★SU -604-82
Domestic aq. waste sediment treatment - includes mixing wi activated sludge and adding a ferrous salt prior to aeration an dewatering
VODGEO WATER SUPPLY (TSVO=) 27.05.75-SU-137761
(27.04.78) C02c-03

The sediment is treated by (a) mixing untreated sludge from primary settling tanks with an activated sludge (b) adding an Fe (II) salt, pref. $FeSO_4$ in an amt. 0.1-0.5% on dried sludge wt. (calculated as Fe), and (c) aerating.

The addn. of an Fe (II) salt speeds the treatment process and improves the filterability of the treated sedimen

A typical aeration time is shortened to 5-6 days and t specific filtration resistance is reduced to 30-40 x 10^{10} cm/g.
Yakovlev S.V., Chumakov F.P., Frandetti L.D., Bul. 16/30.4.78 27.5.75 as 137761 (2pp314)

CHUD/ ★ D15 23664B/12 ★SU -605-1
Measuring gas content in liquids - by injecting steam and measurin intensity of noise generated as pressure in bubbles alters
CHUDINOV V S 26.05.76-SU-367245
J04 R16 (03.05.78) G01n-29/02

Method of controlling the gas content in liquids, e.g. during the degassing of water has been used in the development of automation techniques. The controlling factor is the intensity of the noise which accompanies the liquid-gas phase transition process. Measurement precision is increased by introducing into the liquid, at constant temp. steam which is condensed while retaining constant characteristics.

Saturated steam, at constant parameters (flow-rate, weight compsn., temp.) is fed under constant temp. conditions into the water in which the concn. of gas is to be measured. The steam condenses rapidly accompanied by an abrupt change of pressure in the steam bubbles. This abrupt change of pressure in its turn becomes a source of audible frequency.

Chudinov V.S., Bul. 16/30.4.78 26.5.76 as 367245 (2pp29)

GOTZ- D15 85247A/47 =US 4144-148
Recovery of metal from effluent in electrolytic process - with mechanical sepn. of metal from cathode
GOTZELMANN KG 22.12.77-DT-757271 (03.05.77-DT-719667)
*M11 (13.03.79) *NL7804-692 C02c-05/12*

Waste water contg. metals are treated by electrolysing the waste using rods as cathodes; the rods are arranged in two relatively movable parallel holding devices, and are moved to repeatedly strike each other.

Pref. the devices are rotated in one direction about their axis. The waste water is pref. pumped around a closed circuit to provide forced circulation. Recovered metals are recovered from the rods by their striking. Pref. after electrolysis the waste water is passed over an ion exchanger.

Almost complete metal recovery is obtd.. 2.5.78 as 902261 (10pp1376).

BROV D15 74644A/42 =US 4144-149
Purifying aq. residues from spent electroplating baths - contg. amine chelating agent, by anodic treatment
BBC BROWN BOVERI 06.04.77-CH-004344
*L03 M13 R59 (13.03.79) *DT2721-994 C02c-05/12 C25c-01/12*

Aq. residues are purified from exhausted metallising baths contg. ≥1 amino cpd. as complex-forming agent, by anodically treating aq. residue contg. heavy metal ions and complex-forming agent at a voltage, current density and time sufficient to allow complexing. Pref. heavy metal ions are copper ions and complex-forming agent is an alkalenediaminetetracarboxylic acid or salt, where copper is deposited at cathode during anodic treatment.

Esp. useful for processes such as prodn. of printed circuits for forming predetermined circuitry of Cu or other metallic conductors on appropriate substrates. 29.3.78 as 891223 (4pp931).

ATLS ★ D15 23821B/12 ★US 4144-152
Dehalogenation of halogenated organics - by ultraviolet irradiation in presence of hydrogen, for treating effluents, etc.
ATLANTIC RESEARCH CORP 27.03.78-US-890871
E19 J04 (13.03.79) B01j-01/10

Process for reducing a halogenated organic cpd. (I) contg. ≥1 C-halogen grp. so that halogen is removed from the cpd. consists of the treatment of (I) with UV radiation (1800-4000 Å) and H_2 in the absence of an oxidising agent.

Method effectively dehalogenates a range of (I) (including kepone, polybrominated phthalic anhydride, and polyhalogenated biphenyls) and is partic. useful in the treatment of contaminated effluent wastes, H_2O, soil, or sludges, etc.. 27.3.78 as 890871 (17pp478).

BURK/ ★ D15 23829B/12 ★US 4144-167
Sewage treatment plant with centrifugal mill - causing aeration of sewage and disintegration of solids which are subsequently sepd.
BURKETT A L 14.04.77-US-787567
P41 (13.03.79) B01d-35 B02c-23/38

Aq. raw sewage is treated in a system which includes a centrifugal mill. Here the raw sewage and air are subjected to turbulence and impact forces for aeration of the sewage and disintegration of the solids. The mill comprises a housing with a vertical bore having an inlet at the top and an outlet at the bottom.

A main shaft is vertically mounted in the bore and is attached along its length. At least one outboard shaft is vertically mounted in the bore and is also rotatable. This carries a second series of comminutors. A self-cleaning screen is connected to the outlet from the mill for sepg. the disintegrated solids.

The appts. is used to treat aq. raw sewage to produce water for non-drinking uses. The system is compact and rapidly aerates the raw sewage to satisfy its BOD. 14.4.77 as 787567 (12pp295).

DUNK/ D15 25715A/14 =US 4144-170
Sepg. heavy and lightweight materials e.g. oil, sand etc. from water - by outward and return flow through parallel inclined plates, thus controlling multiple pollution
DUNKERS K R 29.09.76-SW-010793 (29.09.76-SW-010792)
*(13.03.79) *DT2743-963 +B01d-21/10*

Appts. for separating settling and floating components from polluted water, such as storm or overflow water, comprises spaced vertical plates between which a series of vertically elongated flow passages are defined. An inlet chamber supplies water to alternate (first) passages and the water flows through the passages into a flow reversal chamber located at the opposite side of the plates. In the reversal chamber the floating components rise and are removed.

The water then flows back through the other (second) passages to a removal chamber and during its flow the settling components fall to a collecting chamber at the base of the passages. If desired a collecting chamber may also be located at the base of the first passages so that the heavier components settle out during flow of the water to the flow reversal chamber. 19.9.77 as 834558 (10pp525).

BENN/ ★ D15 23833B/12 ★US 4144-172
Solid waste separator for cleaning industrial liq. - has settling tank with stand pipe and internal separator pipe
BENNECKE E J 03.01.78-US-866808
J01 (13.03.79) B01d-21/02

The separator comprises a tank of large hydraulic dia. having an inflow pipe of small hydraulic dia. for supplying dirty liq. to the tank. A standpipe of intermediate hydraulic dia. communicating with the interior of the tank at its midsection and lower portions is mounted on the bottom of the tank and projects above the liq. level.

A separator pipe of small hydraulic dia. depends from above the liq. level in the tank, within the standpipe, and has its inlet opening downwardly above the tank bottom. An outflow pipe of smaller hydraulic dia. has anupwardly opening elbow communicating with the separator pipe and extends outwardly from the tank to discharge cleaned liq.

Used to clean dirty industrial liqs. to recover solid waste for reactivation and reuse. The separator maximises the flotation and settling of solid waste out of dirty liq.. 3.1.78 as 866808 (5pp67).

DRES D15 06444B/04 =US 4144-17
Sludge siphon collector for settling tank - has submerged bridge an
header for protection from weather
DRESSER INDUSTRIES INC 14.07.77-US-815482
*(13.03.79) *GB2000-984 C02c-01/36*

Sludge is removed from the bottom of a settling tank using appts. which includes a siphon tube suspended from a support travelling parallel to the wall to which it is mounted. The siphon tube has a header near the water's surface extending laterally from the wall across the tank, and at least two spaced intakes on the bottom of the tank connected to the header by separate risers.

An arched section extends from the header over a wall of the tank and has a flow regulating discharge section connected to the outlet of the arch for discharging the sludge outside the tank. All the siphon tube except part of the arch is submerged. 14.7.77 as 815482 (8pp1376).

USSI ★ D15 23836B/12 ★US 4144-18
Calcium sulphate scale removal - using amino poly:carboxylic aci
carbonate salt and fluorocarbon surfactant
US SEC OF INTERIOR 24.02.78-US-880831
E19 J01 (E37 J03) (13.03.79) C02b-05/06

Compsn. for removing calcium sulphate scale contains (a) 1% up to the limit of solubility of an amino polycar- boxylic and (I) which is EDTA, NTA, diethylene triamine pentaacetic acid, N-hydroxyethylethylene diamine triacet- ic acid or mixts.; (b) ⩾1 mole per mole (I) of a soluble carbonate which is $(NH_4)HCO_3$, $NaHCO_3$, $KHCO_3$, Na_2CO_3, $K_2CO_3(NH_4)_2CO_3$ or mixts.; and (c) 0.005-0.01 wt.% of fluorocarbon surfactant of formula $F(CF_2CF_2)_nCH_2)_2S(CH_2)$ $_2COOLi$ (II) or $[F(CF_2CF_2)_n(CH_2)_2O]_xPO(ONH_4)_y$ (where n = 3, 4 or 5 and x = 1 or 2, y = 2 or 1.

Compsn. has a more rapid action than (I), or a combination of (I) and a carbonate. Uses include descaling oil well equipment, heat exchangers, flow lines etc., and membranes used in electrodialysis, or reverse osmosis. 24.2.78 as 880831 (4pp955).

GESL D15 67046Y/38 =US 4144-186
Treatment of aq. radioactive waste contg. nitric acid or nitrate - by denitration with formic acid, spray drying and calcining
GES KERNFORSCHUNG MBH 06.03.76-DT-609299
*E37 K07 L01 (E17) (13.03.79) *DT2609-299 G21f-09/14*

Appts. used for the processing of aq. radioactive wastes permits the non-contaminating and safe handling of waste material. Nitric acid or nitrate contg. radioactive aq. waste solns. is continuously denitrated with formic acid, spray dried and calcinated.

A spray nozzle is provided with inlets for the waste soln., formic acid and atomiser steam respectively, and further includes coolant inlet and outlet. The resulting calcinate is mixed with glass former substances. The mixture is melted, then solidified to form a glass or glass ceramic. Waste gases produced during processing are filtered to remove any solid particles in the gas stream. 7.3.77 as 775288 (8pp1397).

CIBA D15 04773A/03 =US 4144-190
Adsorbent for heavy metal ions - prepd. from polysaccharide, esp. cellulose, acylatable polymer, crosslinking agent and opt. carboxylic acid deriv. (BE 9.1.78)
CIBA GEIGY AG 03.11.76-LU-076120 (08.07.76-LU-075329)
*A97 J01 (13.03.79) *DT2730-276 +C02b-01/46*

Polysaccharide-contg. adsorbent is mfd. from a cellulosic material, being the reaction prod. of a basic, N-contg. polymer, a halogenoacetic acid (un)substd. in α-position and a cross-linking agent.

N-contg. polymer is polyalkyleneimine with mol.wt. 5,000-200,000, or a polyamidopolyamine. Crosslinking agent is a halogeno-di- or tri-azine contg. ⩾2 mobile substitutents, a 2-halogeno benzothiazole carboxylic acid halide or -sulphonic acid halide, a halogeno 6-pyridazonyl 1-benzoyl (or 1-alkanoyl) halide, an anhydride or halide of α, β aliphatic unsaturated mono- or dicarboxylic acid, etc..

Adsorbent is used to remove or collect heavy metal ions from liqs. where metal ion concn. is 0.1-2.5 ppm. 28.6.77 as 810838 (9pp931).

CARO ★ D15 23841B/12 ★US 4144-193
Activated carbon mfr. from sub-bituminous coal - includes treatment of coal with mineral acid
CARBORUNDUM CO 06.03.78-US-884084 (16.05.75-US-578061)
E36 J01 (13.03.79) B01j-21/18 C01b-31/12

Hard granular active carbon is prepd. by (a) forming granules of sub-bituminous coal; (b) treating the granules with a soln. contg. 1-25% of inorganic acid to reduce the volatile content and increase the proportion of fixed carbon; (c) drying the granules to a moisture content < 25%.

Process further comprises (d) mixing the granules with 0-15 wt.% carbonaceous binder; (e) reducing to a powder; (f) compressing the powder to form shapes; (g) reducing the shapes to granules; (h) heating in an O_2-type atmosphere to expel volatiles without charging; (i) activating the granules by at a higher temp. in an atmosphere of an activating gas.

Process uses sub-bituminous coal, does not include a charring step. and gives improved yield. Used for waste water treatment, and in e.g. gas and air purificn.. 6.3.78 as 884084 (+25.7.77 - US - 818700) (15pp955).

FARB D15 08524A/05 =US 4144-311
Organically charged industrial waste salts treated by oxidn. - with hot gas avoiding excessive temps. and smoke prodn. (BE 20.1.78)
BAYER AG 22.07.76-DT-632954
*J09 Q73 (13.03.79) *DT2632-954 C01d-05/16 C01f-11/16*

Organics are removed from a sulphate, chloride, phosphate, or nitrate of an alkali(ne earth) metal or their sludges polluted with 1-70 wt.% of organic substances. Prepn. is by continuously supplying and forming a melt of salt at 600-1000°C by direct electrode resistance heating, contacting melt with oxygen-contg. gas at >1 successive stages while advancing salt through stages, continuously withdrawing purified salt as prod. from last stage and continuously withdrawing waste gases.

Method produces as small an amt. of smoke gases as possible without using high reaction temp. in oxidising organic components. 18.7.77 as 817078 (3pp931).

SULZ D15 18166Y/11 =US 4144-456
Radioactive treatment of sewage sludge - in irradiation chamber sunk in pit below water tank as radiation screen
SULZER BROTHERS LTD 12.09.75-CH-011865
*K08 +P41 R16 (13.03.79) *BE-846-046 G01n-21/26*

A flowable substance is irradiated in appts. which includes a hollow cylindrical source carried defining an interior annular space and being supported in an irradiation chamber, the annular space containing radiation sources; a system for circulating the substance over the inner and outer walls of the annular space; a shielding chamber above the support for the carrier and sealed from the irradiation chamber; and orifices in the support communicating the annular space with the shielding chamber to allow cooling with shielding liq. of the sources.

The shielding chamber pref. has a widened source storage pit. 10.9.76 as 722093 (6pp1376).

See Also

D16 J5 4020189

D16 : FERMENTATION INDUSTRY

DSOM/ ★ D16 22088B/12 ★BE-871-899
Continuous-discontinuous malting and drying process for grain - with fan power and fuel consumption in drying process minimised
DE SOMER A 10.11.78-BE-871899
(01.03.79) C12c

A malting and drying system for grain or the like consists of a malting tower with four rotating germination floors, each floor equipped with distribution and extraction equipment for the malting grain which then passes onto a drying floor. The malting can take place continuously or, by extracting the germinating grain, turning and wetting it and returning it to the same floor, in a discontinuous manner. The germinating grain is fed into the malti tower from a soak bath or conventional continuous soakin system.

The malted grain is dried by means of a drying floor. A fan blows hot combustion gases upwards through the malted bed of grain which dries as it approaches the floo The dried grain passes through a heat recuperator in which some of the drying energy is recovered.

Due to the continuous/discontinuous operation, the drying air leaves the system at 100%

mising both fuel consumption and fan power. The heat recuperation yields a further saving of fuel. 10.11.78 as 871899 (F1) (9pp1370)

PROK/ ★ D16 B/12 ★CS 7503-012
Microorganism aerobic cultivation
PROKOP A 30.04.75-CS-003012
(29.12.78) C12b-01/08

DOLE/ ★ D16 B/12 ★CS 7601-417
Cuvette for microorganisms cultivation
DOLEZILEK B 04.03.76-CS-001417
(29.12.78) C12k-01/10

MEDV/ ★ D16 B/12 ★CS 7602-101
Dried starch hydrolysate prepn.
MEDVECKY D 01.04.76-CS-002101
(D17) (29.12.78) C12d-13/04

BETI/ ★ D16 B/12 ★CS 7604-255
Repentine B antibiotic isolation - and also echinuline, erythroglaucine, flavoglaucine and fyscione metabolites
BETINA V 29.06.76-CS-004255
B04 (29.12.78) C12d-09/22

BETI/ ★ D16 B/12 ★CS 7604-256
Repentine A antibiotic prepn. - from microorganism Eurotium-aspergillus repens
BETINA V 29.06.76-CS-004256
B04 (29.12.78) C12d-09/22

KLIM/ ★ D16 B/12 ★CS 7605-055
Alcohol-wine distillates refining
KLIMAN C 03.08.76-CS-005055
(29.12.78) C12h-01/12

SMEK/ ★ D16 B/12 ★CS 7701-365
L-Lysine prepn. by fermentation - to improve product stability
SMEKAL F 01.03.77-CS-001365
B05 E16 (29.12.78) C12d-13/06

VENG/ ★ D16 B/12 ★CS 7705-641
Bacterial culture monitor
VENGLOVSKY J 30.09.77-CS-005641
(29.12.78) C12k-01/10

ROSN/ ★ D16 B/12 ★CS 7706-971
Appts. for simultaneous processing of material in various reagents
ROSNER J 26.10.77-CS-006971
J04 (29.12.78) C12k-01

SHIO D16 45384T/28 =DS 2165-401
(mixed) vaccines against infectious coryza, infectious - bronchitis and modern aviarian pest - treatment of complex respirator
SHIONOGI KK 29.12.70-JA-129817
*B04 C03 +P14 P32 (15.03.79) *BE-777-498 A61k-39/34*

An inactivated vaccine mixture to immunise poultry against respiratory diseases (e.g. infectious coryza, infectious bronchitis and Newcastle disease) contains Haemophilus gallinarum type 221 (cultured in a natural nutrient and inactivated), inactivated Newcastle virus Sabo sp. and inactivated infectious bronchitis virus Beandette type 42.

The vaccine has no side-effects in poultry and the components are compatible. 29.12.71. as 165401 (9pp922)

INSP D16 64840U/43 =DS 2316-911
Calcium phosphate gels - mixed types for vaccine bases
INST PASTEUR 06.04.72-FR-012036
*B06 (15.03.79) *NL7304-219 C01b-25/32*

Prodn. of aq. Ca phosphate gel for the adsorption of vaccines, comprises adding an aq. $CaCl_2$ soln. in $\leqslant 3$ mins. to an agitated aq. Na_2HPO_4 soln. The pH is adjusted with caustic soda to 7.0-7.2 while still agitating. The gel is allowed to settle and, after decanting off the supernatant liq., is washed with NaCl soln.

Adsorbability of the gel is increased by raising the Ca:P wt. ratio. 4.4.73 as 316911. (6pp922)

FARB D16 84693V/49 =DS 2323-847
Immunising cattle against para-influenza-3 virus - using live vaccine contg. apathogenic para influenza-3 virus strain
BAYER AG 11.05.73-DT-323847
*B04 C03 (15.03.79) *DT2323-847 A61k-39/12*

[illegible] applicable intramuscularly and intranasally to immunise cattle against parainfluenza-3 virus infections, is obtd. by culturing P1-3 virus ATCC VR-739 on prim. or permanent cell cultures and working up in known manner.

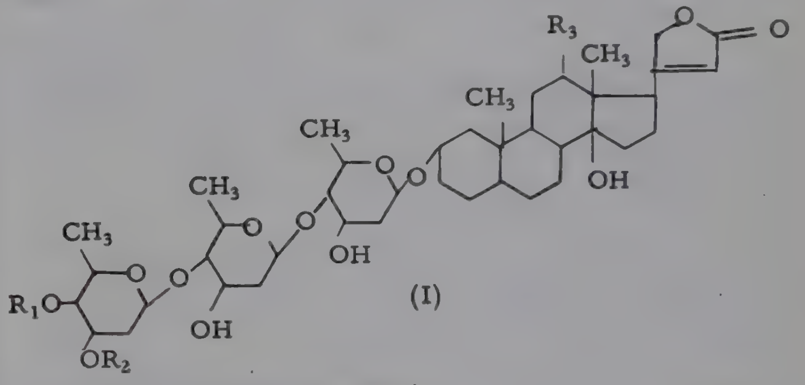
The virus, which is obtd. from the respiratory tract of an animal, is intrinsically apathogenic and can undergo > 100 culture operations without attenuation. 11.5.73. as 323847 (4pp922)

BOEF D16 22633W/14 =DS 2343-400
12 beta-Hydroxylation of Digitalis glycosides - by incubating with Digitalis lanata callus cultures
BOEHRINGER MANNHEIM GMBH 29.08.73-DT-343400
*B01 (15.03.79) *DT2343-400 C07j-19*

A-series digitalis glycosides (I, R_3=H) are 12β-hydroxylated by incubating submerse Kallus cultures of digitalis lanata with A-glycosides and recovering the C-series (I, R_3=OH) in known manner.

In (I), R_1 may be H, CH_3, acetyl or glucose and R_2 may be H, CH_3 or acetyl.

The process is esp. applicable in the prodn. of β-methyl-digoxin (I, R_1=CH_3, R_2= H) from β-methyl-digitoxin.



(I)

29.8.73. as 343400 (5pp922)

BECI D16 12820Y/08 =DS 2646-244
Fluorometric isoenzyme analysis - using a precipitant to localise fluorescent product
BECKMAN INSTRUMENTS INC 22.06.76-US-698554 (14.10.75-US-622132)
*B04 R16 (15.03.79) *BE-847-201 G01n-33/16*

Process for the determn. of isoenzyme concns. comprises dispersion of enzyme systems on an inert carrier and sepn. of the isoenzyme content; the isoenzyme is then treated with a corresp. substrate in a stabilising medium to produce a fluorescent prod., the concn. of which is then determined in a fluorimeter.

Pref. the enzyme is localised on an inert carrier, esp. paper. The substrate is stabilised with 1-6C alkanols (90-100 wt.)% urea, (0-10 wt/vol.%)% 3-8C ketones; inorganic salt solns. (0.01-10 wt.%), esp. Pb, Ca, Sr, or Ba chloride, nitrate or perchlorate or their mixts. in water or an inert polar organic solvent, opt. with PPG or PEG; and water is removed by evapn. before taking fluorimetric measurements.

The process is applicable to creatininephosphokinase, lactatedehydrogenase, glucose-6-phosphate, dehydrogenase, hexokinase, malatedehydrogenase, isocitratedehydrogenase, aldolase and alcoholdehydrogenase. 13.10.76. as 646244 (4pp047)

EAST D16 32799Y/19 =DS 2650-753
Cholesterol oxidase prodn. in surfactant-contg. medium - causing enzyme to be produced outside the cell
EASTMAN KODAK CO 07.11.75-US-629955
*A97 B04 R16 (15.03.79) *BE-848-070 C12d-13/10*

Prepn. of cholesteroloxidase comprises propagation of microorganisms which produce this enzyme in a nutrient medium contg. a nonionic surfactant ($\geqslant 0.5$ g/dm^3), followed by sepn. of the extracellular enzyme from the medium. Pref. surfactants are poly(ethylene oxide) or poly(glycidyl)adducts with $\geqslant 10$ C fatty acids (esp. with about 20 epoxide units and $\geqslant 16$C fatty acids, and/or poly(ethylene oxide)/sorbitan condensates with palmitic, stearic/or oleic acid or nonylphenol.

Pref. microorganisms are Nocardia cholesterolicum

NRRL 5767 and/or NRRL 5768. Pref. precursors are cholesterol or its derivs. and/or other steroid-3β-ols. 5.11.76. as 650753 (15pp047)

ABBO D16 10637A/06 =DS 2729-636

Alpha-amylase enzymatic determination - in e.g. serum or urine using modified starch substrate and phosphorylase, phosphoglucomutase and glucose-(6)-phosphate dehydrogenase

ABBOTT LABORATORIES 01.07.76-US-701778

*B04 R16 +P31 (15.03.79) *DT2729-636 G01n-31/14*

a-Amylase is determined by reacting a sample with a modified starch substrate contg. masked, non-reducing ends, reacting the unmasked starch with phosphorylase in the presence of PO_4^{---} to form glucose-1-phosphate, converting the latter to glucose-6-phosphate with phosphoglucomutase, reacting the glucose-6-phosphate with glucose-6-phosphate dehydrogenase in the presence of NAD or NADP to 6-phosphogluconate and NADH or NADP to 6-phosphogluconate and NADH or NADPH and measuring the NADH or NADPH. The sample may be a biological fluid, esp. serum or urine.

The method is sensitive , rapid, rel. insensitive to the presence of glucose, and has fewer stages besides being contg. operable. 30.6.77. as 729636 (4pp922)

AIDA/ ★ D16 22325B/12 ★DT 2838-252

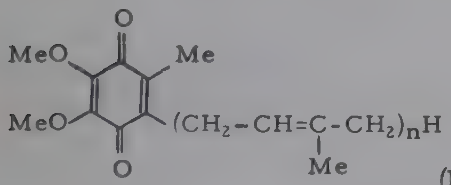
Fermentative prodn. of coenzyme/Q - using Pseudomonas microorganisms in a medium contg. e.g. iso:pentenyl alcohol or geraniol (NL 7.3.79)

AIDA K 08.04.78-JA-040812 (05.09.77-JA-105939)

B05 (15.03.79) C12d-05 C12d-13/10

Prodn. of coenzyme Q (I) is carried out by culturing a (I)-forming Pseudomonas strain in a medium contg. ⩾1 of isopentenyl alcohol, dimethylallyl alcohol, geraniol, the acetates of these alcohols, and β-methyl-crotonic acid.

The prod. is a cpd. of formula (I):



(I)

The particular prod. depends on the microorganism, e.g., P. diminuta ATCC 11568 and P. denitrificans ATCC 13867 give coenzyme Q_{10} (I; n = 10).

(I), esp. the human coenzyme Q_{10}, are useful as medicaments. The additives increase the yield of (I), e.g. by 30-40% per g. of dry cells. 1.9.78 as 838252. (20pp367)

FARB ★ D16 22393B/12 ★EP ---1-099

Continuous sucrose conversion to iso:maltulose - during continuous fermentation of iso:maltulose forming microorganisms with addn. of sucrose-contg. solns.

BAYER AG 14.02.78-DT-806216 (13.09.77-DT-741197)

C03 E13 (D13 D17) (21.03.79) A23k-01 C07h-03/04 C12d-13/02

D/S: BE, CH, DT, FR, GB, NL, SW.

Sucrose-contg. solns. are added continuously to a medium in which isomaltulose-forming microorganisms (I) are cultivated continuously. Cultivation is continued in a standard manner. After sucrose conversion, the soln. is separated from the microorganism mass, purified by a standard method and/or crystallised.

Isomaltulose is an intermediate for the prepn. of glucopyranosido-1,6-mannitol and glucopyranosido-1,6-sorbitol. Both cpds. may be used as sugar substitutes. The bacterial mass separated may be used as cattle fodder.

The cultivation of the microorganisms and sucrose conversion to isomaltulose take place simultaneously. The bacteria grow quickly on reaching the steady state. 90-100% conversion to isomaltulose is achieved. Sucrose-contg. plant juices, cheaper than pure sucrose-contg. solns., may be used. Bacterial growth and conversion can be controlled by only one critical parameter, e.g. CO_2 content in waste air, O_2 partial pressure in culture soln. and/or conversion rate. Fructose and glucose are formed during conversion to isomaltulose, obviating the need for adding carbohydrate sources.

1.9.78 as 10080 (12pp200).

ISR: 2 Journal References.

HOFF ★ D16 22394B/12 ★EP ---1-

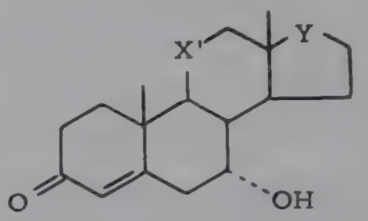
7 Alpha-hydroxy-steroid cpds. prepn. - by fermenting unsubstituted pregnene or androstene steroid with a mu microorganism

HOFFMANN-LA ROCHE AG 02.09.77-CH-010733

B01 (21.03.79) C07j-01 C07j-05

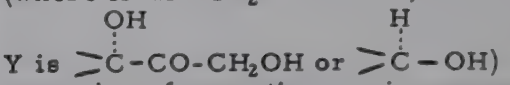
D/S: BE, CH, DT, FR, GB, NL.

The prepn. of 7a-hydroxy steroids of formula (I):



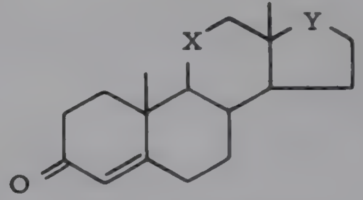
(I)

(where X' is $-CH_2-$ or -CO-;



Y is $\gtrdot\overset{OH}{\overset{\vdots}{C}}-CO-CH_2OH$ or $\gtrdot\overset{H}{\overset{\vdots}{C}}-OH$)

comprises fermenting a microorganism of the genus Mucor with a steroid of formula (II):



(II)

(where X is $-CH_2-$, -CH (OH)- or -CO-).

(I) are intermediates for hormones, chenodeoxycholic acid and other pharmaceuticals.

4.9.78 as 100814 (14pp1401).

ISR: US2960513; US2962512; 2 Journal References.

CNRS ★ D16 22454B/12 ★FR 2394-

3-Alpha and beta hydroxy-steroid dehydrogenase purification - extn. from Pseudomonas testosteroni or Escherichia coli a chromatography on cellulose deriv. then estrone-amino-caproa agarose

INST NAT SANTE RECH MED 09.02.77-FR-003583

A97 B04 R16 (16.02.79) C07g-07/02 C07j-09 G01n-31/08 G0 33/16

Process comprises (a) by extraction of the cells with a buffer having pH about 7; (b) separating the supernatant liquid and saturating it with ammonium sulphate (c) separating the precipitated solid and redissolving it in the buffer (d) dialysing the solution (e) chromatographing the dialysed solution on a column of cellulose deriv. in equilibrium with the dialysis buffer (e) submitting the product to adsorption chromatography on an estrone-amino-caproate-agarose adsorbant (f) eluting and separ ing the two enzymes with 0.5-1.5M, neutral saline solutions (pref. ammonium sulphate) capable of increas the hydrophobic interactions and (g) opt. purifying the separated enzymes by molecular filtration.

Used in determination of steroids partic. micro-dete mination of total bile acids (primary and secondary) in serum and bile and determination of haptens. 3-αHSD may be usedin the synthesis of chenodeoxycholic acid used in the treatment of biliary lithiasis. Process give enzymes with a purity of almost 100%, by a simple, economic process and with good yields. 9.2.77 as 003583 (17pp395)

GLIA/ ★ D16 22458B/12 ★FR 2394-

Wine compsn. drinkable by diabetics - contains limits on sugar a alcohol content and complete absence of sulphuric acid and ether

TAGLIAGAMBE M 28.10.76-FR-032681

(16.02.79) C12g-01

A wine which may be drunk by diabetics is produced fro non-hybrid grapes, contains a minimal amt. of residual sugar (⩽ 1-2g), has ⩽ 10.5-11% alcohol and a total of H_2SO_4 and diethyl ether pyrocarbonate (sic).

The wine acts as an excellent stimulant for the nervous system; aiding intellectual activity and sharpening reflexes 28.10.76 as 032681 (5pp922)

INRG ★ D16 22459B/12 ★FR 2394-606
Protection and preservation of microorganisms with clay - by mixing aq. suspensions of clay and microorganism, gives prod. used for agricultural purposes
INST NAT RECH AGRON (ANVR) 29.10.76-FR-032722
C03 (16.02.79) A01n-15 C12k-01/08

Biologically active microorganisms are preserved and pro--tected by mixing an aq. prepn. contg. the microorganisms with an aq. suspension of clay. The aq. prepn. of micro-organisms is obtd. from a culture medium by washing several times with water, centrifuging or filtering and then resuspending in water. The suspension is then mixed with the aq. suspension of clay and excess water is removed to give a compsn. in which the microorganism is coated by the clay.

The microorganisms may be symbiotic agents, hypo-virulent strains or entomopathogenic agents, chosen from viruses, fungi, bacteria protozoa etc. 29.10.76 as 032722 (17pp395)

SUMO D16 21861A/12 =GB 1542-551
Prepn. of L-lysine from DL-lysine alkyl ester - using a non-specific protease produced by Streptomyces to separate the optical isomers (NL 10.3.78)
SUMITOMO CHEMICAL KK 08.09.76-JA-108277
*B05 E16 (21.03.79) *DT2740-348 C07b-19/02 C07c-101/24 +C07g-07/02*

Prodn. of L-lysine (I) from DL-lysine alkyl esters (II)
comprises contacting, under weakly acidic conditions, an
aq. soln. of (II) with a non-specific protease with ability
to resolve (II) and recovering (I). The non-specific pro-
tease is produced by bacteria belonging to the genus Stept-
omyces, pref. St. griseus, St. fradial, St. erythreus, St.
rimosus or St. flavovirens.

Pref. reaction is terminated when 60-90% of (II) is con-
sumed Pref. pH is 5.7 and temp. is ⩽60 (esp. 20-45)°C.
Pref. amt. of (II) in soln. is 100-500 mg/ml and alkyl is
1-2C alkyl. Pref. the protease is immobilised on a solid
carrier. 31.8.77 as 036405 (7pp918)

GEMI- D16 32390A/18 =GB 1542-600
Bacterial oxidation of ferrous sulphate soln. - to form ore leaching medium, is carried out by passage through honeycomb structure lined with bacteria film
GEN MINING & FINANC 14.02.77-ZA-000860 (18.10.76-ZA-006191)
*E31 M25 (21.03.79) *DT2742-199 C01g-49*

A ferrous salt soln. is oxidised by passing it, at acid pH,
through a vessel contg. a bacterial supporting structure
comprising ⩾1 plate having relief formations projecting
outwardly from one or both sides as corrugations defining
a honeycomb-like structure.

Structure contains tortuous passages through which the
ferrous soln. may pass surfaces of passage has a bacter-
ial oxidation agent present as a film, of size to permit
movement of soln. Bacterial oxidising agent is capable of
oxidising ferrous ions to ferric ions causing oxygen to be
bubbled upwardly through passages.

Esp. used for oxidation of ferrous sulphate soln. used
in mining industry or in steel plant pickling liquors.
4.8.77 as 032778 (7pp931)

MOEB/ D16 49085A/27 =GB 1542-750
Growing yeast on lactose-contg. dairy residues - using ammonia as inorganic additive, with fermentation of lactose to lactic acid and dextrin hydrolysis with amylase to give growth medium
MOEBUS O 24.11.77-DT-752485 (15.12.76-DT-656663)
*E35 (21.03.79) *NL7713-846 A23k-01 C12c-11/18 +C12b-01*

A yeast culture is produced from a culture medium contg.
a starch-contg. material and a soln. contg. lactose by
treating medium with amylase to convert starch to dextrin,
and treating medium simultantously or subsequently with
lactic acid bacteria in the presence of ammonia to convert
lactose to lactic acid, then with amylase to effect hydrol-
ysis of dextrin, then culturing yeast in the medium further

Pref. amylase is thermostable bacterial alpha-amylase. Lactic acid bacteria is yogurt bacteria of species Lactobacillus bulgaricus and/or Streptococcus thermophilus.

Esp. useful in recovering useful prods. from whey by a relatively simple and inexpensive process. 13.12.77 as 051854 (5pp931)

ARAI/ ★ D16 22518B/12 ★GB 2003-853
Antibacterial and antitumour saframycin(s) A, B, C, D and E - obtd. by fermentation of streptomyces Lavendulae NRRL 11002
ARAI T 12.09.77-JA-109692
B04 (21.03.79) C12d-09/16

Saframycins A, B, C, D and E and their acid-addn. salts are new. Their empirical formulae are respectively $C_{29}H_{30}N_4O_8$. 2/5 H_2O; $C_{28}H_{31}N_3O_8$; $C_{29}H_{33}N_3O_9$. $C_{28}H_{31}N_3O_9$; and $C_{28}H_{33}N_3O_9$.H_2O. Their respective m.pts. are 122-6°C; 108-9°C; 143-6°C; 150-4°C and 146-8°C. They have characteristics u.v., i.r. and n.m.r. spectra.

The cpds. are antibacterials and antitumour agents, with relatively low toxicities. 12.9.78 as 036509 (16pp)

USAS ★ D16 22592B/12 ★J5 3139-785
Detecting bacteria in blood for diagnostic purposes - by comparing with blank sample, by culturing, releasing ATP, and reacting with Luciferase Luciferin
NAT AERO & SPACE ADMIN 19.01.77-US-760795
B04 +R16 (06.12.78) C12k-01/04 G01n-31/14

Process for detecting bacteria in blood soln. is claimed where a sample of blood soln. contg. the bacteria is diluted with a culturing meat juice, and a blank sample of blood soln. free from the bacteria is prepd. and cultured in the meat juice.

The two samples are treated in a centrifuge to separate
cellular components. Non-bacterial cells in both supernat-
ant solns. are then treated with 'Lysis treatment'. Thus,
the non-bacterial ATP in the sample and the blank sample
are broken out and further the combined ATP are also lib-
erated and broken out.

The sample and the blank sample are reacted with Lucif-erase-Luciferin and a luminescent output of the sample is compared with that of the blank and the existence of the bacteria is detected. 19.1.78 as 003767 (11pp15)

KURS ★ D16 23019B/12 ★J5 4020-093
Water absorbing high molecular material mfr. - by reacting PVA with cyclic acid anhydride under anhydrous conditions
KURARAY KK 15.07.77-JA-085353
A14 B07 C03 (B04) (15.02.79) C08f-08/14

Process comprises reacting PVA polymer with cyclic acid
anhydride under anhydrous conditions opt. in the presence
of ⩾1 cpd. selected from hydroxides of monovalent meta
atoms, alkoxides, various salts and tert. amines, of whic
amt. is less than equivalent amt. to cyclic acid anhydride.

Hydroxyl group of PVA polymer is esterified and cross
linking bond is introduced partly in it. The obtd. powdery
carboxyl-modified PVA polymer can absorb 10-1000 times
its weight of water and can be applied widely in medicinal
field, food industry and agricultural chemical field, e.g.
as a culture medium for plants and microbes, as material
for contact lens, membranes, etc. 15.7.77 as 085353
(4pp5)

IKED/ ★ D16 23028B/12 ★J5 4020-12
Eye lotion contg. caropeptide(s) from Zalophus family of animals accelerates the metabolism and cures asthenopia, keratitis conjunctivitis sicca, etc.
IKEDA S 11.07.77-JA-081984
B04 (15.02.79) A61k-35/34 A61k-37/02

The caropeptides have peripheral vasodilatory action that
accelerates inflow of blood into acro-tissue, improves th
metabolism, etc.

The eye lotion also has analgesic and antiphlogistic ac
ion, removes congestion from the eyes, rests the eyes a
promotes hematogeneous flow into peripheral blood vesse
It may be used for remedy for various diseases that rela
to hematogeneous flow, such as cataracts, etc. 11.7.77
as 081984 (2pp69)

LIOY ★ D16 23051B/12 ★ J5 4020-189

Culturing bacteria showing surfactant decomposing activity - using surfactant having 5-80 carbon oleophilic part as inducer

LION FAT & OIL KK 18.07.77-JA-085107

E12 (D15) (15.02.79) C12b-01/20 C12d-13/10 C12k 01 C12k-03

The method comprises culturing the bacteria showing the surfactant-decomposing activity in a culture medium contg. surfactant having 5-8C oleophilic part as the inducer and sugar and producing large amt. of the bacterial body showing high surfactant-decomposing activity in the culture medium.

Bacteria can be cultured in medium contg. the inducer with high concn. and the bacterial body showing high surfactant-decomposing activity can be obtd. with high yield. 18. 7. 77 as 085107 (4pp5)

SEKI ★ D16 23052B/12 ★ J5 4020-190

Microorganism fungi body prodn. - by culturing bacteria of Pseudomonas aichiensis in medium contg. methanol as main carbon source

SEKISUI CHEMI IND KK 11.07.77-JA-083152

B04 C03 (D13) (15.02.79) A23k-01 A23l-01/34 C12k-03

Method comprises culturing bacteria of Pseudomonas aichiensis in a culture medium that contains methanol as main carbon source and taking out fungi body from cultured mixt. Pref. P. aichiensis DS-26 is used.

Microorganism fungi body of Pseudomonas aichiensis may be obtd. by mass prodn. in high yield using methanol from the chemical industry. Resultant fungi body is rich in protein and may be used as a feedstuff, material for pharmaceuticals or material for industry. 11. 7. 77 as 083152 (5pp69)

TANA ★ D16 23053B/12 ★ J5 4020-191

Purifying urokinase by gel filtration - using polyacrylamide gel and agarose gel beads

TANABE PHARMACEUTICAL KK 12.07.77-JA-083679

A97 B04 (A14) (15.02.79) C07g-07/02

Process comprises subjecting human urine or crude urokinase origined from it to gel-filtration by means of gel beads comprising polyacrylamide gel and agarose gel.

High purity urokinase may be obtd. advantageously on industrial scale by removing pyrogenic substance. Urokinase activates plasminogen contained blood serum to yield plasmin having fibrin-dissolving power and urokinase is useful as activator on fibre-soluble system and used as remedy for peripheral arterial thrombus or myocardial infarction, as reinforcing drug on anticancer drug. 12. 7. 77 as 083679 (3pp69)

AMAN ★ D16 23054B/12 ★ J5 4020-192

Fixed enzyme prepn. with little enzyme migration - by including enzyme in carrier obtd. by reacting glycidyl:methacrylate monomer and acrylamide monomer with crosslinking agent

AMANO PHARM KK 11.07.77-JA-081980

A96 B04 (A14) (15.02.79) C07g-07/02

The method comprises including enzyme in the carrier obtd. by reacting the monomer mixt. of glycidylmethacrylate monomer and acrylamide monomer with a crosslinking agent.

Pref, the monomer mixt. is added as 15-30%, esp. 15-20% in the enzymic soln. and glycidyl-methacrylate is used at 1-15% esp. 5.0-12.5%. The crosslinking agent is then added at 0-3% on the monomer mixt. and after adding a polymerisation sensitiser and polymerisation initiator the polymerisation is carried out with stirring and with blowing nitrogen gas in the reaction mixt. As crosslinking agent, methylenebisacrylamide is pref. used favourably and as polymerisation initiator, potassium persulphate, potassium permanganate, etc. are pref. used.

By using a mixt. of glycidylmethacrylate and acrylamide as the monomer the polymerisation time can be shortened and the fixed enzyme obtd. suffers little from enzyme leakage. The fixed enzyme can be used for continuous enzymic reaction for a long time whilst maintaining high enzymic activity. 11. 7. 77 as 081980 (4pp5)

BEEC ★ D16 B/12 ★ J5 4020-194

Production of antibiotics - used for obtaining MM4550, MM1390, and MM17880

BEECHAM GROUP LTD 14.07.77-GB-029569

B04 (15.02.79)

13. 7. 78 as 086671

AJIN ★ D16 23055B/12 ★ J5 4020-19

Guanosine-5'-phosphoric acid prodn. - by culturing suitable variety of Bacillus microorganism, prod. useful as seasoning

AJINOMOTO KK 14.07.77-JA-084393

B02 E11 (D13) (15.02.79) C12d-13

Method comprises culturing a variety of Bacillus which shows the requisition for adenine, the resistance for deco nin or methioninesulphoxide and the producibility for guanosine-5'-monophosphoric acid (GMP) and collecting the GMP accumulated in the culture medium.

Typical varieties of Bacillus are B. subtilis AJ11160 (FERM-P 4122), B. subtilis AJ11161 (FERM-P 4123), etc. and they are induced from B. subtilis IAM 1523 through B stubilis AJ11159 (FERM-P 4121) by treating it with N-methyl-N-nitro-Nlnitroso-guanidine etc. Culture is at 28-37°C at pH 4-7.5 for 1-4 days aerobically in a culture medium contg. a carbon source, nitrogen source, inorgan ic ions, micronutrients and adenine.

After the culture, bacterial body is removed by centrif ging and the filtrate is adjusted to pH 1.5 with hydrochlori acid. Then, the soln. is treated with H-form cation exchange resin to adsorb the GMP. 14. 7. 77 as 084393 (3pp5)

MEIJ ★ D16 23056B/12 ★ J5 4020-19

Fermentative prodn. of antibiotic-(SF-837M-1) - by culturing suitable Streptomyces strain under aerobic conditions

MEIJI KK 14.07.77-JA-083616

B04 (15.02.79) A61k-35/66 C07g-11 C12d-09/14

Process comprises culturing fungi strain of Streptomyces genus under aerobic conditions to accumulate SF-837M_1 su -bstance in culture liquor and taking out resultant prod. Suitable fungi strain of Streptomyces is Streptomyces mic rofacients nov. sp. (FERM P-No. 262).

SF-837M_1 substance is 4'-deacyl derivative of SF-837A substance, antibiotics (Pat. pobl. 28834/71 and 3158/72) and SF-837M_1 substance may be obtd. in high yield by trea ting SF-837A_1 substance with fungi body enzyme, e. g. mo or Mucor genus yeast of Cryptococcus genus (Pat. publ. 29148/73).

SF-837M_1 substance has activity against Gram-positive bacteria (Table 1) and usefulness as antibiotics. 14. 7. 77 as 083616 (4pp69)

TOKA- ★ D16 23095B/12 ★ J5 4020-85

Compost mfr. - from pulp and paper wastes and wood chip dus based composts by treatment with oxygen

TOKAI PULP KK 18.07.77-JA-086196

C04 F09 (16.02.79) C05f-07 C05f-09/04 C05f-11

Compost prepd. from sludge exhausted from a kraft pulp mfg. factory and paper mfg. factory, is mixed with 10-50 wt. % of compost prepared from the wood chip dust generated in the pulp processing step; and then the mixture is piled for 1-2 months, while supplying oxygen and physical impact is applied to the mixt. 1-3 times to improve its breathability and the supply of oxygen. 18. 7. 77 as 08619 (2pp108)

TOKA- ★ D16 23096B/12 ★ J5 4020-86

Compost prodn. from sludge from kraft pulp or paper mfr. - by dehydrating, adding fermentation nutrient and maturing

TOKAI PULP KK 18.07.77-JA-086198

C04 F09 (16.02.79) C05f-07 C05f-09/04

Method comprises dehydrating the sludge to a solid concn. of 20-30 wt. %; adding nutritive source necessary for the fermentation of bacteria; and piling the mixt. for > 4 months while supplying air and intermittently applying physical impact.

Matured compost can be obtd. in a short piling period. Lignine and cellulose contained in the sludge are decompo sed. Caking of the compost is prevented by drying the obtd. matured compost, followed by pulverising. The nutritive source is pref. a superphosphate of lime and ure The amt.. of superphosphate of lime added is 1.0-2.0

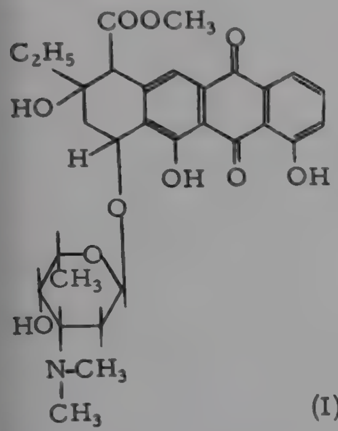
per 100 pts. of the sludge solid content. The amt. of urea added is 1.0-1.5 pt. per 100 pts. of the sludge solid content. 18.7.77 as 086198 (2pp108)

ZAID D16 62170Y/35 = J7 9003-871

Antibiotic anthracycline glycoside - prepd. e.g. by hydrolysis or methanolysis of aclacinomycin A, has antitomour activity

MICROBIAL CHEM RES 14.01.76-JA-003396
*B03 C02 (27.02.79) *J52087-158 A61k-31/71 +C07h-15/24 C12d-09/18*

Anthracycline glycoside of formula (I) and its acid addn. salts are new.



(I)

Cpd. (I) is prepd. by hydrolysis with inorganic acid or methanolysis of aclacinomycin A and/or B, e.g. with HCl, H_2SO_4 or HNO_3 or 0.01-10% concn. at 15-60°C for 15 mins. - 3 hrs., in ca. 30% yield; or by isolation from a culture of Streptomyces galilaeus MA144-M1 strain (Bikoken No. 2455, ATCC 31133) which mainly produces aclacinomycin A and B.

D-oxypyrromycin exhibits antibacterial activity against Gram-positive bacteria and Candida, and is effective against tuberculosis, diphtheria, pneumonia, staphylomycosis, streptomycosis, tetanus and candida; and exhibits an anti-tumour activity to P388 ascites and L1210 leukaemia in mice with LD_{50} 181 mg./-kg. in vein. 14.1.76 as 003396. C07h 15/24; A61k 31/71; C12d 9/18 (27.2.79) MICROBIAL CHEM. RES. (5pp) (J52087158)

AGEN D16 78218V/45 = J7 9003-946

Lipase prodn by culturing a pseudomonas microorganism - maintained at pH 3.5-6.0 and opt treated at 50-90 deg C

AGENCY OF IND SCI TECH 09.11.72-JA-112499
*(28.02.79) *J49069-886 +C07g-07/02 C12d-13/10 C12k-01*

In an example, P. mephitica var. lipolytica (FERM-P520) was aerobically cultured in a medium contg. defatted soya-bean powder 3, K_2HPO_4 0.4, $MgSO_4$ 0.03, and $(NH_4)_2SO_4$ 0.3% added with 0.05M oleic acid. Cells harvested after 12 hrs. cultivation were suspended in a buffer soln. with anionic strength of 0.2 and of various pH and the suspension was maintained at 45° for 24 hrs. Lipase activity was fixed at >90% in the cells treated at pH 3.5-6.0. A cell suspension (1.5g. dry cells) in 0.1M acetate buffer (pH 5.0) contg. tributyrin (I) 1.51 g. and 5ml. of 1 M $CaCl_2$ was reacted with stirring at 50°C for 22 hrs. under reflux with cooling. The cells were used repeatedly. Decompsn. of (I) at each reaction was -70%. By seven repetitions, residual activity was 47% of the initial value. 9.11.72 as 112499. C12d 13/10; C07g 7/02; C12k 1/00 (28.2.79) AGENCY IND. SCIENCES & TE (4pp) (J49069886)

SAKB D16 32943R/19 = J7 9003-947

Protease production from bacillus species o-20

OTSUKA KAGAKU YAKUHIN (OTS -) 30.10.68-JA-079413
*(28.02.79) *NL6916-325 C12d-13/10 +C07g-07/02*

Process comprises cultivating Bacillus sp-O-20 (FERM-P 270) in a culture medium to accumulate the protease in the culture medium and then recovering the protease from the medium.

The culture medium contains glucose, etc. as sugar component, soybean oil cake, corn steep liquor, etc. as N source, potassium hydrogen phosphate, potassium chloride as a salt component, etc. The cultivation is conducted at pH 6.8-7.0 at 32-35°C for 1-3 days under shaking or aerobic condition. The resulting mixt. is subjected to pptn., salting out, dialysis, concn., ion exchange resin treatment, etc. to give pure protease. The protease is inhibited by EDTA and stable against Ca ion. It has activity against casein, fibrin, gelatin, albumin, etc.

In an example, 1.4 g. of Na_2HPO_4, 1.0 g. of KH_2PO_4, 20 g. of NaCl, 0.1 g. of $MgSO_4$, 6.0 g. of Na glutamate and 10 g. of glucose were dissolved in 1000 ml. of water, and adjusted to pH 7.0. In the resulting medium, Bacillus sp-O-20 is cultivated at 30°C for 3 days with shaking. The resulting mixt. was subjected to centrifugation to give supernatant. 30.10.68 as 079413. C07c 7/02; C12d 13/10 (28.2.79) OTSUKA KAGAKU YAKUHIN (8pp22)

ORIY ★ D16 23346B/12 ★ J7 9003-948

Fermentative uricase prepn. - by cultivation of microorganisms in nitrogen deficient medium

ORIENTAL YEAST KK 02.06.70-JA-046893
B04 (28.02.79) C07g-07/02

Microorganism which can produce uricase is cultivated in a culture medium, and the resulting cell bodies are collected and suspended in a nitrogen-deficient medium contg. sugar and inorganic salt (except for those contg. N) and cultivation is conducted at 30°C for 60-120 mins. under aerobic conditions, and then to the resultant is added uric acid. In this way, uricase can be obtd. in high yield.

Microorganism useful in this method include Candida utilis, Brevibacterium herboram, etc. 2.6.70 as 046893. C07g 7/028 (28.2.79) ORIENTAL YEAST KK (5pp22)

AJIN D16 08965R/06 = J7 9003-949

D-arabitol prodn

AJINOMOTO KK (EIDA) 25.05.68-JA-035311
*E17 (28.02.79) *DT1926-178 +C12d-13*

Pichia ohmer which can produce D-arabinitol (I) is incubated on a medium contg. ⩽10 g./dl. of fermenting sugar as the main carbon source, and cultivation is conducted under aerobic conditions to prod. (I) without prodn. of other polyhydric alcohols in the culture medium. (I) can be obtd. in high yield. A typical strain is Pichia ohmeri No. 230 (FERM No. 158).

In an example, Pichia ohmeri No. 230 of 4 ml. is incubated on a medium contg. 10% glucose, 0.4% yeast extract, 0.3% KH_2PO_4, 0.1% $MgSO_4 \cdot 7H_2O$ (pH 6.6), and cultivation is conducted at 30°C for 4 days with shaking. This procedure gives 4.3 g./dl. of D-arabinitol in the culture medium, and there is observed no other sugar nor polyhydric alcohol in the medium. Yield to the sugar is 43%. 25.5.68 as 035311. C12d 13/00 (28.2.79) AJINOMOTO KK (3pp22)

ASAE ★ D16 23347B/12 ★ J7 9003-950

Pure sebacic acid prodn. in high yield - by cultivating the microorganism Candida tropicalis

ASAHI ELECTROCHEM IND KK 06.11.70-JA-097137
E17 (28.02.79) C12d-01/02

Yeast selected from Candida tropicalis B-70-2 (FERM No. 1770), Candida tropicalis IAM 4924 (FERM No. 1771), Candida tropicalis IFO 0006 (FERM No. 1772), Candida tropicalis M-271 (FERM No. 1773) or Candida tropicalis Y-112-2 (FERM No. 1774) is cultivated under aerobic conditions in a medium contg. n-decane, and the sebacic acid is recovered from the culture medium. The culture medium also contains a nitrogen source such as urea, ammonium nitrate, ammonium sulphate, etc., inorganic salt such as phosphorus, sodium, potassium, magnesium, iron salts, and other additives such as yeast extract, corn steep liquor, meat extract, etc.

The amt. of n-decane contained in the culture medium is 1-10 (v/v)%; and the cultivation temp. is 15-45, pref. 20-40°C. The cultured prod. is subjected to filtration; the filtrate is acidified with sulphuric acid and extracted with organic solvent such as chloroform, ether, etc.; and the solvent is removed by distillation to give crystals of sebacic acid. 6.11.70 as 097137. C12d 1/02 (28.2.79) ASAHI ELECTROCHEM. IND. KK (5pp22)

TREK D16 71796V/41 = J7 9003-951

L-lysine microbial prodn. - from L-alpha-amino-epsilon-caprolactam and its hydrolase in presence of manganese salts

TORE KK (TORN) 17.10.72-JA-103237
*B05 E16 (28.02.79) *J49062-691 +C12d-13/06*

L-Lysine (I) was produced from L-α-amino-ε-caprolactam (II) catalysed by a II-hydrolase in presence of Mn^{2+}. Addn. of Mn^{2+} increased activity and stability of the enzyme.

In an example, acetone dried cells of Cryptococcus laurentii (FERM-P 709), cultured in a medium (pH 6.5) contg. glucose 1, L-(II) HCl 0.2, K_2HPO_4 0.2, $MgSO_4 \cdot 7H_2$-

O 0.05, and yeast extract 0.05% was added at 22.5 mg to 40 ml. soln. (pH 9.0) contg. DL-(II) 5.63 g. and MnCl$_2$ 2.5×10^{-3} M. The mixt. was reacted with shaking at 40° for 22.3 hrs. The reaction mixt. was boiled and centrifuged. The supernatant liq. was treated with active C, concd. to dryness at pH 4.5. Residual (II) was removed by extn. with MeOH. (I) remaining insoluble was washed with EtOH to give 4.1 g. of the final prod. 17.10.72 as 103237. C12d 13/06 (28.2.79) TORE CO., LTD. (5pp) (J49062691)

MITU D16 31430W/19 =J7 9003-952
L-Beta-henylserine prepn. - from glycine and benzaldehyde in presence of threonine aldolase
MITSUBISHI CHEM IND KK 22.03.73-JA-032830
_B05 E14 (28.02.79) *J49117-684 +C12d-13/06_

L-β-Phenylserine (I) is produced from glycine (II) and benzaldehyde (III) in the presence of a threonine aldolase. In an example, Streptomyces griseus (IFO 3430) was cultured on a medium (pH 7.0) contg. 0.2% L-threonine, 0.5% glucose, 0.2% peptone, 0.2% meat extract and 0.2% NaCl at 30°C for 24 hrs. The washed cells were added to 1000 cm^3 0.05M phosphate buffer (pH 8.5) contg. 50 mmole (II), (III) 50 mmole and 0.1% cetyltrimethylammonium Br, and incubated at 30°C for 24 hrs., to produce 0.7 g. (I).

The reacted soln. was added to 6% CCl$_3$COOH and centrifuged (I) was adsorbed onto 'Diaion SK1B' (H$^+$) at pH 7.0, eluted with 1.0N HCl, and crystallised from aq. ethanol, to yield 250 mg. (I). 22.3.73 as 032830. C12d 13/06 (28.2.79) MITSUBISHI CHEM. IND. KK (4pp) (J49117684)

WISC D16 73644U/48 =J7 9003-953
Cyclopentane-1,3-diones inters to prostaglandins
WISCONSIN ALU RES FOUND 29.09.72-US-293457
_B05 (28.02.79) *US3773-622 C12d-13_

Optically active 2-substd. 4-hydroxy-cyclopentane-1,3-diones are prepd. by subjecting 2-substd. cyclopentane 1,3,4-triones or 2-substd. 3-alkoxy-2-cyclopentane-1,4-diones to the fermentative enzymatic action of a microorganism of the class Ascomycetes. The microorganism is selected from the orders Endomycetales, Mucorales, Moliliales or Eurotiales and is esp. Dipodascus aggregatus or Dipodascus albidus. 27.9.73 as 108049 (clg. 29.9.72-US-293457) C12d 13/00 (28.2.79) WISCONSIN ALUMNI RESEARCH FOUNDATION (9pp) (J49075786)

KYOW D16 33204V/18 =J7 9003-956
5'-Ribonucleotides by RNA hydrolysis - using phosphodiensterase for plant cells
KYOWA FERMENTATION KK 31.08.71-JA-066274
_B04 (28.02.79) *J48033-093 +C12d-13_

Callus of Vinca rosea was shake cultured at 28°C for 10 days in the presence of 3 mg./l. kinetin and 20 mg./l. indole-acetic acid. After cell disruption the broth was incubated with 10 g./l. RNA and 1 g./l. NaF at 60°C for 2 hrs. to give (g./l.) 2.1 AMP, 2.4 GMP, 1.6 CMP and 1.4 UMP. Other enzyme sources are Phytolacca americana, Duboisia myoporoides, Capsicum annwus, or Ipomoea nil. 31.8.71 as 066274. C12d 13/00 (28.2.79) KYOWA FERMENTATION IND. (4pp) (J48033093)

JAPA ★ D16 23349B/12 ★J7 9003-957
Anticancer rinfomycin prepn. - by culture of microorganism of the genus Streptomyces
JAPAN ANTIBIOTICS RES 22.07.68-JA-051159
_B04 (28.02.79) A61k-39 C12d-09/14 C12d-13/06_

Microorganism belonging to the genus Streptomyces which can produce Rinfomycin is cultivated on a culture medium to produce Rinfomycin and the resulting Rinfomycin is recovered from the culture medium. The typical strain used s S. griseochromogenes var S-66 (FERM No. 3627).

The culture medium contains a carbon source such as sugar, glycerin, glucose, xylose, etc., a nitrogen source such as meat extract, yeast extract, cornsteep liquor, soybean powder, etc., an inorganic salt such as an Fe, Cu or Mn salt. Cultivation is at pH 6-8 at 27-28°C under aerobic conditions for 3-4 days. The Rinfomycin produced is sepd. and purified in conventional manner such as pptn., extn., ion exchange resin treatment, column chromatography, etc. Prod. is effective against e.g. sarcoma, Elemental analysis of the prod. is C 44.98%; H 5.97%; N 11%; mol. wt. is 9000-14,500. 22.7.68 as 051159. C12d 9/14, 13/06; A61k 39/00 (28.2.79) JAPAN ANTIBIOTICS RES. (8pp22)

KAKE ★ D16 23350B/12 ★J7 9003-958
Antibiotic H-60 prepn. from Streptomyces microorganism - by aerobic cultivation in medium contg. carbon and nitrogen sources, inorganic salts etc.
KAKEN CHEM KK 29.12.70-JA-120899
_B04 (28.02.79) A61k-39 C12d-09/14_

Microorganism Streptomyces sp H-60 is cultured in a culture medium to produce the antibiotic H-60, and the antibiotic is recovered from the culture medium. The microorganism Streptomyces sp H-60 is FERM No. 768. The culture medium contains carbon source, nitrogen source, inorganic salt, inorganic components, antifoaming agent, etc. Cultivation is conducted at 25-35°C under aerobic condition for 72-120 hrs. The culture broth is filtered and treated with absorber such as activated carbon, ion exchange resin, etc. Elution is conducted with the use of acid, alkali, etc.

The antibiotic has the following properties: white amorphous powder, decomposed at ⩾180°C, soluble in water, sparingly soluble in methanol, insoluble in acetone, butanol, ethyl acetate, benzene, etc., specific rotation $[\alpha]_D^{25}$ = +43°, mol. wt. of 470, elementary analysis of C 44.30%, H 7.50%, N 12.21%, positive to Ninhydrin reaction, Molisch reaction, negative to Pherling reaction, Tolence reaction and Biuret reaction. The antibiotic appears to be the same as known antibiotic SF-733. 29.12.70 as 120899. C12d 9/14; A61k 39/00 (28.2.79) KAKEN CHEM KK (5pp22)

GOEP= ★ D16 23440B/12 ★SU -508-078
Nutrient medium for dysentery bacteriophage prodn. - contg. hydrolysate or meat, casein, enzymes, meat broth, glucose, sucrose, salts and water
GORKI EPIDEMIOLOGY 28.12.72-SU-867744
_B04 (05.07.78) C12k-01/06_

Nutrient medium for culturing dysenteric bacteriophase comprises (in wt.%): boiled chopped meat acid hydrolysate 12-15; casein-pepsin hydrolysate 12-15; meat broth 11-14; casein-pancreatic hydrolysate 0.25-0.30; glucose 0.075-0.1, sucrose 0.075-0.1; Na$_2$HPO$_4$.12H$_2$O 0.15-0.25; sodium chloride 0.45-0.55; sodium hydroxide to pH 7.7-7.9 and water to 100.

This culture medium gives high yield of dyseuteric bacteriophase. The dry final prod. is used in the prodn. of medicinal compsns. with high bacteriolytic activity and improved storability.

Voronkina I.M., Pankstyanova V.T., Garnova N.A.,
Bul. 31/25.8.78 28.12.72 as 867744 (2pp938)

BIOT= ★ D16 23467B/12 ★SU -604-543
Photo-autotrophic microorganisms culture unit - has porous partition between reactor housing and light source
BIOTECH RES INST 30.06.76-SU-378394
_P13 (25.04.78) A01g-31/02_

Combined culturing and concn. of biomass of microorganisms leading to a higher efficiency of the unit are achieved by using a porous partition. The latter is set coaxially between the reactor housing and the light source and the outer chamber is connected to the filtrate collector, while the inner chamber holds the heat exchanger.

The chlorella microorganisms circulate in the housing and are saturated with air and CO$_2$. Part of the culture medium is filtered through the porous partition for collecting in the tank at a rate set by the valve.

Anisimov O.L., Zadorin N.N., and Timoshkov V.K.,
Bul. 16/30.4.78 30.6.76 as 378394 (3pp89)

BIOS= ★ D16 23590B/12 ★SU -604-869
Microorganisms culture foam breaker - has multistart auger drum rotor with inner channels for suspension flow to improve sepn.
BIOSYNTHESIS PROTIE 20.10.76-SU-413369
_(27.04.78) C12b-01/18_

The sepn. of gas-fluid mixt. is improved if the foam breaker rotor in the form of a multi-start auger and drum featuring perforations for gas exhaust. The inner surface of the foam breaking chamber is provided with helical guides forming fluid flow channels.

The foam entering the chamber runs into the helical channels formed by the guides and impinges the rotor blades which impart a swirl. The gas separated from the biosuspension is drawn out from the chamber and is sucked through the drum by the vacuum of the gas chamber. Kan S. V., Evseev A. V., Pershtein B.M. et al. Bul. 16/ 30.4.78 20.10.76 as 413369 (3pp89)

ANTI= ★ D16 23591B/12 ★SU -604-870

Bacteriolytic microbial enzyme complex prodn. - by culturing specified Actinomyces strain, useful in antigen extn. from haemolytic streptococci

ANTIBIOTIC RES INST (MOME=) 21.04.76-SU-349422

B04 (03.05.78) C12d-13/10

The enzymic complex, producing lysis of habuolytic Streptococci gp. A. strains, is used for the sepn. of streptocacoal antigens for research and specific antiserum prodn. for the treatment of bacterial infections in man.

The enzymes are prepd. by culturing Actinonyces strain microorganisms and sepg. the enzyme complex by known methods. These enzymes do not attack antigens during lysis of bacterial cells.

Petrov G.I., Savelev E.P., Rakhmanova Z.F., Bul. 16/ 30.4.78 21.4.76 as 349422 (3pp938)

AMCE ★ D16 23776B/12 ★US 4144-046

Storage stable compsn. for stimulating latex flow - contg. 2-chloroethyl-phosphonic acid and polysaccharide gum

AMCHEM PROD INC 09.06.75-US-585208 (02.11.70-US-086342)

A11 C01 (D17) (13.03.79) A01n-09/36

Latex flow stimulant compsn. for application to rubber plants comprises an aq. medium contg. 2-chloroethyl phosphonic acid (I) and a polysaccharide gum (II) (obtd. by fermentation of a carbohydrate by Xanthomonas campestris). The compsn. contains 0.5-2.5% (II) and has a viscosity of ⩾1000 c.p.s..

Compsns. have good shelf-life under tropical conditions and can be shipped long distances. They readily blend with large amts. of vegetable oils and fats. 9.6.75 as 585208 (5pp1248).

BEEC D16 90600X/49 =US 4144-126

Culturing animal cells in vitro - by applying a liquified foamed nutrient medium in a film to cells mounted on a solid porous matrix

BEECHAM GROUP LTD 21.05.75-GB-021998

*B04 (13.03.79) *BE-842-002 C12k-07 C12k-09*

In culturing animal cells in a monolyaer supported on a solid porous matrix, the improvement comprises contacting the cells with a film of liq. nutrient medium (I) produced by the breakdown of a foam generated from (I), leaving gas in intersitial spaces.

The matrix may comprise solid granules of plastic, ceramic, glass, inert metal or inert metal oxide, silicate, carbide or phosphate. The method may be used to produce
interferon, (the cells being skin and muscle fibroblasts
treated with an interferon inducing substance e.g.a ds
RNA of viral origin) and viruses such as mareks disease
virus or foot and mouth disease virus. 22.8.77 as 826761
(+ 13.5.76 - US - 686097) (10pp945).

CORP D16 70736Y/40 =US 4144-127

Immobilisation of glucose isomerase - by adsorption on colloidal silica and freezing

CPC INTERNATIONAL INC 02.04.76-JA-036179

*(D17) (13.03.79) *BE-853-143 C07g-07/02 C12d-13/02*

Glucose isomerase is immobilised by adsorbing enzyme
onto colloidal silica by contacting in aq. medium, solid-
ifying enzyme adsorbed silica at -10 to -30°C, then
thawing resulting frozen compsn. to obtain active immob-
ilised isomerase composite. Pref. enzyme adsorbed sil-
ica is gelatinised prior to freezing. Composite is in form
of granules or flakes having particle size of 20-100 mesh
contg. colloidal silica of 10-30 mµ dia.

Glucose isomerase is used in the prodn. of levulose-
bearing syrup (LB syrup) from glucose on industrial
scale. Method has improved flow properties. 23.3.77
as 780374 (5pp931).

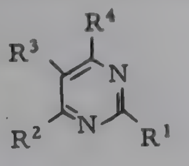
FARB D16 79350Y/45 =US 4144-128

Coupling ligands to polymeric supports - by activating the ligand or support with a halogenated pyrimidine

BAYER AG 03.05.76-DT-619451

*A97 B04 (13.03.79) *BE-854-201 C07g-07/02*

Bonding of a ligand toa carrier is improved by activating one or the other with a pyrimidine deriv. of formula (I) prior to the bonding reaction.



(I)

In (I) R^{1-4} are each H, OH, halogen, alkyl, alkoxy, alkylthio, acylamino, NO_2, CN, carboxamido, alkylsulphonyl, alkoxycarbonyl, phenyl, CF_3 or chloromethyl, provided that ⩾2 of R^{1-4} are halogen.

Process is esp. useful for bonding an enzyme to a polymeric carrier.

29.4.77 as 792297 (14pp910).

BOEF D16 74988U/49 =US 4144-129

Cholesteroloxidase prepn - by extraction of micro-organism cultures with buffer and surfactant

BOEHRINGER MANNHEIM GMBH 15.02.73-DT-307518 (17.05.72-DT-224131)

*B01 R16 (13.03.79) *NL7306-737 C07g-07/02*

Cholesteroloxidase is prepd. by culturing a cholesterol-converting microorganism. The culture is disintegrated by destruction of the cell walls. The disintegrated culture is extracted with a buffer soln. contg. a non-ionic surfactant and the cholesteroloxidase isolated from the extract.

The enzyme is useful in providing a routine method of determining cholesterol. 15.5.73 as 360490 (+ 17.5.72 - DT - 224133) (6pp910).

BIOT- D16 78841Y/44 =US 4144-130

Enzymes sepn. from cells after solubilisation - by partition in multiphase systems contg. polymers

GES BIOTECH FORSCH 31.08.76-DT-639129 (14.04.76-DT-616584

*A97 (13.03.79) *NL7704-046 C07g-07/02*

Enzymes are sepd. from cell fragments or intact cells by solubilisation to yield system contg. enzymes, insol. components and cell liq. fed into an aq. multiphase system.

Multiphase system contains one high mol. wt. cpd. of (un)substd. polyalcohols polyethers polyesters, polyvinylpyrroldones or polysaccharides and ⩾1 inorganic salt; or ⩾2 high mol. wt. cpds. of similar gps. Enzymes are sepd. from high mol. wt. components and isolated.

System avoids problems of viscous suspensions used in centrifugation and fitration techniques in detergent extractions. 14.4.77 as 787312 (14pp931).

WISC ★ D16 23811B/12 ★US 4144-13

Enzyme immobilisation on human tissue or erythrocytes - using coupling agent contg. electrophilic gps.

WISCONSIN ALU RES FOUND 23.05.74-US-472588

B04 (13.03.79) C07g-07/02

An enzyme having nucleophilic gps. selected from
amino, carboxyl and tyrosine gps. is immobilised on
tissue or erythrocytes by reacting it with a cpd. contain-
ing an electrophilic gp. selected from α, β-unsaturated
carbonyls, alkyl halides and thiol and then coupling the
electrophilic gps. of the derivative formed with the nu-
cleophilic gps. of the tissue or erythrocytes having nu-
cleophilic gps. selected from sulphydryl, amino, imid-
azole, carboxylato and tyrosine gps..

The immobilised enzymes have use in the immunotherapy of cancer, hyperlipoproteinemia (lipoprotein) and enzyme deficiency diseases as well as other uses. 23.5.74 as 472588 (10pp476).

LINE/ ★ D16 23812B/12 ★US 4144-1

Single cell protein prodn. - by introducing pre-fermenting yeast in potato waste as growth medium and utilising glucose produced prim. fermentation

LINES K K 11.08.77-US-823673

(D13) (13.03.79) A23j-01/16

A single-cell protein is prepd. as follows: (a) a growth medium is provided which is an aq. suspension of a sem solid, gel-like mass of particulate potato material and peels removed by a screening process in a potato proce ing plant; (b) a mixt. of a pre-fermenting yeast (I) and a prim. fermenting yeast is cultured on the above growth medium.

(I) is capable of producing amylase for breaking down starch in the growth medium to glucose; and (II) is capable of utilising the produced glucose to support its growth.

Economical treatment does not need expensive heating and cooling equipment, and increases the protein content of very dense potato waste filter cake from processing plants so that it becomes a more complete diet for animals. In addn. the process does not need additional growth factors, and the filter cake can be used for a relatively long time before it no longer promotes yeast growth. 11.8.77 as 823673 (18pp478).

WADL ★ D16 23813B/12 ★US 4144-133

Fungal growth medium containing purified saponin - as well as substrate for phenol oxidase, oxgall and support

WADLEY RES INST BLOOD BK 25.08.77-US-827573

B04 (13.03.79) C12k-01/06

A dry preparation for mixing with water to form a fungal growth medium comprises purified saponin which is non-toxic to microbial pathogens (I), oxgall (II) and a substrate for phenol oxidase (III). A fungal growth medium comprises (I), (II) and (III) and a supporting agent.

The medium facilitates rapid identification of a variety of pathogenic fungi, obtained from a body fluid for example. In particular, (III) provides for the specific identification of Cryptococcus neoformans, a characteristic brown pigmentation appearing, while (II), in addition to suppressing non-pathogenic organisms, enhances filament and chlamydospore production of Candida albicans and Candida stellatoidea. 25.8.77 as 827573 (7pp).

VITA- D16 57199A/32 =US 4144-134

Determining bacterial concn. by luminescence - of extracted reactive microbial material sepd. from reactive material extracted from non-microbial cells

VITATECT CORP (PLAK/) 31.01.77-US-764180

*B04 H04 (13.03.79) *DT2804-117 C12k-01/04*

The presence of microbial cells in a sample comprising a mixt. of microbial cells and non-microbial cells is detected by (A) combining the sample with an enzyme which ruptures the walls of the non-microbial cells to extract non-microbial reactive material; (B) removing the non-microbial reactive material extracted from the non-microbial cells by filtering the sample on a filter surface to eliminate the non-microbial reactive material from non-microbial cells and to produce a residue on the filter surface contg. microbial cells; (C) rupturing the walls of the microbial cells on the filter surface to extract and retain microbial reactive material contained on the filter surface; (D) combining on the filter surface the microbial reactive material with a luminescence-causing reagent to generate light as a function of the amount of reactive material thus combined; and (E) detecting the amount of light thus generated on the filter surface. 31.1.77 as 764180 (7pp910).

MPJD- D16 10729A/06 =US 4144-135

Vaccine spreading appliance - with endless belts on incline and spreading head for circular culture plates

MPJ DEV LTD 31.07.76-GB-032036

*(13.03.79) *DT2734-221 C12b-01/02 C12k-01/04*

Culture plates are spread with inoculant in appts. which includes a conveyor for moving the plate to a processing station where a driven spreader produces a progressively more dilute inoculant trace. The conveyor is formed by two spaced endless belts arranged for movement in opposite directions at the same or different speeds to produce translational or rotational movement of the culture plate between.

Pref. the spreader is electrically conductive material to allow sterilisation by heating. The spreader pref. has a head, and a motor for rotating the head. The appts. is compact. 20.7.77 as 817273 (8pp1376).

ARMA- ★ D16 23814B/12 ★US 4144-136

Cell culture appts. - comprises rotating elongated vessel housing parallel tubes and cell suspension

INST ARMAND-FRAPPIE 06.06.77-US-804075

(13.03.79) C12k-09

An appts. for cell culture comprises a culture vessel housing discrete tubes mounted parallel to and equidistant from each other. The tubes are open at each end. A suspension of cells are introduced into the vessel in which aerobic conditions are created. The vessel and its contained tubes are rotated about an axis parallel to the longitudinal axis of the tubes.

Pref. the culture vessel is elongated and cylindrical and is tapered at each end. Liquids may be introduced or removed from the tapered regions of the vessel.

The vessel is used for cell culture. It enables an improved yield to be obtd.. 6.6.77 as 804075 (5pp295).

SEAR D16 74694A/42 #US 4144-327

Antimycotic compositions - contg. lytic Physarum enzymes, opt together with an antimycotic e.g. amphotericin B (BE 28.9.78)

SEARLE G D & CO 28.03.77-GB-012919 (20.03.78-US-888276)

*B04 C03 (13.03.79) *DT2813-282 A61k-37/48 +A61k-31/71*

Fungal infections in animals are treated by admin. of an effective amt. of mycolytic enzymes extracted from Physarum, pref. in conjunction with an antimycotic agent Specifically, the compsn. used comprises a sterile, pyrogen free, lyophilised extract of lytic enzymes from Physarum in combination with an antimycotic agent. Pref. antimycotic agent is Amphotericin-B, Nystatin or 5-fluorocystosine.

Method is esp. effective in treating Candida, Aspergillus and Trychophytan infections. 20.3.78 as 888276 (5pp927).

ZAID D16 55824Y/32 =US 4144-32

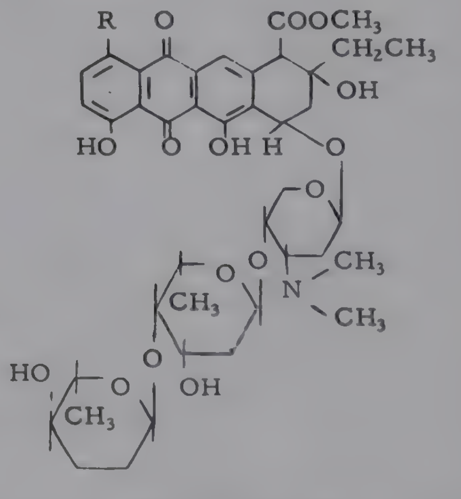
Anthracyclin glycoside antibiotics MA 144-M1 and -M2 - usef against tumours, esp. leukaemia, and Gram positive bacteria

ZH BISEIBUTSU KAGAKU KEN 07.04.76-JA-039688

*B03 (13.03.79) *BE-853-203 A61k-31/71 +C07h-17/08*

Novel anthracycline glycosides are of formula (I; R is H or OH), their non-toxic acid addn. salts or complexes with DNA. The cpds. are free of substances co-produced with them. R is H or OH.

(I) are anti-tumour agents and are e.g. produced by fermentation of MA-144-producing strains of streptomyces.



(I)

24.3.77 as 780730 (22pp974).

MASI ★ D16 23915B/12 ★US 4144-3

Conductive perfluorinated olefin polymer membrane - contg. a fluoride and/or carboxylic acid functional gps., used as so electrolyte or ion exchange membrane

MASSACHUSETTS INST TECH 03.01.77-US-756451 (12.12.74-U 531931)

A88 B04 J01 P73 (A14 A17) (13.03.79) B32b-27/06

A conductive membrane of resistance pref. < 150 ohm cm comprises a perfluorinated polymer having functiona gps. selected from acid fluoride and/or carboxylic acid The polymer is pref. based on a polyolefin, esp. polyethylene, polypropylene or ethylene-propylene copolym Membrane thickness is pref. 1-25 mil.

The membranes are used as solid electrolytes, ion-exchange membranes etc.. The perfluorinated polymer may also serve as template for binding proteins while chemical reactions are carried out. 3.1.77 as 756451 (9pp966).

See Also

D13 CS 7705523
D13 J5 4020162
D13 US 4144354
D13 EP ---1122
D13 J5 4020175
D17 CS 7701289
D13 FR 2394251
D13 SU 604551
D17 J7 9003707

D17: SUGAR; STARCH

PURK/ ★ D17 B/12 ★CS 7701-178
Mechanical cleaning of cutting knives
PURKRABEK F 23.02.77-CS-001178
(29.12.78) C13c-01/08

LANG/ ★ D17 B/12 ★CS 7701-289
Liquid starch prodn. from natural starch
LANGER O 28.02.77-CS-001289
(D16) (29.12.78) C12d-13/04

RUZI/ ★ D17 B/12 ★CS 7801-464
Vibration separator for dry layering of sugar beet
RUZICKA J 08.03.78-CS-001464
(29.12.78) C13c-01

DUSE/ ★ D17 B/12 ★CS 7801-487
Sugar beet pulp separation from diffusion juice
DUSEK S 09.03.78-CS-001487
(29.12.78) C13d-03

ASIZ- D17 59583S/37 =DS 2125-945
Spray-dried granules prodn
ASIZAWA TEKKO KK (ASI -) 01.06.70-JA-047026
*J08 Q76 (15.03.79) *NL7107-488 F26b-03/12*

A spray drying process for the production of granules, for example of sugar from a sugar solution, maintains a fluidised bed of dry particles in a vertical tank by hot primary gas. Hot secondary gas is admitted tangentially downwards in a narrower cylindrical part on top to create a vortex which ends at the fluidised bed. The fresh solution is sprayed into the laden ascending stream of primary gas.

This results in a thorough drying effect and in the production of granules with a fixed minimum of unit weight. 25.5.71. as 125945 (5pp39)

CARG/ D17 23601A/13 =GB 1542-482
Multistage diffusion (extn.) plant - esp. for extn. of cane sugar from bagasse moving over sieves (NL 16.3.78)
CARGILL J M T 14.09.76-GB-038018
*J04 (21.03.79) *DT2741-065 B01d-11/02*

Solvent extraction appts. comprises an annular extracting stage, an inner shell, and an outer rotatable shell. The stage includes a screen supported by a tray fixed to the inner shell.

Radial arms fixed to the outer shell move material being extracted over the screen, each screen having a hatch for material to fall through after it has covered a partial revolution as the screen. The outer shell is pref. driven on rollers.

The appts. may be used in the extraction of sucrose from sugar cane, and is characterised by simplicity of operation. 9.9.77 (7pp1379)

DASU- D17 25704A/14 =GB 1542-753
Continuous vertical crystalliser with axial tubular cooler - having axial shaft with paddles oscillating as agitator
DANSKE SUKKERFAB AS 28.09.76-DK-004359
*J01 (21.03.79) *DT2743-671 B01d-09/02*

A crystalliser comprises an elongate container provided
with cooling elements in the form of at least one bundle of
spaced pipes along the container.
A vane is provided to move the liq. relative to the cool-
ing elements, and is attached to a shaft to effect an oscill-
ating movement. The container is pref. mounted vertica-
lly. Oscillation of the vane effects crystallisation by forc-
ing theliq. between adjacent pipes.
The appts. is simpler in design than previous crystall-
isers and is used for crystallising sugar from supersatur-
ated sugar juice. 28.9.77 as 040369 (5pp1379)

STAL D17 58424V/33 =J7 9003-705
Cross-linked cereal starches - using phosphorus oxychloride, having higher caking temp. and improved specific props
STALEY A E MFG CO 01.03.73-US-337182
*A11 G05 +P75 (26.02.79) *BE-810-281 C08b-31*

Crosslinked cereal starches, pref. from maize, waxy maize, wheat, millet, rice, rye or barley, have a caking temp. ⩾11.1°C higher than the non crosslinked material. Partic. the caking temp. of wheat starch can be raised from 58.9°C to 72.2°C using phosphorous oxychloride. The wheat starch pref. has a particle size of 12-40 μm partic. with ⩾22% above 22 μm. 30.1.74 as 011922 (clg. 1.3.73-US-337182) C08b 31/00 (26.2.79) A.E.STALEY MANU. CO. (8pp) (J49118783)

SUMO D17 71101W/43 =J7 9003-707
Pullulan as dispersant in emulsion polymerisation - giving stable dispersions for treating fibres and paper
SUMITOMO CHEMICAL KK 29.03.74-JA-036432
*A87 F06 (A18 D16 F09) (26.02.79) *DT2513-866 C08f-02/30*

Pullulan is used as additional dispersant in polymerisation of monomers in aq. emulsion in presence of a catalyst. Pullulan (I) is water-soluble and its solns. do not gel or age. The polymer dispersions are very stable and easy to handle, e.g. as dressings for fibres and paper.

(I) may be prepd. by culturing a strain of Pullularia pullulans for 5 days at 24°C on a nutrient medium contg. 10% partially saponified starch, 0.5% K_2HPO_4, 0.1% NaCl, 0.02% $MgSO_4 \cdot 7H_2O$, 0.06% $(NH_4)_2SO_4$ and 0.04% yeast extract.

(I) is sepd. from the culture medium by pptn. with methanol, as a sticky substance. Repeated soln. in water and pptn. with methanol, followed by drying, gives a 60-70% yield, w.r.t. saccharide used, of (I) with mol. wt. 5,000-5,000,000 (50,000-1,000,000). 29.3.74 as 036432. C08f 2/30 (26.2.79) SUMITOMO CHEMICAL KK (SUMO) (6pp) (J50145447)

TATL D17 04705X/03 =J7 9003-735
Production of sugar derivs
TATE & LYLE LTD 06.04.74-GB-016579
*A13 (27.02.79) *J50148-322 C07h-13/08 +C08f-212/32*

Sugar derivs. (I) are prepd. by reacting a mono- or di-
saccharide contg. ⩾1 opt. protected OH gp. with a p-vin-
ylbenzoyl halide to replace the OH gp(s). New copolymers
are prepd. by reacting a sugar deriv. (I) and an ethylenic-
ally unsatd. monomer (II).
The polymers have a high glass transition temp.
(I) is e.g., 2, 3, 3^1, 4, 4^1-penta-O-acetyl-1^1, 6, 6^1-tri-O-
(p-vinylbenzoyl)-saccharose (A) or 1, 2:3, 4-di-O-isoprop-
ylidene-6-O-(p-vinylbenzoyl)-α-D-galactopyranose. (II)
is pref. styrene or methyl methacrylate. 16.4.75 as
046279 (clg. 16.4.74-GB-016579) C08f 212/32; C07h 13/08
(27.2.79) TATE & LYLE LTD. (5pp) (J50148322)

HAYB D17 35836R/20 =J7 9003-937
Preparation of maltose
HAYASHIBARA KK 18.11.68-JA-084261
*(28.02.79) *BE-741-824 +C12d-13/02 C13k-07*

Starch slurry is heated opt. with a liquifying enzyme or
acid to liquify it until the prod. has D.E. of ⩽3.0, then
β-amylase and α^1-1,6-glucosidase is applied to the result-
ant to give highly purified maltose soln., and then prod.
is concd. with addn. of seed to give soln. contg. ⩾35% of
pptd. crystals and the soln. is subjected to spray drying

to give crystalline maltose.

In an example, 100 g. corn starch was mixed with 300 ml. boiled water and heated at 130°C for 5 mins. under pressure, and cooled to 80°C 50 units of amylase and purulanase of 20 units are added at 45°C. After 48 hrs., the resultant is heated, filtered, concd. and purified using charcoal. The resulting soln. is mixed with seed of maltose crystal and kept for 3 days at 35-20°C. The resultant is spray-dried to give maltose crystal contg. 6% water. 18.11.68 as 084261. C13k 7/00; C12d 13/02 (28.2.79) HAYASHIBARA KK (5pp)

HAYB D17 39604R/22 = J7 9003-938

Pure maltose

HAYASHIBARA KK 26.11.68-JA-086530

*(28.02.79) *BE-742-209 +C13d-13/02 C13k-07*

Starch is liquefied till D.E. becomes ⩽ 5.0, the resultant is rapidly cooled to 80-45°C, then β-amylase and/or α-1,6-glucosidase is contacted with the prod. to reduce the viscosity and the resultant is saccharised under optimum pH value (e.g. 6.0), desirably with the addn. of β-amylase and/or α-1,6-glucosidase.

Crystalline maltose of high purity e.g. 92%, is obtd. 26.11.68 as 086530. C13k 7/00; C13d 13/02 (28.2.79) HAYASHIBARA KK (7pp22)

HAYB D17 08152R/06 = J7 9003-939

Preparation of starch syrups containing straight chain - oligosaccharides and polysaccharides

HAYASHIBARA KK 01.04.68-JA-021366

*(28.02.79) *FR2005-305 C13l-01 +A23l-01/09 C12d-13/02*

Polysaccharide such as α-1,6-glucosidase, decomposed prod. of starch, high amilose starch, amilose sepd. from starch, etc., the polysaccharide contg. α-1,4-glycoside linkage, is reacted with organic acid, inorganic acid, α-amilase, β-amilase, glucoamilasa or isomelase to allow saccharification to take place. A millet jelly chiefly consisting of straight chain oligo- or poly-saccharide is obtd.

For example, purified sweet potato starch is disperse into a 35% suspension at 160°C. The resultant is rapidly cooled to 50°C and amilase of 20 μ/starch is allowed to act upon the resultant at pH 6 at 45°C for 30 hrs. Furthe amilase of 15 μ/starch is added, the resultant kept at 60°C at pH 6 for 20 hrs. so that D.E. becomes 40. The resul ant is purified by ion exchange resin, whereby there is obtd. liq. sugar having low viscosity, non-crystallising property and high sweetness. 1.4.68 as 021366. A231 1/09; C12d 13/02; C131 1/00 (28.2.79) HAYASHIB ARA KK (3pp22)

PISH= ★ D17 23480B/12 ★SU -604-5

Periodically-operating sugar-beet filter thickener control - usir juice flow rate and residues accumulations as computable factors

PISHCHEPROMAVTOMATI 06.08.75-SU-163642

(19.04.78) B01d-37/04

Filtration in a gp. of periodically-operating filter-thicke ers, for use in the sugar-beet and chemical inds., invol es controlling the active filtration time in each cycle in accordance with a predetermined total vol. of filtrate an making each filter/thickener to start work the moment i is empty of sediment. Optimum load is maintained, according to the amt. of sediment, by converting the given vol. of filtrate in each half-cycle of filter operation in relation to the value of the specific consumption of lime clarification, the density of the milk-of-lime, and the nu ber of filters working. The way the time interval betwe filter start-ups is determined is considered.

Rozinskii A.A., Medzenovskii V.B., Bul. 16/30.4.78 6.8.75 as 163642 (3pp29)

See Also

D13 CS 7705523 D13 EP ---1192 D13 US 414408
D16 CS 7602101 D16 EP ---1099 D16 US 414404
D16 US 4144127 D18 US 4143666

D18: SKINS; HIDES; LEATHER; TOBACCO

GALL- ★ D18 22053B/12 ★BE -870-521

Preparing wrappings for smoking prods., esp. cigarette paper - by serigraphic printing of spots contg. an additive

GALLAHER LTD 16.09.77-GB-038710

A97 P15 (15.03.79) A24b A24d

The wrapping for smoking prods. is prepd. by applying on the wrapping by serigraphic printing a series of separate spots using an ink contg. an additive which, when the smoking product is lit, passes into the inhaled smoke.

Process is applied to cigarette papers and cigar and cigarlets. It enables precise regulation of the amt. of additive, the rolling and combustion of the wrapping is unaffected and the smoker's satisfaction is enhanced. 15.9.78 as 870521 (20pp597)

MONT ★ D18 22054B/12 ★BE -870-528

Tanning skins using mixt. contg. aluminium salts - and oxalic or tartaric acid as complexing agent

MONTEDISON SPA 15.09.78-BE-870528

E12 (15.03.79) C14c

The parent patent describes tanning prods. consisting of an acid mixt. contg. neutral or basic aluminium chlorides and/or sulphates and a complexing agent. This improvement comprises using oxalic or tartaric acid as complexing agent.

In an example, a tanning soln. was prepd. by dissolving. Aluminium sulphate (37kg) contg. 16% Al_2O_3. $AlCl_3$ $6H_2O$ (19kg), and oxalic acid dihydrate (20 kg) on water (44 kg) with stirring at 90°C. To the soln. 20% Na_2CO_3 (174 kg) was added to give a soln. (269 kg) contg. 3.71% Al_2O_3 at 40°C. 15.9.78 as 870528 Add. to 862563 (5pp597)

NEUK/ ★ D18 22138B/12 ★CH -609-

Tobacco smoke filter contg. iron complex pigment - of tetra:pyrr type with affinity for harmful gases

NEUKOMM S 29.09.75-CH-012901

E12 P15 (28.02.79) A24b-15/02

Filter contains a tetrapyrrole type pigment (I) contg. co plexed Fe which has affinity for the harmful gaseous co ponents of the smoke. Esp. (I) is haemoglobin or chlorocruorin.

Pref. the filter also includes a metal (or oxide or sa which converts CO to CO_2, or fixes CO. Specified are $PdCl_2$, $PtCl_2$, $K_3Fe(CN)_6$, acidic Cu chloride or hopcalit

Used as filter tips for cigarettes or inserts into pipe etc. Haemoglobin has an affinity for CO 100 times grea than for O_2 and also has high affinity for HCN and NO_2. 29.9.75 as 012901 (3pp1251)

FARB ★ D18 22205B/12 ★DT 2739

Water-soluble oligo-urethane resins contg. quat. gps. - for tan or pre-tanning of hides and leather, and also as dyeing aids

BAYER AG 01.09.77-DT-739378

A25 (A97) (15.03.79) C08g-18/83 C14c-03/18

Water-soluble oligo-urethanes, free from NCO gps. b contg. methylol gps. and with mol.wt. 600-5000, are ed on (a) polyethylene glycol ethers with mol.wt. 400-1 (b) polyisocyanates, opt. (c) mono- or poly-functional cpds. reactive to NCO and with mol.wt. below 300, an HCHO.

Amt. of (a) in the urethane is 40-90(60-80)wt.%. C ponents (a) and/or (c) together contain 20-200 m.Val p 100 g. urethane of tert. N atoms, of which 20-95% are verted by treatment with alkylating agents and/or acid to quaternary ammonium or ammonium salt cpds.

They are extremely stable to electrolytes. The anionic character of post-tanned chrome leather is over-compensated. They have a soft-tanning effect and can be used for pre-tanning without adversely affecting subsequent chrome tanning. Exhausting of anionic dyes is improved, giving more brilliant and intensive dyeing, without reducing levelness. 1.9.77 as 739378. (26pp195)

TEHO- ★ D18 22287B/12 ★DT 2830-991

Chrome-tanning of leather - by chroming hides in tanning vessel and controlled heating in separate heating compartment

TECHN HOCHSCHULE KA 05.09.77-DL-200877

(15.03.79) C14c-03/06

Leather mfr. by Cr tanning takes place in two separate steps, pref. continuously. In the first step, the hides are chromed in a stationary tanning vessel. Reaction between hide substances and Cr tanning materials takes place in the second step, in a heating compartment, at a higher controlled temp.

Hide-treatment time in tanning vessel can be shortened, e.g. by 50%. Chemicals and energy are saved and waste water pollution is reduced. Pickling and neutralising can be obviated, whereby total process can take place continuously. Milling in second step can be omitted, whereby leather defects are prevented. Cr leather storage at room temp. for 1-2 days is no longer necessary. 14.7.78 as 830991. (11pp200)

AMBS ★ D18 22296B/12 ★DT 2836-658

Tobacco foils formed from suspensions - contain added carbon and alkaline earth metal cpds. forming alkaline earth metal oxide(s) on smoking

AMERICAN BRANDS INC 09.09.77-US-831955

E33 P15 (15.03.79) A24b-15 A24c-01/18

The smoking properties of a tobacco prod. contg. shaped tobacco foils, formed from a suspension, are improved by adding C and one or more alkaline earth oxides, -bicarbonates, -hydroxides, basic alkaline earth carbonates or other alkaline earth cpds., which form alkaline earth oxides on burning, to a tobacco prod. Wt. ratio C:alkaline earth cpd. is 1:10 to 10:1. Proportion of C +alkaline earth cpd. is 2-50(5-15)wt.% w.r.t. total prod. wt.

The additives improve smoke flavour and side-taste of tobacco foil. "Stalky" character of smoke aroma is reduced. The proportion of combustion prods., esp. tars, is reduced. 22.8.78 as 836658. (12pp200)

NIPC ★ D18 23023B/12 ★J5 4020-101

Acidic sodium sulphate pickling agent prepn. - by mixing (an)hydrous sodium sulphate and sulphuric acid or acidic sodium sulphate and reacting to form acidic sodium sulphate

NIPPON CHEM IND KK 18.07.77-JA-084998

E34 (15.02.79) C14c-03/06

Pickling agent, which is a powdery mixt. of anhydrous sod-
ium sulphate and acidic sodium sulphate with a wt. ratio
Na_2O/SO_3 of 0.57-0.74, is prepd. by (a) mixing (an)hydrous
sodium sulphate and sulphuric acid or acidic sodium sulph-
ate ($NaHSO_4$) so that the mixt. has a wt. ratio Na_2O/SO_3 of
0.57-0.74 and (b) reacting the mixt. to form acidic sodium
sulphate ($Na_3H(SO_4)_2$) in the mixt.

Pref. anhydrous sodium sulphate, obtd. by reducing the
chrome content in sodium sulphate byproduced in the prepn.
of sodium perchromate is used. Acidic sodium sulphate is
pref. the acidic sodium sulphate ($NaHSO_4$) which is bypro-
duced in the prepn. of chromic anhydride. The pH of the
pickling bath can be regulated by changing the proportion
of anhydrous sodium sulphate and acidic sodium sulphate
or by adding common salt (NaCC) to the mixture.

The pickling agent can be used for the pickling process in chrome tanning, and leather pickled with the pickling agent, does not swell and can be tanned uniformly without stains and wrinkles. 18.7.77 as 084998 (5pp5)

HONP ★ D18 23024B/12 ★J5 4020-104

Reclaiming leather wastes - by breaking up into fibres, dispersing in water, beating, and forming into sheet, opt. with unbeaten collagen fibres

HONSHU PAPER MFG KK 14.07.77-JA-083607

F08 (15.02.79) C14b-07

The method comprises (a) crushing leather dust, (2) breaking it up into fibres in the dry state, (3) dispersing the obtd. collagen fibres in water, (4) beating them to freeness 100-600 ml (Canadian standard) and (5) forming the beaten collagen fibre alone or together with unbeaten collagen fibres into a sheet. The leather dust which is inevitably byproduced in leather industry and has been discarded is utilised effectively and thus obtd. reclaimed leather shows similar properties as natural leather.

Firstly leather dust is crushed into fine pieces of 5-10 mm size and the breaking up is pref. carried out on the pieces of moisture content $< 30\%$. The breaking up is pref. effected by a method, in which leather powder is not formed and obtained collagen fibre has 5-30 mm in length and 30-60 μ. The obtd. collagen fibre is dispersed in water and is beaten in the slurry of 2% concn. The collagen fibre obtd. by unfastening leather dust without forming powder, has the proper freeness of Canadian standard and can be easily mfd. in sheets. 14.7.77 as 083607 (7pp5)

MELY/ ★ D18 23592B/12 ★SU -604-871

Twisted belts forming unit - has die with semi-cylindrical, and punch with two half-cylinders, as working surfaces

MELYAKOV V S 26.04.74-SU-024791

Q35 (30.05.78) B65f-01 C14b-01/02

The prodn. of coiled belts of improved quality involves forming the blank in a die whose working surface is semi-cylindrical. The working surface of the punch is formed by two semicylinders and both the die and the punch have inner rollers. The advance mechanism comprises a spring-loaded lever and a worm gearing mounted on the lever in line with the unit for holding and turning the belt.

The belt is pierced at one end and threaded on to the
hook, and after raising the punch the belt is placed and the
pedal is released. Pressing another pedal engages a shaft
to shift the lever, while gears impart rotation to sprocket
meshing chains that are linked by platforms. The move-
ment of rollers along the guides ensures rotation of the
hook with the belt, which is drawn through the punch and
die to fold the edges. The turning of the hook imparts
twist to the belt.

Melyakov V.S., Bul. 16/30.4.78 26.4.74 as 024791 (4pp89)

PHIM D18 13296Y/08 =US 4143-66

**Tobacco substitute material - comprises a carbohydrate treated wit
ozone to form a specified carboxyl group concn.**

PHILIP MORRIS INC 15.08.75-US-604944 (15.02.77-US-768685)

*P15 (D17) (13.03.79) *DT2636-597 A24b-15 A24d-01*

Smoking material is prepd. by contacting ozone with a
film forming carbohydrate material (I) so that the mol.
wt of (I) is reduced. Pref. 0.2-2.0 mequiv. carboxy gps.
per g. are produced in the treated (I).

The prod. may be used in comminuted form by mixing
it with (reconstituted) tobacco or tobacco substitutes. or
in the form of a paper-like sheet of tensile strength 0.1 -
2.0 kg per inch as a wrapper for cigarettes etc.. 15.2.7
as 768685 Div. ex. 4034764 (8pp945).

D2: DISINFECTANTS; DETERGENTS

D21 : DENTAL; TOILET PREPARATIONS

OREA ★ D21 22076B/12 ★BE -870-586

Cosmetic compsn. for hair or skin contg. cationic polymers - including novel polymers, contg. two quat. nitrogen atoms

L'OREAL SA 20.09.77-LU-078153
A96 (19.03.79) A61k C08g

A cosmetic compsn. for the hair or skin contains ≥1 polymer contg. moieties of formula (I):

$$-[\underset{\oplus\ X^{\ominus}}{N}(R_1)(R_2)-A-\underset{\oplus\ X^{\ominus}}{N}(R_1(R_2)-(CH_2)_n-CO-B-(CH_2)_n-]- \qquad (I)$$

In (I), A is alkylene, hydroxyalkylene, alkenylene or alkynylene; B is either (a) -OZO- where Z is aliphatic hydrocarbyl or $-[CH_2CH_2O]_x-CH_2CH_2-$ or $-[CH_2CH(CH_3)-O-]_y-CH_2CH(CH_3)-$ where x and y are 1-4; (b) a bis. sec. diamino residue such as 1,4-piperazinyl; (c) a bis prim. diamino residue of formula -NH-Y-NH- where Y is aliphatic hydrocarbyl or $-CH_2CH_2-S-S-CH_2CH_2-$; or (d) -NHCONH-; R is 1-4C alkyl; R_2 is 1-12C aliphatic hydrocarbyl or the radicals R_2 with A and the 2 N atoms can form 1,4-piperazinyl or 4,4'-dipiperidinyl; X is halogen, pref. Cl or Br and n is 1-10.

Compared with previous similar polymers, the above have better compatibility with anionic surfactants and can be eliminates from the hair by normal treatments. 19. 9. 78 as 870586 (36pp597)

OREA D21 12547Q/00 =DS 1667-882

Keratin-reinforcing agent containing methylol

L'OREAL SA (JOOS) 02.03.67-CH-003113
*A96 E16 (15.03.79) *BE-711-309 +A61k-07/06*

Keratin strengthener for hair and nails contains methylol cpds. of mono- or di-carboxylic acid amides, which may contain a thiocarboxy or carbimide gp. in place of at least one carboxy gp.

The reaction prod. of formaldehyde and thiourea may be used. 23.2.68. as 667882 (2pp068)

BARH D21 14767W/09 =DS 2439-388

Abrasive skin cleansing cream - contg sucrose or sparingly soluble salts in a cream base

BARNES HIND PHARM INC 17.08.73-US-389297
*B05 E13 (15.03.79) *DT2439-388 A61k-07/48*

A skin-cleansing formulation having an abrasive action, e.g. for treating acne, contains 20-80 (35-60) wt.% borax, Na citrate, NaH_2PO_4, $Na_4P_2O_7$ and/or saccharose in particulate form as the abrasive and 20-80 (40-65) wt.% of a creme base comprising 15-70 wt.%. Na salt of an anionic foam-former, 5-65 wt.% water, ≤12 wt.% ≥1 non-ionic surfactant and ≤15 wt.% ≥1 other additive (foam stabilisers, fatty alcohols, therapeutic agents, dyes, perfumes, etc.).

The formulation is storage stable, has a mild abrasive action and is easily removed by washing with water. 16.8.74. as 439388 (8pp922)

DEGS ★ D21 22149B/12 ★DS 2751-547

Yellow gold alloy - contg. small amt. of palladium, for dental applications

DEUTSCHE GOLD & SILBER 18.11.77-DT-751547 (00.00.74-DT-424575)
M26 (15.03.79) C22c-05/02

Parent patent claimed a Pd-free Au suitable for dental applications in which a porcelain layer is applied by baking. In this addn. the Au alloy is given a higher solidus temp. which is required for some dental applications by the addn. of Pd the compsn. being 83-87% Au, 6-10% Pt, 3-6% Pd, 2-3% In, 0.1-0.3% Ta. The alloy has a yellow colour resembling gold.

Used for dental crowns and bridges, which are coated with porcelain. 18.11.77. as 751547 Add to 2424575 (2pp095)

KUKI- ★ D21 22259B/12 ★DT 2741-072

Tablet-form cleaning agent for dental braces etc. - contg. antimicrobial agents and para hydroxybenzoic acid ester(s) to exert synergistic antimicrobial action

KUKIDENT K KRISP 13.09.77-DT-741072 (00.00.73-DT-312847)
A97 (A25) (15.03.79) A61k-07/30

Tablet-form cleaning agent is produced by (a) prepg. a mixt. of 5-25wt.% phosphates and/or polyphosphates, 15-45wt.% carbonates and/or bicarbonates, 25-55wt.% peroxide salts, 5-15wt.% salts of weak organic acids and 0.5 1.5wt.% detergents, and (b) compressing the mixt. with ≥1 antimicrobial agent and with polyethylene glycol at a temp. below the melting temp. of the polyethylene glycol to give tablets; the polyethylene glycol, used in an amt. of 2-6% of the total weight of the tablet, being in the form of fine granules or flakes which have been sprayed with a soln. of a dye in a hydroxybenzoic acid ester and dried before mixing with the other components and compressing The pH on dissolution of the tablets in water is 7.0-9.9.

The novelty is that the hydroxy-benzoic acid ester is "Phenonip" (RTM; a combination of p-hydroxybenzoic aci esters marketed by Nipa-Laboratorien GmbH) and that in addn. there is added to the tabletting mixt. 0.5-1.0wt.% disodium decylenic acid ethanolamide sulphosuccinate (I).

The cleansing agent is intended for removal of e.g., saliva components and food residues from the surface of dental braces etc. The stable compsn. has good antimicrobial properties without attacking or corroding dental braces. 13.9.77 as 741072. Add. to 2312847. (16pp280)

FARB ★ D21 22260B/12 ★DT 2741-19

Two/phase pearl polymers - contg. methacrylate polymer an polyurethane components, useful for making tough dentures

BAYER AG 13.09.77-DT-741196
A14 (A25 A96) (15.03.79) C08f-283

2-Phase pearl polymers with an average particle size of 10-150μ comprise (A) 88-99.5wt.% of a polymer of an acrylic component contg. units of a methacrylic ester wit 1-10C aliphatic satd. alcohol component, with up to 30wt. copolymerised units of ≥1 monomer chosen from acrylic esters with 1-10C aliphatic satd. alcohol component; hydroxyalkyl esters of (meth)acrylic acid with 2-4C in the alkyl gp.; styrene; vinyl acetate; (meth)acrylamide; (meth)acrylic acid and/or itaconic acid; and (B) 0.5-12wt % of a polyurethane made from, (1) ≥1 dihydroxy cpd., (2 diisocyanates chosen from (a) aliphatic diisocyanates with a branched 7-36C chain, (b) cycloaliphatic diisocyanates and (c) (cyclo)aliphatic diisocyanates modified by radical graft polymerisation with vinyl monomers, (3) (cyclo)aliphatic diamines and (4) monofunctional opt. unsatd. chain stoppers.

The prods. are esp. useful for making dental prothese (dentures) having improved impact resistance and toughness c.f. straight PMMA materials. 13.9.77 as 741196. (27pp513)

HOFF ★ D21 22379B/12 ★EP ---1-07

Cosmetic compsn. having anti-seborrhoea activity - contains amin oxide as solubiliser for pyridoxine tri:palmitate used as activ ingredient

HOFFMANN-LA ROCHE AG 14.09.77-CH-011213
E16 (E13) (21.03.79) A61k-07/06
D/S: BE, CH, DT, FR, GB, NL.

Amine oxides having formula $R^1R^2R^3N \longrightarrow O$ (I) (where R^1 is 16-20C alkyl and R^2 and R^3 are $HOCH_2CH_2-$ or Me) are used as solubilisers for pyridoxine tripalmitate (II), in cosmetic compsns. having anti-seborrhoea activity. The cosmetic compsns. pref. contain 0.1-10 (esp. 0.1-2) (I) and 0.2-5 (esp. 1-20)% (II).

The compsns. can be used as face lotions, shampoos and creams for inhibiting fat gland secretion, and as hair-treatment compsns. against greasy hair.

(II)-contg. cosmetics can be prepd. without adding fats or oils. Fat gland-inhibiting activity of (II) is accelerated. E.g. a 50% skin grease reduction can be achieved in 2 hrs. with a face lotion contg. 2% (II) and 8% of 25% aq. stearyl dimethyl amine oxide.

28.08.78 as 100761 (13pp200)
ISR: US4007261, GB1337467; FR1264810. 2 Journal References.

PACJ ★ D21 22581B/12 ★J5 3136-529

Water-in-oil emulsion for toilet or medical material - contains salt of esterified cpd. obtd. from fatty acid and hydroxyl carboxylic acid together with emulsifying agent and adjuvant

PATTERSON C J CO 04.05.77-US-793534
B05 E17 (29.11.78) A61k-07 A61k-09/10 B01f-17/34

Water-in-oil type of emusion with favourable stability as an additive comprises a compsn. which consists of 65-85 wt.% water phase and 100 wt.% external oil phase. Aq. fine particles are dispersed in the external oil phase. The liq. compsn. contains divalent or trivalent salt of an esterified cpd. produced from 10-22C fatty acid, 2-4C hydroxyl carboxylic acid together with an emulsifying agent and an emulsifying adjuvant having the same HLB number and compatible solubility to the emulsifying agent.

The fatty acid is pref. stearic acid and the said emulsifying agent is pref. a stearoyl-2-lactyl-calcium cpd.

The emulsion is used as an additive to skin cleaning cream or hair dressing lotion. 28.10.77 as 129558 (7pp15)

SUNZ ★ D21 23035B/12 ★J5 4020-138

Compsn. for treating buccal cavity - contains azulene and chlorohexyzine salt

SUNSTAR HAMIGAKI KK 11.07.77-JA-083431
*B05 E14 (E16) (15.02.79) A61k-07/26 A61k-31/**

The compsn. contains > 0.001 wt.% of azulene and chlorohexyzine salt. Pref. the chlorohexyzine salt is chlorohexyzine gluconate or hydrochloride, and is contained in an amt. of 0.001-1. Compsn. described, (where 0.03-0.1) wt.%. The compsn is in the form of a gargle, dental cream or tablets.

The compsn. has antiphlogistic action, tissue-regenerating action, antiallergic action etc. 11.7.77 as 083431 (5pp69)

SUNZ ★ D21 23038B/12 ★J5 4020-142

Dentfrice compsn. which does not change the taste of food - contains as nonionic surfactant, e.g. sucrose fatty acid ester, polyoxyethylene hardened castor oil deriv., etc.

SUN STAR HAMIGAKI K 11.07.77-JA-083430
A96 B05 E19 (A25 E37) (15.02.79) A61k-07/16

The composition contains a nonionic surfactant selected from (a) sucrose fatty acid ester, (b) polyoxyethylenestearylalcoholether, (c) polyoxyethylenemonostearic acid ester, (d) polyoxyethylenesorbitan monostearate, (e) polyoxyethylene-hardened castor oil deriv. and (f) polyoxyethylene sucrose fatty acid ester as foaming agent combined with ≥1 of (g) N-long chain acylamino acid, (h) its salt, (i) sodium fluoride, (j) polyphosphate, (i) ethylenediaminetetraacetic acid and (m) its salt.

The nonionic surfactant is a safe cpd., and the dentifrice compsn. has excellent taste. The dentifrice compsn. shows excellent preventive effect on tooth decay. 11.7.77 as 083430 (7pp5)

POKK ★ D21 23039B/12 ★J5 4020-145

Fragrance e.g. perfume - contg. thin flakes with brilliant surface

POLA KASEI KOGYO KK 14.07.77-JA-084409
(15.02.79) A61k-07/46

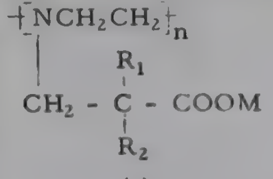
Fragrance is characterised by contg. thin flakes having brilliant surface. The fragrance (e.g. perfume, eau de cologne, etc.) can give the beutifying effect as well as good perfume. It is suitable for applying to hair, skin etc. The thin flakes are adhered and the beutifying effect is attained through the reflection by light partic. spot light. 14.7.77 as 084409 (3pp5)

BIKO- ★ D21 23270B/12 ★J5 4021-500

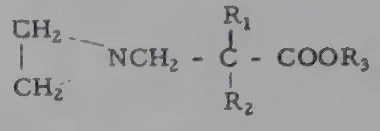
Amphoteric high molecular surface activating cpds. - contain repeating aminoacid units

BIKOEN KK 20.07.77-JA-087183
A14 (A60 A96) (17.02.79) C08g-73/02 C09k-03

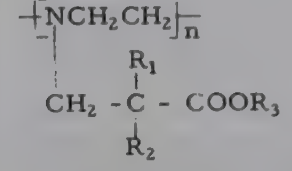
Amphoteric high molecular cpds. contg. the repeating unit of formula (I). The cpds. are produced by polymerising adducts of Formula (II) in the presence of polymerisation initiators, and allowing the polymers of formula (III) to react with alkali metal hydroxides.



(I)



(II)



(III)

In the formulae , R_1, R_2 and R_3 are H, halogen, 1-10C alkyl; M is H, alkali, metal atoms or $1\text{-}10^2$C alkyl gps., which may be different in each repeated unit; n ≥1; provided that there is ≥1 unit where M is H or an alkali metal atom.

The amphoteric high molecular cpds. have surface activating ability and are used as surface activators, flexibility-imparting agents for shampoo or rinse, plasticisers for rubbers, plastics, 20.7.77 as 087183 (3pp136)

KANE ★ D21 23342B/12 ★J7 9003-935

Skin cosmetic prepn. - by extracting Lithospermum root with an oleophilic organic cpd. e.g. isopropyl myristate

KANEBO KK 24.10.68-JA-077590
(28.02.79) A61k-07/48 A61k-35/78

Cosmetics for skin, contg. extract of active component of gromwell root (Lithospermum erythrorhizon), are prepd. by extracting gromwell root with ≥1 of oleophilic organic cpd. selected from isopropyl myristate, butyl myristate, isopropyl palmitate, ethyl linolate. oleyl oleate, oleic acid, linoleic acid, arachidonic acid and oleyl alcohol.

The oleophilic organic cpd. is used as a base for cosmetics. Oily extract is directly mixed with cosmetic mixt. The cosmetics possess good affinity to skin and increased permeability to skin without irritating, and is useful for protection of skin. 24.10.68 as 077590. A61k 7/48, 35/78 (28.2.79) KANEBO KK (7pp68)

ALEX- D21 32174T/20 =J7 9003-936

Hair-treatment compsn - contg purified beef bone marrow and cetyl ricinoleate

ALEXANDRE (ALE -) 04.11.70-FR-039676
*E17 (28.02.79) *BE-774-917 A61k-07/06*

The synergistic association of cetyl ricinoleate with a natural extract of beef bone marrow is used in a treatment for dry, brittle hair. The compsn. also contains essential oils, anti-oxygen prods., fungicides and white beeswax.

The extract of beef bone marrow is obtd. by mixing with water and heating to melt the marrow, allowing to cool to obtain a hard mass, and a water portion which is discarded. The part of the hard mass which has a clean yellow colour is sepd. for use: the residue is retreated several times until all the marrow is purified. The ricinoleate is present as 1.8-2.2% of the marrow extract. 4.11.71 as 087945 (clg.4.11.70-FR-039676) A61k 7/06 (28.2.79) ALEXANDRE (2pp) (J47012800)

FERO D21 59442Y/34 =US 4144-320

Oral hygiene compsn. contg. amino-alcohol - for preventing caries and periodontitis

FERROSAN 20.04.76-GB-015971
*B05 (13.03.79) *BE-853-739 +A61k-09/68*

N-n-Butyl-N-cetyl-6-amino-1-hexanol is new. It is pref. used in the oral cavity and on tooth surfaces to inhibit plaque formation. Pref. it is used in soln. or suspension in carriers conventionally used for cleansing and hygienic purposes, esp. at 0.1-5%.

Cpds. are e.g. prepd. by alkylation of sec. amines. 12.4.77 as 786951 (5pp974).

HUBE ★ D21 23891B/12 ★US 4144-321

Transparent tooth paste compsn. - contg. synthetic pptd. amorphous silica as polishing agent

HUBER J M CORP 30.01.76-US-653720 (06.09.72-US-286655)

E36 (13.03.79) A61k-07/16 C08h-17/04 C09c-01/30

Visually clear toothpaste compsn. consists of 15-50 wt.% compsn. of a synthetic pptd. amorphous SiO_2 (I) as solid polishing agent in a liq. phase.

(I) has the same refractive index as the liq. phase; consists of micelles or aggregates which have been milled to the required fineness; and has Radioactive Dentin Abrasion value >50. (I) aggregates are free of pptd. silicas which have no cleaning ability on human teeth and have initially small particle sizes; and do not readily break down to small particle sizes.

(I) have low structure, relatively low surface areas, low oil absorption, high pack densities, and high valley abrasion, and are highly effective in removing stains, food debris, and plaque from human teeth at acceptable abrasion levels without imparting undesirable opacity to the toothpaste. 30.1.76 as 653720 C. i. p. 3893840, 3998162 (+31.10.74-US-519720)(13pp478)

COLG D21 50101A/28 =US 4144-322

Dental care compsns. contg. hard abrasives - contain a magnesium, calcium or sodium salt to minimise scratching and tooth enamel erosion

COLGATE PALMOLIVE CO 27.12.76-US-754464 (28.01.75-US-544618)

*E37 (13.03.79) *DT2758-548 A61k-07/16*

Dentifrice toothpaste having superior cleaning and polishing characteristics is prepd. having pH maintained >7 contg. alkali(ne earth) metal aluminosilicate as a siliceous abrasive and flat flakes or crystals of alpha alumina as calcined alumina abrasive with particle size 1-15µ dia. in amt, to provide radioactive enamel abrasion to dentifrice >450.

Calcined alumina is present to 7.5-20 wt.%, siliceous abrasive to 10-70 wt.%, and 0.1-5 wt.% Ca, Mg or Na salt of carbonate, bicarbonate, chloride, phosphate, silicate and nitrate to reduce enamel abrasion of dentifrice.

Abrasive content causes min. damage to enamel surfaces to teeth, whilst affording max. removal of difficult stains and debris. 27.12.76 as 754464 (6pp931).

UNIL ★ D21 23892B/12 ★US 4144-323

Oral anti:calculus compsns. - contg. non-astringent zinc carboxymethoxy succinate salt

LEVER BROTHERS CO 15.06.78-US-916032

B05 E12 (13.03.79) A61k-07/16

Non-astringent oral compsn. at pH ≤ 7 contains a zinc cpd. $Zn_xM_y(CMOS)_n$ (I) (where n is 1 or 2; and (a) when n is 1, x = y = 1 and M is H, Na, K, Li, NH_4 or 10-18C alkylammonium, or (b) when n = 2, x and y are 1 or 2 and x+y = 3 and M is Ca, Mg, or Zn; and CMOS is the trianion of carboxymethyloxysuccinic acid).

Used for controlling plaque and calculus. Suitable compsns. include toothpastes, lozenges, chewing gum and mouthwashes, Gingival conditions may be controlled more easily with (I) in which the Zn is much less astringent than in prior compsns.. 15.6.78 as 916032 (6pp1248).

COLG ★ D21 23893B/12 ★US 4144-32

Oral anti:calculus compsns. for ingestion, esp. foods - contain poly:amine poly:phosphonic acid or salt

COLGATE PALMOLIVE CO 07.08.78-US-931697 (12.11.77-US 198439)

B05 C03 E11 (D13) (13.03.79) A61k-07/22

Oral compsn. for intentional ingestion in contact with exposed dental surfaces by man or animals contains 0.01-10% of a polyamine polyphosphonic acid of formula (I):

$$(CH_2)_n[N(CH_2-PO_3H)_2]_2 \quad (I)$$

(n is 1-10). An alkali metal NH_4, mono-, di- or triethanolamine salt of (I) may also be used. The compsn. is at pH 5-11.

(I) inhibits formation of dental calculus without adversely affecting tooth structure. The amount of (I) present is too small to chelate any appreciable amounts of Ca, but it retards conversion of amorphous Ca phosphate to crystalline Ca hydroxyappatite. Typical compsns. are foods and animal feeds. 7.8.78 as 931697 (+ 6.8.73, 13.2.75, 3.11.75, 8.10.76 - US - 386121, 549647, 627987, 730930) (5pp1248).

VOYT/ ★ D21 23894B/12 ★US 4144-32

Preventing erythema of the skin dye to UV absorption - b application of sunscreen compsn. contg. tocopherol cpd. and carrie

VOYT W F 10.11.76-US-740646

E13 (13.03.79) A61k-07/42 A61k-31/35

Skin erythema caused by UV is prevented, whilst allowing skin tanning, by application of ≥1 of alpha-, beta-, gamma-, delta-, epsilon-, zeta- or eta tocopherols as absorbents for radiation of 295 to 315 n.m. wavelength.

Process prevents sunburn without causing skin irritation or staining skin or clothing or causing unpleasant odours. 10.11.76 as 740646 (11pp916).

AMCY ★ D21 23895B/12 ★US 4144-32

Oil-free clear creme rinse for hair - contg. lauryl tri:methy ammonium and di:alkyl di:methyl ammonium halide(s)

AMERICAN CYANAMID CO 22.02.77-US-770874 (19.05.75-US 578438)

A96 E16 (A11) (13.03.79) A61k-07/08

A creme rinse for use after shampooing the hair contains 0.5-10% lauryl trimethyl ammonium chloride or bromide and 0.25-5% of dialkyl dimethyl ammonium chloride or bromide, the alkyl gps. contg. 12-18C.

The compsn. is clear, water white, non-oily and can be diluted with water without haze formation or phase sepn.. It does not give an oily feel to hair . 22.2.77 as 770874 (4pp955)

See Also

D13 J5 4019908 D13 J5 4019957

D22 : BANDAGES ; DRESSINGS

VIBR- D22 76950R/42 =DS 2016-698

Disinfection chamber evaporator

VIBRASUG AB (VIB -) 09.04.69-SW-005003

*P34 (15.03.79) *DT2016-698 A61l-03/02*

A disinfection chamber for disinfecting rooms includes an electrically heated, elongated evaporator chamber. The evaporator channel contg. the heating elements is designed as a temp. probe, because it is fixed at one end and is free to expand at the other end. Its thermal elongation operates a spring-loaded lever which can thus be moved between a switch to actuate the heating element and a switch to actuate the motor for a pump to pump disinfectant (formalin) into the evaporator channel. 8.4.70. as 016698 (8pp39)

PROP/ D22 34213X/19 =DS 2451-093

Temporary prevention of refuse rotting - by treatment with mixt of naphthenic acids or their salts and petroleum prods.

PROPFE H 28.10.74-DT-451093

*E15 G02 P34 (15.03.79) *DT2451-093 A61l-11*

A highly viscous mixt. of naphthenic acids and their salts and the high boiling constituents of crude oil distn. of mol.wt. > 550 is used in an amt. of 0.5-5 wt.% (based on the waste) to preserve temporarily household or industrial waste. The naphthenic acids have mol.wt. 300-550 and may be mono- or di-acids of 6-30C cycloparaffins.

The mixt. reduces smell in waste waiting to be processed. 28.10.74. as 451093 (3pp068)

FARB D22 09739A/05 =DS 2631-352

Radiation sterilisation in solid-particle-free atmos. - in airlocked oven with turbulence-free finely filtered airflow

BAYER AG 13.07.76-DT-631352

*P34 +P33 Q31 Q77 (15.03.79) *NL7707-699 B65b-55/08*

Containers, e.g. glass bottles to be filled with parenteral medicine, are sterilised by passing them via laminar flow units through a steriliser zone, sterilising them by radiant heat, and cooling them by air which has been filtered through high-duty suspension filters.

A part of the filtered air is branched off and is passed in a low-turbulence flow parallel to the movement of the containers through the radiant heater. This is a low-cost (investment and operation) soln. for the task of keeping the particles of <1 µ to the order of one per litre of air. 13.7.76. as 631352 (5pp39)

HOLT/ ★ D22 22231B/12 ★DT 2739-966

Removal of odour and toxic substances - by burning the substance absorbed on a refractory carrier

HOLTER H 06.09.77-DT-739966 (00.00.77-DT-705533)

E19 J01 (15.03.79) B01d-53/14

In the parent application, waste gas contg. odours and toxic substances such as amines, ammonia, phenols, and formaldehydes are treated by contacting with a combustible carrier which is impregnated with an absorbent and subsequently burnt to remove these substances. In this addn, the carrier is not burnt but recovered and used agakn for the absorption process. The carrier is made of a refractory material which is porous and can be impregnated with the toxic substance in the form of a liq. Pref. the carrier is composed of expanded perlite.

Method is more economical as the carrier is recycled to the process. Used for the removal of odour and toxic substances such as amines, ammonia, phenols, and formaldehydes from waste gases or air. 6.9.77 as 739966, Add. to 2705533. (5pp095)

BIOM- ★ D22 22267B/12 ★DT 2741-317

Anodic oxidn. sterilisation of fluids - after increasing conductivity by carbon di:oxide introduction

INST BIOMED TECH 14.09.77-DT-741317

P34 (15.03.79) A61l-01

The sterilisation process of fluids in anodic oxidn. cells is severely impeded if the fluid has a low or no electrical conductivity, e.g. distilled water. This is remedied by introducing into the fluid carbon dioxide through a gas exchanger. The conductivity is increased enough (e.g. by a factor of 50) to apply the anodic oxidn. process. The carbon dioxide is finally removed by an inert gas aeration. 14.9.77 as 741317. (5pp39)

UPJO ★ D22 22298B/12 ★DT 2836-913

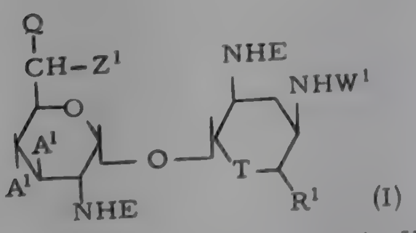
Antibacterial deoxy-neamine derivs. and precursors - useful e.g. for sterilisation and paper making BE 6.3.79)

UPJOHN CO 13.03.78-US-885872 (06.09.77-US-830684)

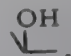
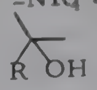
B03 E13 F09 (15.03.79) A61k-31/71 C07h-05/06 C07h-15/22

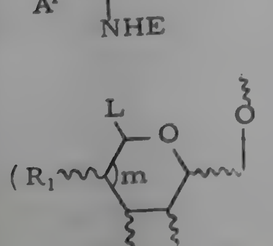
$3^1, 4^1$-Di-O-acetyl-1, 2^1, 3, 6^1-tetrakis-N-(trifluoroacetyl)-neamine (Ia) is new.

Cpds. of formula (I) are also new.



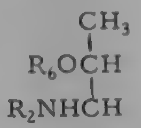
(I)

T =  and R^1 = OG; T = oxo and R^1 = H; T is $=NR_4$ and R^1 is H; T =  and R^1 = H; T is $=CZ_1Z_2$ and R^1 = H; T is ∿OH and R^1 is H or T is the gp. (a):



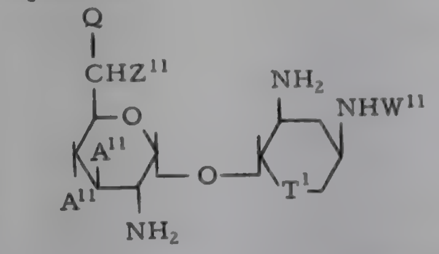
(a)

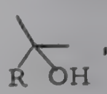
Q is H or CH_3; Z^1 is NHE, OB or $N(CH_3)E$; E and B are removable blocking gps. for amino and hydroxy respectively; A^1 is H or OB; W^1 is E or J, or $CO \cdot CHOH \cdot (CH_2)_n \cdot NH_2$; n = 0-2; J = 1-3C alkyl; G = SO_2R_7; R_7 = 1-3C alkyl opt. with 1-3 F and/or Cl substits. or phenyl with up to 2 same or different Cl, CH_3, NO_2 or CH_3O substits.; R_4 = OH, NH_2 or NHCO-4C alkyl or phenyl; Z_1 and Z_2 are H, 1-4C alkyl or together complete 5-6C cycloalkyl. When one is H and the other alkyl this can have a terminal alkoxycarbonyl or alkoxy substit.; R_1 = H, OH, acetyloxy, benzyloxy, benzoyloxy, NHR_2 or NR_2R_3; R_2 = H, acetyl or CF_3-CO; R_3 = 1-4C alkyl; m = 0 or 1; L = CH_2R_1 or, if m = 1 and R_1 = acetyl, the gp. -



; R_6 = H or acetyl).

The cpds. are intermediates to antibacterials e.g., cpds. of formula:



(T^1 is $=NR_4$; where T^1 = , CZ_1Z_2, OH or gp. (a); Z^{11} = OH, NH_2 or $NHCH_3$; A^{11} = H or OH; W^{11} = J or OH).

23.8.78 as 836913. (123pp1251)

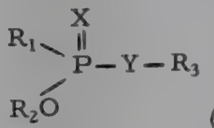
CSIR ★ D22 22345B/12 ★DT 2838-898

Fibre-reactive organo-phosphorus insecticide derivs. - for protecting keratinous materials e.g. wool against insect attack

COMMONWEALTH SCIENT ORG 06.09.77-AU-001533

C01 E11 F06 (15.03.79) A01n-09/36 C07f-09/18

New organophosphorus derivs. are of formula (I):



(I)

In (I), X,and Y are O or S; R_1 is NH_2, aryl, or 1-6C alkyl, alkoxy, alkylamino, dialkylamino or alkylmercapto; R_2 is 1-6C alkyl; R_3 is $-J-(K-L)_n$; J is aliphatic residue or a residue with an aromatic or heterocyclic ring; K is -O-CO- (3), $-NR_4$-CO- (4), -O-CO-NR_4- (5), -O-CO-NR_4-CO- (6), or -O- (7), in which the O-atom of (3), (5) or (6) or the N-atom of (4) is linked to J and in which the carbonyl oxygen of (3), (4) or (5) or both carbonyl oxygens of (6) may be replaced by S; R_4 is H, aryl or 1-6C alkyl; L is halogenated alkyl or alkenyl, 1-4C alkyl or aryl substd. by vinylsulphonyl or vinylsulphonamido or its precursor; or a heterocyclic residue substd. by 1-4 halogen atoms attached to the C-atoms adjacent to the ring N-atom, the ring being linked to K directly or via a 1-4C alkylene gp.; and n = 1, 2 or

Under favourable conditions (I) react with keratin fibre to give a durable bond which ensures prolonged insecticid al activity. 6.9.78 as 838898. (46pp280)

STIL ★ D22 22368B/12 ★EP ---1-048

Disinfecting hospital operating theatres and other rooms - by connecting air conditioning plant for closed circuit operation and feeding disinfectant into air duct

STIERLEN-MAQUET AG 09.09.77-DT-740738

Q74 (21.03.79) F24f-03/16

D/S: BE, CH, DT, FR, GB, LU, NL, SW.

Hospital operation theatre and other rooms are disinfected using the same air conditioning plant (16) by connecting the plant in a closed circuit arrangement with the theatre and rooms and feeding the disinfecting agent into an air duct of the plant.

3.8.78 as 100593 (49pp536).

ISR: DT2308012; US3493323; FR2191908; DT2233215.

KIDA/ ★ D22 22405B/12 ★EP ---1-12

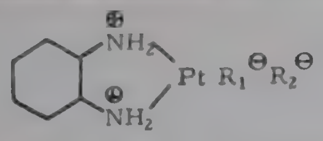
Cis-platinum complexes - useful as antitumour agents an antimicrobials

KIDANI Y 12.09.77-JA-108921

B02 (21.03.79) A61k-31/28 C07f-15

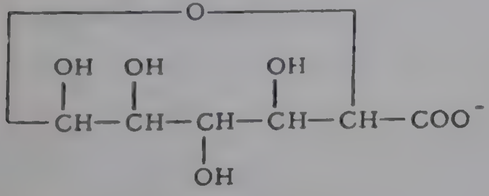
D/S: DT, FR, GB.

Cis-platinum (II) complexes of formula (I) are new:



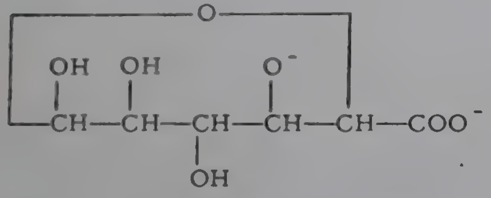
(I)

($R_1 = R_2$ = Br, I, NO_3, $BrCH_2COO$ or



(II)

or R_1 is (II) and R_2 is NO_3;
or $R_1 + R_2$ is SO_4 or



the stereoisomerism of 1,2-diaminocyclohexane is cis-, trans-l or trans-d-).

(I) are antitumour agents and antimicrobials esp. for cleaning and sterilising purposes. Dose: 1-400 mg/kg. daily.

12.9.78 as 100871 (21pp1248).
ISR: 1 Journal Reference.

GEAT ★ D22 22411B/12 ★EP ---1-147

Joint prosthesis element - having a carbon coated graphite body encircled by a metal pressure band

GENERAL ATOMIC CO 08.09.77-US-831488
L02 P32 (21.03.79) A61f-01
D/S: CH, DT, FR, GB.

An element for an artificial joint comprises a body of dense isotropic graphite, a coating of dense isotropic pyrolytic carbon, and a metallic pressure band encircling the body adjacent the joint surface of the element. The band has a modulus of elasticity at least five times that of the body.

The element is extremely hard wearing and the compression imposed by the band helps counteract the stresses experienced by the element adjacent the joint surface during use.

31.8.78 as 200171 (14pp525).
ISR: US3526906; US4012796; US3623164; US3893196.

BRIM ★ D22 22415B/12 ★EP ---1-151

Heatable article for application to the body - having a layer of wax melted by a heating element incorporated in the article

BRISTOL MYERS CO 09.09.77-US-831839
P24 P32 R59 (21.03.79) A45d-02/46 A61f-07 H05b-03/34
D/S: BE, CH, DT, FR, GB, LU, NL, SW.

An article, for heat treating an area of the body, comprises inner and outer plastics layers between which are located a wax layer, a heating element and a layer of insulating material. In use, the wax layer is closest to the body. The wax layer may be of modular form and retained between a pair of plastics sheets, the heating element may be an electric heater, and the insulating layer may be a fibrous material or a heat reflective sheet.

The article is used by heating the wax to melt it, switching the heater off, and applying the article to the body to treat the body with the heat of fusion of the wax as it resolidifies. During the application the heating is switched off, unlike articles of the prior art.

7.9.78 as 2001796 (13pp525)
ISR: DT580453; GB427795; US3202801; US3281578.

CECA- ★ D22 22428B/12 ★EP ---1-19

Gel compsn. based on carboxymethylated galactomannan crosslinked with chromium cations, useful in air treating compsns.

CECA SA 31.08.77-FR-026435
A11 C03 P34 (A97) (21.03.79) A61l-09/ C08l-05/14*
D/S: CH, DT, GB, NL.

A gel compsn. comprises as principal gelling agent a carboxymethylated galactomannan (I) crosslinked by Cr cations. Pref. (I) are obtd. from guar gum, carob gum, tara gum and/or Espina corona gum. (I) is esp. used as the Na or K salt. Amt. of (I) is pref. 0.5-10 wt.%. Pref. Cr cations are provided by the (basic) sulphate, chloride, acetate and/or chrome alum. Cr:(I) wt. ratio is pref. 0.005-0.1. Compsn. may also contain 0-1% preservative, e.g. benzoic acid or benzoates.

Claimed uses of the compsn. are as supports for air treating compsns. liberating e.g. disinfectants, bactericides, insecticides, perfumes or essential oils, or deodourants. Formation is effected at room temps., no syneresis is observed, and the gel has suitable cohesion and retention props. for air treatment compsns.

2.8.78 as 400071 (14pp949).
ISR: US2599771; US3301723; US3615794; US3677961; US3888312; US3723409.

UNIL ★ D22 22438B/12 ★FR 2394-29

Deodorising compsns. not contg. antiperspirants - contg. at least tw of hydroxy-aliphatic acids, ester(s) amine(s), diol(s) or unsatd. aci salts

UNILEVER NV 04.07.77-GB-027930 (13.06.77-GB-024560)
E19 (16.02.79) A61k-07/32

The compsn. comprises at least 2 deodorising cpds. from (1) 2-10C α-hydroxyaliphatic acids; (2) 1-4C alkyl esters of (1); (3) 2-10C hydroxyalkyl monoamines; (4) 2-10C alkane diols; (5) Ca, Al, Mg or Zn salts of an α-hydroxy unsaturated aliphatic carboxylic acid having at least MC; provided that the 2 cpds. are chosen from different classes, and when the compsn. comprises a mix a triethanolamine and zinc ricinoleate it also contains a third cpd. from any class. The compsn. is prepd. by mixing and packing into an applicator or distribution appts.

The compsn. is applied to the skin using an aerosol, a ball applicator or as a cream lotion or gel. The compsr is effective without the use of anti-perspirants such as Al salts normally used. 9.6.78 as 017310 (20pp597)

JETT/ ★ D22 22440B/12 ★FR 2394-29

Controlled rate vaporiser for volatile prod. e.g. deodorant - couple to air outlet of domestic appliance e.g. vacuum cleaner

JETTER G 18.02.77-FR-004671
P28 P34 (16.02.79) A47l-07/04 A61l-03

The vaporiser comprises a cylindrical outer casing contg the prod. and having air outlets. It has an extension at on end to couple the casing chamber to the air outlet of a domestic appliance. Inside the casing, a coaxial, cylindrical drum contg. the prod. has wall apertures through which the prod. vaporises into the annular air stream between drum and casing. The wall apertures can be adjustably restricted to regulate the rate of vaporisation

The prod. is pref. held in a cylindrical canister which fits rotatably inside the drum with negligible radial clearance. The canister has radial holes through its wall and rotation of the canister inside the drum allows the canister holes and drum wall apertures to coincide to a greater or lesser extent or not at all.

Used in vaporising a volatile prod. such as a deodorant insecticide or bactericide into the atmos. of a dwelling etc. The vaporiser makes use of the air flow from a domestic appliance such as a vacuum cleaner, hair dryer, fan heater, fan etc. The vaporising time can be regulated as required. 18.2.77 as 004671 (7pp448)

HAGE- ★ D22 22472B/12 ★GB 1542-390

Preservative compsn. for protecting wood against blue stain - contains higher fatty acid, boric acid and alkali

HAGER AB 29.04.77-GB-018022
C03 E17 F09 (E34 E36) (21.03.79) A01n-09/02

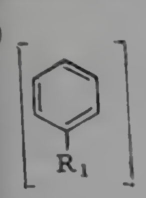
Alkaline-reacting preservative compsn. comprises a 6-

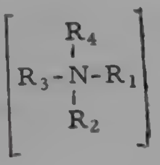
1C normal fatty acid (I), H_3BO_3 and/or HF, and NaOH, a_2CO_3, KOH or K_2CO_3.
For protecting wood against blue stain; compsn. is eadily soluble in water to give economic prepns. for ppln. to wood, and the health problems and fire risks ssociated with the use of organic solvents are avoided. 9.4.77 as 018022 (4pp1248)

ENK D22 05914Y/04 =GB 1542-520
ower alkyl laurates as foam inhibitors - added to disinfectants ontg. quat. ammonium cpds. applied by spraying (BE070176)
HENKEL KG AUF AKTIEN 09.07.75-DT-530584
*E17 P34 (E19) (21.03.79) *DT2530-584 A61l-13 +A01n-09/20*

A disinfecting agent is prepd. for spraying or sprinkling process contains a quat. ammonium cpd. as disinfectant and ⩾ 1 ester of lauric acid with a 1-4C aliphatic alcohol as foam inhibitor.

Pref. aliphatic alcohol has 1-4C. Lauric acid ester content is 0.1-10 wt.% w.r.t. solids in combination of ammonium cpd. and ester. Quat. ammonium cpd. has formula (I) or (II) where R_1 is 8-20C organic radical, R_2 and R_3 are each 1-3C alkyl, R_4 is 1-12C opt. substd. alkyl or aralkyl, X is an anion.

(I)

X

(II)


$$\left[\begin{array}{c} R_4 \\ | \\ R_3\text{-}N\text{-}R_1 \\ | \\ R_2 \end{array}\right] X$$

Prod. is used for cleaning metal surfaces in the food industry, esp. in industries manufacturing beverages. 8.7.76 as 028378 (5pp931)

BETT- ★ D22 22546B/12 ★GB 2004-020
Sliding door with inflatable seal for steriliser - restrained at upper and lower ends and inclined slightly to steriliser opening in open position
BETTER BUILT MACHIN 09.09.77-US-831768
A88 Q67 (21.03.79) F16l-13

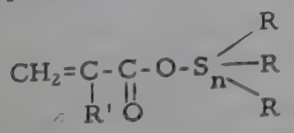
A sterilizer comprises an enclosure having an access opening which mounts guide tracks on opposite sides. A rigid door is of slightly larger dimensions than the opening and mounts roller members on opposite sides for movement in the guide tracks.

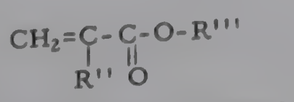
A restraining flange restrains the door against outward displacement by the pressure of steam within the sterilizer chamber. Fluid actuated flexible seals pref. of ethylene, propylene or silicone rubber surround the opening of the sterilizer to engage the door during sterilising.

Used for sterilization of hospital and labortory glasswear, liquids, instruments, surgical gowns. The door is restrained only at two faces which avoids the necessity for heavy structural steel restrains. The door is strengthened by stiffeners which cuts down the amt. of material used without sacrificing strength. The door retracts slightly from the front face of the sterilizer to provide a spacing which allows broken glass which accummulates in the open -ing to drop down to the floor. The glass does not therefore become embedded in or abrade the sealing member. 22.8.78 as 034221 (10pp1044)

ASAH ★ D22 22557B/12 ★J5 3112-991
Mouldable plastic with resistance to mould, fungus, etc. - comprises a (co)polymer of e.g. tri:butyl tin meth)acrylate, tri:propyl tin methacrylate or tri:phenyl tin acrylate
ASAHI CHEMICAL IND KK 14.03.77-JA-027720
A14 (02.10.78) A01n-09 C08f-220/04 C08f-230/04 C08f-246 C08l-57

The plastic contains (1) 0.05-5 wt.% of a monomer of formula (I) as polymerisation component, or (2) a copolymer of (I) and the monomer of formula (II); or (3) mixts. of homopolymers of (1) or (II) and vinyl type plastics.


(I)


(II)

$$CH_2{=}\underset{R'}{\underset{|}{C}}\text{-}\underset{O}{\underset{\|}{C}}\text{-}O\text{-}SnR_3 \quad (I) \qquad CH_2{=}\underset{R''}{\underset{|}{C}}\text{-}\underset{O}{\underset{\|}{C}}\text{-}O\text{-}R''' \quad (II)$$

In the formulae R is propyl, butyl, amyl or phenyl; R' and R'' are H or Me; and R''' is 1-8C alkyl.
(II) are e.g. methyl (meth)acrylate, ethyl (meth)acrylate or n-butyl acrylate. The homopolymers or copolymers in (3) are of vinyl(idene) chloride, styrene, acrylonitrile, methyl methacrylate or vinyl acetate. 14.3.77 as 027720 (7pp136)

SUGI/ ★ D22 22652B/12 ★J5 4018-472
Air conditioner for use in automobiles - includes rotary adsorbent container which controls flow of air through desorbing and conditioned air lines
SUGIMOTO H 11.07.77-JA-082833
J01 P34 (10.02.79) A61l-09 B01d-46/32 B01d-53/06

A cold air circulation line is disposed separately from a desorbing line, through which warm air flows in the direction opposite to the cold air flow in the circulation line. An absorbent container rotatable at low speed is mounted so as to shut off the above lines from one another. A flow line switching plate is disposed at the outlet side of the circulation line to close it when it is not used, thus avoiding outside air from entering the line.

Device is for cleaning air; removing harmful gas components and dust to provide pure cold air. Pollution of the pure air by polluted outside air is avoided. 11.7.77 as 082833 (3pp26)

NIKS ★ D22 22838B/12 ★J5 4019-475
Deodorising appts. for gas - comprises a pair of units, each comprising packed ion exchange resin bed and liq. distributor
NIPPON KASEI KK 13.07.77-JA-084349
J01 P34 (14.02.79) A61l-09/ B01d-53/04*

The appts. comprises a pair of upper and lower units, each including a packed bed of ion-exchange resin and a liquid distributor. During a certain phase of the operating cycle, a cleaning liq. is delivered from the distributor onto the top of the packed bed in the bottom unit to clear the packed bed, and the malodorous gas is introduced into the bottom unit to be washed by the downward stream of cleaning liq. as the gas rises through the packed bed, and then enters the top unit where the malodorous components in the gas stream get caught by the ion exchange resin bed.

When the top unit is in the cleaning operation, the gas is introduced into the top unit for washing purposes and then passed to the bottom unit. 13.7.77 as 084349 (4pp47)

DYNI ★ D22 23031B/12 ★J5 4020-128
Base cloth for medical plaster - comprises knitted cloth of specified elongation coated with resin compsn.
DYNIC CORP 13.07.77-JA-083885
A96 F07 P34 (15.02.79) A61k-09/70 A61l-15/06

Base cloth comprises resin compsn. on one surface of knit cloth that does not substantially elongate in vertical direction and has 50-130% of elongation in horizontal direction. The resin compsn. gives 50% modulus 500-1200 g and residual strain at the point 10-30% to the knitted clothes. Pref. compsn. is foamed resin compsn.

Medical plaster is produced by coating plaster medicament resin compsn. coated surface of base clothes. The resin compsn. is coated over one surface of knitted cloth. Knitted cloth is latch knitting, raschel knitting, tricot knitting, milanese fabric made from natural fibre or synthetic fibre. 13.7.77 as 083885 (4pp69)

MONM/ ★ D22 23127B/12 ★J5 4020-956
Cleaning air in room - by adsorption into aq. soln. contg. hydrogen peroxide and calcium hydroxide and generating oxygen from peroxide for recirculation
MONMA K 18.07.77-JA-085155
E37 J01 P34 (16.02.79) A61l-09/08 B01d-53/14 C01b-13/02

Air in room is cleaned by (a) absorption into aq. soln. (II) contg. hydrogen peroxide (III) and calcium hydroxide (IV), which is stored in a vessel, for removal of CO_2 by the reaction with (IV) for formation of calcium carbonate and capture of viruses and bacteria into (II); (b) generation of O_2 (V) by decomposition of (III) in the presence of catalyst (VI such as manganese dioxide; and (c) recirculation of (V) into room.

Viruses and bacteria captured in (II) are sterilised by (III). 18.7.77 as 085155 (4pp42)

MASI D22 11480Y/07 =J7 9003-779

Composite polymers of collagen and micro-polysaccarides - for medical purposes giving controlled resorption properties

MASSACHUSETTS INST TECH 15.07.75-US-596111

*A11 B04 P32 P34 (A96) (27.02.79) *DT2631-908 A61f-01/24 A61l-15 A61l-17 C08h-01*

Crosslinked composite polymers from (A) collagen and (B) a muco-polysaccharide contg. $\geqslant 0.5(6\text{-}15)$wt.% (B). Polymers are useful for prodn. of surgical sutures, blood vessel implants and all forms of surgical prosthesis.

Resorption rate can be varied from that of uncrosslinked collagen down to almost zero, without deterioration in mechanical properties. Most types are compatible with blood and do not cause aggregation of platelets or coagulation of red corpuscles. 12.7.76 as 082872 (clg.15.7.75-US-596111) A61f 1/24; A61l 15/00, 17/00; C08h 1/00 (27.2.79) (20pp) MASSACHUSETS INST. TECH(J52080885)

KOBE ★ D22 23319B/12 ★J7 9003-820

Appts. for removing carbon mon:oxide from air - includes filter contg. gas permeable conductive porous fillers carrying platinum or palladium

SHIN KOBE ELEC MACH 01.04.71-JA-019895

J01 P34 (27.02.79) A61l-09 B01j-01 B01j-23/40

The appts. comprises a filter which contains gas-permeable conductive porous fillers carrying Pt or Pd and a device for automatically adjusting the temp. of heated fillers. 1.4.71 as 019895. A61l 9/00; B01j 1/00, 23/40 (27.2.79) KOBE ELECTRIC KK (3pp26) (J47027173)

ANON ★ D22 23393B/12 ★RD-179-042

Wool finishing compsn. for protecting against pests - contains ring chlorinated phenoxy chloro-methyl sulphanilide and halogenated di:phenyl urea deriv.

ANONYMOUS 20.02.79-RD-179042

*E14 F06 (10.03.79) D06b-00/**

A combination of poly-ring chlorinated 2-phenoxy-chloromethane sulphanilide and 4,4-dichloro-3,3'-trifluoromethyldiphenyl urea or 2-(2'-sulpho-4'-chlorophenoxy)-5-chloro-3',4'-dichlorodiphenyl urea is used.

Stable compsns. are obtd. in the presence of alkalis, H_2O and H_2O-miscible solvents. (903)

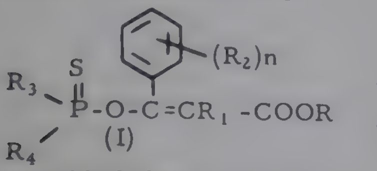
FARB D22 12754Y/08 =SU-604-459

Phenyl-carbalkoxy-vinyl esters of thiono phosphoric acid - are insecticides, acaricides used in hygiene, as plant protection agents and to protect stored goods

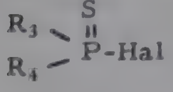
BAYER AG 20.08.75-DT-537047 (20.08.75-DT-536977)

*C01 E11 (09.03.78) *BE-845-328 A01n-09/36 C07f-09/08*

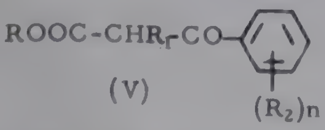
Cpds. of formula (I) as the cis or trans isomer or their mixt. have been prepd. In the formula R is CH_3 or C_2H_5; R_1 is H or CH_3; R_2 is CN, halide, CH_3 OCH_3, SCH_3, or phenyl; R_3 is 1-3C alkoxy, methyl, ethyl, propylthio, butylthio R_4 is OCH_5, OC_3H_7 or OC_4H9; n is 1-3 or 0 or 1-3 provided that R_3 is not 1-3 alkoxy. (I) are insecticides and acaricides used as plant protection agents, in hygiene and to protect stored goods. They have low phytotoxicity and are active against both sucking and biting insects. They are formulated in conventional compsns. and have superior activity to known vinyl esters of thionophosphoric acid. The initial concn. of (I) is 0.1-95 wt.%.



(I)



(IV)



(V)

(I) is prepd. by reacting cpd. of formula (IV) with cpd. of formula (V) in the presence of solvent and acid acceptor. Gofer W., Maurer F., Ribel H.J., Bul. 15/25.4.78 16.8.76 as 387272 (19pp)

ALPU D22 40372X/22 =SU-604-

Sterile packaging machine chamber - disinfected by injecti hydrogen peroxide and steam mixt at specified temp throu nozzles BE170576)

ALPURA KORECO AG 19.11.74-CH-015348

*P34 Q31 (05.04.78) *DT2507-790 A61l-03*

The sterile chamber of a packaging machine is disinfect by injecting into the chamber simultaneously H_2O_2 and steam. The former has been raised to 50-95°C and the latter to 110°C at a pressure of 1.46-10 kg/cm^2. Steril is achieved in 60 seconds, thus reducing the overall tim required from 27 mins to 4 mins.

Leliger W., Bul 15/25.4.78 19.11.75 as 193146 (2pp)

STER/ ★ D22 23679B/12 ★US 4143-

Lubrication of surgical devices - by coating surfaces with sodium potassium carbonate, acetate, citrate or bi:carbonate

STERNLIEB J J 25.10.77-US-844726

A96 B07 E12 P21 P32 (E34) (13.03.79) A41d-19 A61f-13 C1 01/10 C10m-03/18

Surgical devices of plastics, natural or synthetic rubbe are surface coated with Na or K carbonate, bicarbonate acetate (or the corresp. hihydrate) or citrate dihydrate.

The coating acts as a lubricant but it does not cause adverse reactions in animals or humans. Installation of the devices is eased and self-adhesion of the devices on storage is prevented. The coating is used instead of the usual talc or cornstick, with their known disadvantages. The coating also acts as an inhibitor of bacteria and moulds. 25.10.77 as 844726 (3pp1248).

COHE/ ★ D22 23681B/12 ★US 4143-

Filling augmentation mammary silicone prosthesis - using syri with screw threaded connector for saline supply bottle

COHEN I K 16.12.76-US-751215

A96 P21 (13.03.79) A41c-03/10

An inflatable prosthesis is implanted in a breast then a syringe is sterile filled with sufficient liq. to fill compl ely the prosthesis by attaching to a liq. container via a screw-threaded connector removing the syringe from t connector and attaching to the prosthesis.

Syringe volume is pref. 300-400 ml and the liq. is sa ine soln.. The syringe may be removed from the connec or by unscrewing or by breaking a connection. 16.12.76 as 751215 (5pp1358).

WICH/ ★ D22 23705B/12 ★US 4143-

Adjustable bend finger splint - with spaced side tabs and g extending to bending grooves in base strip

WICHMAN H 21.03.77-US-779506

P32 (13.03.79) A61f-05/04

Splint, partic. for a finger, comprises a base strip bendable to required shape, projections extending upwa ly from the base and separated at the base by gaps whic extend to grooves on the base outer surfaces to facilitat base shaping and reduction to desired size.

The projections are pref. at right angles to the base and the splint may be e.g. of aluminium and carry a foam or sponge rubber cushioning pad. The arrangement permits splinting at any desired bend position and provides the necessary lateral support. 21.3.77 as 779506 (5pp1358).

HEXC ★ D22 23706B/12 ★US 4143-

Orthopaedic bandage assembly - comprises fabric carri softenable polymer compsn. and perforated separator to prolo cool down time

HEXCEL CORP 22.08.77-US-826437

A96 P32 (A13 A17) (13.03.79) A61f-05/04

An orthopaedic bandage assembly includes a length of a pliant fabric carrier formed by strands of a relatively bulky material which define openings having an area 0.010 in^2. The strands are coated and at least partially impregnated with a polymer compsn. which is heat softenable. The assembly also includes a separator made o a material that is readily separable and releasable from the heat softenable composition. The separator is relatively thin and has apertures which are smaller than the carrier openings.

The coated carrier and the

nto a roll so that the separator separates consecutive urns of the carrier. To form a cast. the roll is sub ged in heated water to heat the compsn. above its softenng temp. The water can glow through the carrier openngs and separator apertures to the roll centre to speed ip the softening process. The roll is then removed from he water and the separator is discarded to allow the carrier to be applied to the patient.

The separator prolongs the cool-down time of the carrier to extend the time for forming the cast. 22.8.77 as 826437 (8pp1405).

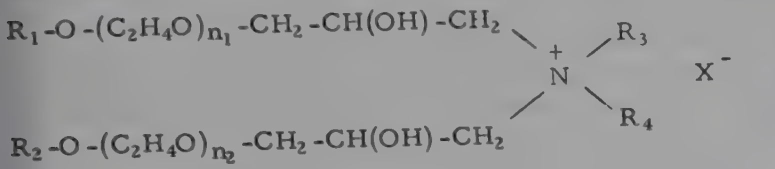
BERP ★ D22 23810B/12 ★US 4144-122

Cellulose pulp fibre web of low mechanical strength - obtd. by treating slurry with a quaternary ammonium cpd.

BEROL KEMI AB 29.11.77-US-855587 (10.11.72-US-306250)

A97 E16 F09 (A25) (13.03.79) D21d-03

A cellulose pulp fibre slurry is treated, prior to or during formation into a web, with a quat. ammonium cpd. of formula (I)



(I)

where R_1 and R_2 are 8-22C aliphatic hydrocarbon gps., R_3 and R_4 are Me, Et or hydroxy-ethyl; n_1 and n_2 are 2-10; and X^- is a salt-forming anion; and the formed web is dried.

The treatment reduces inter-fibre bonding and imparts a low degree of mechanical strength to the web, while at the same time preserving good hydrophilic properties. The treated cellulose may be defibrated into fluff and used in hygienic prods. such as diapers, absorbent or sanitary pads or tampons. 29.11.77 as 855587 (+ 17.10.74; 22.10.76 - US - 515738; 734798) (6pp558).

DOWC ★ D22 23849B/12 ★US 4144-211

Solid complex of oxazoline or oxazine polymer and halogen - which is soluble in water or organic solvent e.g. to form disinfectant

DOW CHEMICAL CO 06.09.77-US-830529

A26 (13.03.79) C08g-73/06 C08l-79/04

Solid complex comprises (a) a poly-2-oxazoline or poly-2-oxazine and (b) a halogen, interhalogen, or pseudo-halogen.

The complexes are soluble in water and a variety of conventional solvents (including CH_2Cl_2, acetonitrile, MeOH, THF and i-PrOH), and some serve as excellent sanitising and antimicrobial agents. When dissolved, the complexed halogen retains its chemical activity although the complexes themselves are quite stable. Thus the dangers associated with the handling of volatile halogens are substantially diminished. The complexes also increase the solubility of the halogens in various solvents in which they normally have low solubility. 6.9.77 as 830529 (4pp914).

BADI D22 70719W/43 =US 4144-260

N-Nitroso N-(cyclo)alkyl hydroxylamine aluminium salts prodn - from alkali(ne earth) or ammonium salts with organic solvent to improve purity

BASF AG 30.04.74-DT-420874

*A60 C03 E19 +P63 (C01) (13.03.79) *BE-827-721 C07f-05/06*

Al salt of an N-nitroso-N-alkylhydroxylamine of formula R-N(OH)NO (I) (where R is 1-10C alkyl or 5-7C cycloalkyl) is prepd. by reacting an Al salt with an alkali(ne earth) and/or ammonium salt of (I) in the presence of water, an acid and an inert organic solvent.

Pref. starting material is an alkali metal salt of N-nitroso-N-cyclohexylhydroxylamine. Pref. solvent is an aromatic or araliphatic hydrocarbon. The prods. have fungicidal properties and are starting materials for the prodn. of fungicides for wood preservatives, coloured surface coatings, synthetic resins and dye formulations. 28.3.75 as 563225 (5pp924).

ALZA ★ D22 23885B/12 ★US 4144-309

Formaldehyde microbicide dispensing device - consists of shaped polymer unit contg. para formaldehyde

ALZA CORP 09.06.77-US-804961

A97 E17 P34 (13.03.79) A61l-09/04

A dispenser for microbicide consists of a body sized and shaped for placement in the environment of use, formed of a stable, moisture-permeable polymer, and a reservoir of paraformaldehyde which depolymerises to formaldehyde on contact with water. The device is activated by moisture when in use.

The device can be constructed of a wide range of materials, including acrylic polymers, homo- or copolymers of vinyl chloride, polyethylene, polypropylene, ABS resins, polyesters, polyamides, polyurethanes, etc.. It is pref. in the form of a tube prepd. by extrusion of the polymer contg. dispersed paraformaldehyde. 9.6.77 as 804961 (5pp955).

See Also

D13 EP ---1192

D23: OILS; FATS; WAXES

STEP ★ D23 22139B/12 ★CH -609-316

Oxo-bi:cyclohexadecene isomer perfume components - are prepd. from cyclododecanone, morpholine and methyl vinyl ketone and opt. hydrogenated to alkali stable deriv.

STEPAN CHEMICAL CO 17.04.74-CH-005297

E15 (28.02.79) A61k-07/46 C07c-45 C07c-49/27

14-Oxobicyclo-(10,4,0)-hexadec-1(12)-ene, (I) and 14-oxo -bicyclo-(10,4,0)-hexadec-12-ene (III) are prepd. simultaneously by:(a) cyclododecanone condensn. with morpholine to 1-morpholino-cyclododecene, (III); (b) reaction of (III) with Me vinyl ketone to form an internal salt; (c) hydrolysis of salt formed to 2-(3-oxobutyl)-cyclododecanone (IV), and (d) base-catalysed cyclisation of (IV).

14-Oxobicyclo-(10,4,0)-hexadecane, (V), is prepd. by (i) hydrogenating a mixt. of (I) and (II) or (ii) ketalising a mixt. of (I) and (II), hydrogenating the ketal and hydrolysing the hydrogenation prod.

Mixts. of (I) and (II) are used as active components in perfume compsns. (V) has a musk-like odour, similar to that of (I), but has higher stability under alkaline conditions and can be used in perfumes exposed to alkaline conditions. 17.4.74 as 005297 (I(5pp200)

DURD/ ★ D23 B/12 ★CS 7701-595

Beeswax isolation

DURDA A 00.00.77-CS-001595

(29.12.78) C11b-01/10

FIRM ★ D23 22319B/12 ★DT 2837-935

Methyl-substd. 6-methylene-1-oxa-spiro-decene or deca-di:ene perfume and aroma ingredients, prepd. by reacting epoxy cpds with basic cpds. and dehydrating prod. (NL 9.3.79)

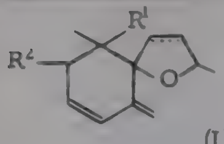
FIRMENICH SA 07.09.77-CH-010930

B07 E13 P15 (B03 D13) (15.03.79) A23k-01 A23l-01/23 A24b-1.

A61k-07/46 A61k-47 C07d-307/94

6-Methylene-2,9,10,10-tetramethyl-1-oxa-spiro[4, 5]-dec-7-ene, (Ia), 6-methylene-2,10,10-trimethyl-1-oxa-spiro[4, 5]-deca-3,7-diene, (Ib), and 6-methylene-2,9,10-trimethyl-1-oxa-spiro[4, 5]-dec-7-ene, (Ic) are new cpds.

Perfume- or aroma-modifying compsns. contain, as organoleptically active ingredient, an Me-substd. 6-methylene-1-oxa-spiro[4, 5]-decene or -decadiene having formula (I) (where the dotted line indicates a single or



(I)

double bond; and (a) R^1 is Me and R^2 is H or Me, or (b) R^1 is H and R^2 is Me). The use of 6-methylene-2,10,10-trimethyl-1-oxa-spiro-/4, 5/-dec-7-ene, (Id), for imparting a vanilla taste or aroma to foodstuffs or beverages, is specifically claimed.

As perfumes, (I) are used for reconstituting ethereal oils, e.g. pine-, rosemary and lavender oils. (Id) develops a fresh, camphor-like note. (I) may be used in cosmetic compsns., e.g. in 0.1-30wt.% concn. As aroma-modifiers, (I) can reinforce the aroma of carrots, potatoes or parsley; and can aromatise foods, beverages, beer, pharmaceuticals or tobacco. Concns. are 0.01-10 ppm. 31.8.78 as 837935. A231 2/26 (22pp200)

SCMZ D23 30207A/17 =GB 1542-379

Rapid hydrogenation of soap-contaminated glyceride oil - by adjusting copper chromite auxiliary catalyst concn.

SCM CORP 17.03.77-US-778710 (18.10.76-US-733348)
*(21.03.79) *BE-859-868 C11c-03/12*

A glyceride oil hydrogenation process comprises subjecting oil to hydrogenation in zone with hydrogen gas in the presence of > 0.02 wt.% nickel hydrogenation catalyst and ≥ 0.25 wt.% copper chromite adjunct catalyst (wt. w.r.t. oil), oil being contaminated with soap.

Concn. of soap contaminant is ≥ threshold for exerting its depresant effect but ≯ 0.25 wt.% oil concn. of adjunct catalyst is established and maintained proportional to soap concn. Hydrognation is discontinued after ≥ signigicant increase in oil saturation.

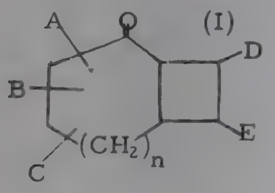
Oil can now be catalytically hydrogenated contg. soap contaminants in high concn. and free fatty acid. 14.10.77 as 042733 (16pp931)

MONS D23 49103Y/28 =GB 1542-741

Odorant compositions contg. polycyclic aliphatic cpds. - contg. a cyclobutane ring

MONSANTO CO 29.12.75-US-645188
*E15 (21.03.79) *DT2659-197 A61k-07/46 C07c-49/36*

Fragrance compsn. is prepd. contg. a odiferous amt. of cpd. of structural formulae (I), (II) or (III) where n is 0 or 1; A, B and C each are H or 1-3C alkyl, such that when n is 0, > 1 of A, B or C is not H; D and E are each H or 1-6C alkyl, such that D+E is ≯ 6C, 1-5C alkoxy, RCOO- where R is 1-6C alkyl or aryl such that if either D or E is alkoxy or carboxy then the other is H; M is 1-8; F and G are H, 1-3C alkyl or tert. butyl; X is of formula (IV) where p is 0, 1 or 2 and I and J are each H or Me such that if p is O, then m > 2 such that number of C and O ≯ 23.



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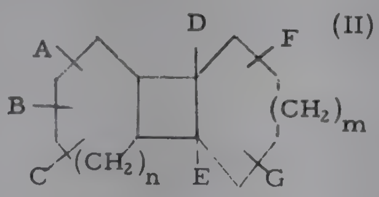

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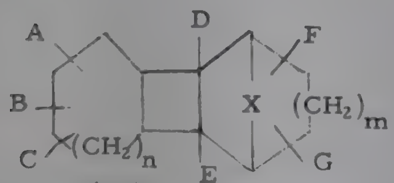
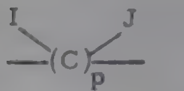


(III)



Prod. has pleasing, strong and longlasting aroma used in cosmetic, detergent and bar soap formulations. 29.12.76 as 054225 (11pp931)

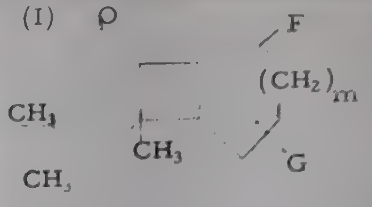
MONS D23 49103Y/28 =GB 1542-742

Odorant compositions contg. polycyclic aliphatic cpds. - contg. a cyclobutane ring

MONSANTO CO 29.12.75-US-645188
*E15 (21.03.79) *DT2659-197 C07c-49/36*

Tricyclic ketones of structural formula (I) are prepd. where m is 1-8, F and G are each H or 1-3 alkyl, as fragrance compsns. Pref. m is 2 and (I) is 5, 5, 7-trimethyltricyclo [6.4.0.$0^{2.7}$] dodecane-3-one or 1, 13, 13-trimethyltricyclo [8.4.0.$0^{2.9}$] tetradecane-11-one.

(I)



Prod. is synthesised by irradiating a mixt. of isophorone and a cyclo-olefin in appropriate solvent through a glass filter which will not pass light having a wavelength < 2600 Å, reaction temp. is pref. 150°C.

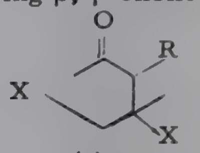
Prod. forms many different spatial configurations i.e. mixts. of stero isomers, used as fragrance cpds. in perfumery. 29.12.76 as 1282/78 Div.ex 1542741 (2pp931)

SAGA ★ D23 22907B/12 ★J5 4019-909

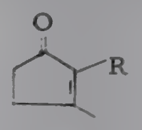
1,2-Di:halo-2-methyl-3-alkyl-4-pentanone - useful as precursor for perfumes and prostaglandin(s)

SAGAMI CHEM RES CENTRE 15.07.77-JA-084185
B05 C03 E16 (15.02.79) C07c-45 C07c-49/16

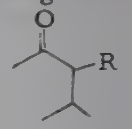
1,2-Dihalo-2-methyl-3-alkyl-4-pentanone of formula (I) (where R is 4-10C alkyl and/or X is Br) is new. Prod. of (I) (esp. R is 4-10C alkyl and X is Br) comprises reacting β, γ-enone of formula (III) with halogenating agent.



(I)



(II)



(III)

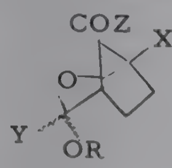
(I) is useful as synthetic intermediate for perfume (jasmone homolog) of formula (II), which in turn is useful as synthetic intermediate for prostaglandin. The process provides simple synthesis of (II) using (I) which can be easily converted into (II) by treatment with base. 15.7.77 as 084185 (5pp38)

KAWA/ ★ D23 22936B/12 ★J5 4019-960

Bi:cycloheptane cpds. - useful as intermediates for prostanoid, pyrethroid, allethroid jasmonoid or mono:terpenoid

KAWANISHI M 12.07.77-JA-082561
B02 C02 E13 (15.02.79) C07c-177 C07d-307/93

New bicycloheptane cpds. are of formula (I). In (I) X, Y are each H or lower alkyl; Z is lower alkoxy or dialkylamino; R is lower alkyl). (I) are cheaper than the known cyclopentane cpds. and useful as intermediate fore preparing the correspg. prostanoid pyrethroid allethroid, jasmonoid or monoterpenoid cpds. For example, 3-methoxy-2-oxabicyclo 2, 2, 1 heptane-7-carboxylic acid methyl ester is hydrolysed to obtain 2-formyl-5-hydroxycyclopentane carboxylic acid methyl ester, from which dl-11-deoxy-prostaglandin E_1 can be obtained. 12.7.77 as 082561 (4pp140)



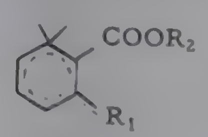
(I)

NAAR D23 58736W/36 =US 4144-199

Safranic acid esters as aromatising cpds. - in perfumes, foods, drinks, tobacco

NAARDEN INT NV 22.02.74-GB-008166
*B07 E15 +P15 (D13) (13.03.79) *BE-825-841 C11b-09*

Perfumed prod. or flavouring compsn. having a herbal, spicy or fruity note contains ≥ 0.5 ppm of ≥1 safranic acid ester of formula (I).



(I)

In (I) the dotted lines represent 2 conjugated double bonds in the posn. 2 endocyclic and 4(α-isomer), 1 and 3 (β-isomer) or 2-exocyclic and 3(γ-isomer); R_1 is 1-3C alkyl or, in the γ-isomers a 1-3C alkylidene; R_2 is 1-4C alk(en)yl. 6.7.77 as 813322 (8pp910).

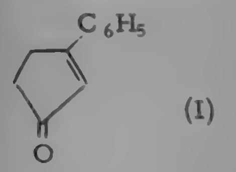
FIRM D23 82568A/46 =US 4144-200

Perfume compsns. contg. 3-phenyl-cyclopentenone - e.g. as coumarin replacement, for improving, intensifying or modifying olfactory properties

FIRMENICH SA 06.05.77-CH-005689
*E14 (13.03.79) *DT2819-858 +C11b-09*

The fragrance of a perfume compsn. is improved, enhanced or modified by the addition of 3-phenyl-cyclopent-2-en-1-one as active ingredient, in combination with a coingredient or diluent.

Prepn. is from reaction of 3-ethoxy-cyclopent-2-en-1-one with bromobenzene to produce prod. of formula (I).


(I)

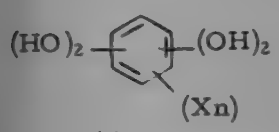
Pref. (I) is added to material to be perfumed to 1-10 wt.%, pref. 5 wt.%. lower concentrations are utilised in mfr. of soaps cosmetics, detergents and household materials.

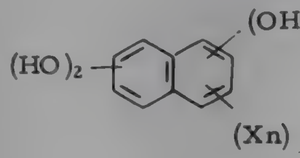
Prod. replaces coumarin having floral-type scent, esp. their jasmine-like fragrance. 14.4.78 as 896440 (2pp931).

TEXC D23 43428Y/25 =US 4144-249
Bis cyclic acetals esp. (2,2,6,6)-tetramethyl benzo bis dioxole - prepd. from polyphenolic cpds. and ketones by simple single phase reaction
TEXACO BELGIUM NV 30.12.75-GB-053095
*E13 (13.03.79) *BE-849-480 C07d-317/44*

Bisacetal prods. are prepd. such as 2,2,6,6-tetramethyl benzobisdioxide by reacting an acetal-forming cpd. such as acetone or 2,2-dimethoxypropane, with an aromatic cpd. contg. 2 pairs of ortho- hydroxy gps. such as 1,2,4,5-tetrahydroxybenzene.

Pref. aromatic cpd. is a polyhydric phenol of formulae (I) or (II), with hydroxy gps. ortho- to each other, X is halogen, OH or R_1OR or SR where R is (substd.) hydrocarbon, m is 0 or 1-4, n is 0, 1 or 2 pref. m and n are each 0.


(I)


(II)

Prods. are used in perfumery 2,2,6,6-tetramethylbenzobisdioxole has odour providing a green top note and can replace phenyl acetaldehyde, hydrotropic aldehyde, acetals thereof etc. contg. such fragrances. 17.11.77 as 852391 Div.ex.4092331 (+ 25.6.76 - US - 689776) (3pp).

TAKS D23 83539V/48 #US 4144-257
Conjugated diene dimer deriv. prodn. - by reacting conjugated diene cpd. with a cpd. active methyl, using nickel complex catalyst
TAKASAGO PERFUMERY KK 24.03.70-JA-024568 (05.10.73-US-404051)
*B05 E19 (13.03.79) *J74040-203 C07c-47/20 C07c-49/20 C07c-121/30 C11c-03*

Prepn. of derivs. of isoprene dimers of formula $CH_2=C(CH_3)-[CH_2]_3C(CH_3)=CH-CH_2-C(R_1)=CH-X$ (I) comprises catalytically reacting in the presence of an inert gas atmos. and at a temp. of 50-150°C for 2-14 hrs. isoprene with a cpd. contg. an active methyl gp. and of formula $R_2\ C(CH_3)=CH-X$ (II).

Reaction is effected in the presence of 1-5 mol % based on wt. conjugated diene cpd. of a Ni catalyst of formula $Ni^{\circ} \leftarrow L$ (III). Molar ratio (III) to ligand is 1:1. Reaction is in pyridine, diethylaniline or triethylamine as solvent, present as 10-200 vol.% on vol. isoprene.

In the formula, R_1 is H or methyl; X is aldehyde-, acetyl-, carbomethoxy- or carboethoxy gp.; R_2 is H or methyl; Ni° is bis-π-allyl Ni or bis-cyclooctadiene Ni complex; L is a ligand consisting of ≥ 1 of $P(R'')_3$, $As(R'')_3$, $Sb(R'')_3$ or $P(OR'')_3$; and R'' is alkyl, cycloalkyl or phenyl.

Prods. are useful as materials for producing perfumes, pharmaceuticals and industrial chemicals. 30.7.76 as 709982 (+ 17.10.74 - US - 515754) (5pp936).

See Also

D13 J5 4019908
D13 J5 4019957
D13 J7 9003878
D14 BE 871990
D15 FR 2394602

D24 : SOAP; SOAP DETERGENTS

NOTHING TO REPORT

D25 : OTHER DETERGENTS

FARB ★ D25 22199B/12 ★DT 2739-343
Basic ester(s) of amino-carboxylic acids and aliphatic poly:ol(s) - esp. for use as surfactants in dyeing of textiles
BAYER AG 01.09.77-DT-739343
A60 E16 F06 (15.03.79) C07c-93/04 C07c-101/02 C07h-13/02 D06p-01/62

New surfactant esters of aliphatic polyols with $\geq$5C with opt. quaternised amino-carboxylic acids in which $\geq$1 N atom is substd. with a hydrocarbon gp. contg. $\geq$8C and opt. interrupted by hetero-atoms and for CONH gps.

As detergents, emulsifiers, wetting agents, thickeners and esp. as aids in dyeing or printing of textiles from natural or synthetic fibres, esp. wool, silk and synthetic polyamides. The esters completely biologically-degradable, causing no pollution of effluents, and also low- or non-foaming. 1.9.77 as 739343. (25pp195)

FARH ★ D25 22228B/12 ★DT 2739-916
Mixed acid orthophosphate ester prodn. - from phosphorus pentoxide and excess of alkanol and poly-ol, useful e.g. in cleaning compsns.
HOECHST AG 05.09.77-DT-739916 (00.00.76-DT-645211)
E11 (15.03.79) C07f-09/09

The parent patent describes prepn. of a mixt. of acid orthophosphate esters by reacting P_2O_5 with a mixt. of a monovalent alcohol (I) and a 2-12C alkanepolyol (II) with 2-6 OH while keeping a P_2O_5:(I):(II) mole ratio 1:2:4/n (n = no. of OH gps. in (II)).

The reactants are mixed or kneaded at 0-120°C with exclusion of moisture and under an inert gas for 1-6 hrs., then the mixt. cooled. In this addn. (I) and/or (II) is used in molar excess relative to P_2O_5.

The mixts. are useful as components of acid cleaning compsns. because of their relatively low corrosivity. They can also be used, opt. after neutralising, as emulsifiers, wetting agents, lubricants, foam-suppressants, antistatics, and (if they contain halogen) as intermediates for flame-proofing agents.

By using an excess of alcohol the viscosity of the mixt. is reduced so side reactions leading to coloured impurities are suppressed. 5.9.77 as 739916, Add. to 2645211. (14pp1251)

KAOS D25 85014Y/48 =GB 1542-387
Cleaning compsn. for removing viscous dirt or wax stains - comprising aq. mixt. of phosphate ester, alkali and anionic and/or nonionic surfactants
KAO SOAP KK 11.05.76-JA-053684
*A97 E11 (E16) (21.03.79) *DT2717-928 C11d-03/36*

A detergent compsn. comprises 0.1-10 wt.% $\geq$1 organic phosphoric acid ester of formula (I) where n is 1, 2 or 3,

$O=P-(-O-(CH_2CH_2O)_nC_mH_{2m+1})_3$ (I) and m is 2, 3 or 4; and 0.1-20 wt.% ≥ 1 of ammonia, and alkanolamine of formula $NHn'(Cm'H_2m'OH)_{3-n'}$, where n' is 0.1 or 2, m' is 2 or 3 and a water-soluble inorganic alkaline agent; 0.1-10 wt.% ≥1 water-soluble organic anionic surfactant and a water-soluble organic non-ionic surfactant; and water.

Pref. ester is tris-2(2 butoxyethoxy)ethyl phosphate or tris-2 (2-ethoxyethoxy) ethyl phosphate. Second component is ammonia or monoethanolamine.

Detergent prod. is esp. useful to remove, rapidly and completely, sticky or solid household stains esp. of cooking oils and fats. 13.4.77 as 015306 (5pp931)

PROC D25 88763X/48 =GB 1542-456
Aq. composn. for refreshing slightly soiled clothes - by spraying and drying pref. in automatic drier
PROCTER & GAMBLE CO 05.05.75-US-574658
*A97 E34 G04 +Q76 (E19) (21.03.79) *BE-841-479 D06m-11/04 D06m-15/10*

A process for freshening and deodorising wrinkled or lightly soiled fabrics comprises commingling fabrics under heat in a fabric dryer with an effective amt. of fabric freshner compsn.

Compsn. contains 1-10 wt.% water-soluble deodorant of alkali metal bicarbonate and carbonate salts or mixts.; 0.5-5 wt.% ethoxylated nonionic antistatic agent; 0-10 wt.% fabric treating adjunct agent other than the antistatic agent or deodorant; balance of water. Pref. compsn. is applied in amt. 0.02-2.0 g per gram dry wt. treated fabric.

Compsn. is prepd. for use in aq. laundry bath. 4.5.76 as 018171 (6pp931)

PROC D25 05092Y/03 =GB 1542-696
Clear stable, liq. washing agents for cold water use - contg. anionic and nonionic wash active agents and opt. alkanolamine
PROCTER & GAMBLE CO 19.02.76-US-659608 (30.06.75-US-591987)
*A97 E19 (21.03.79) *NL7607-160 C11d-01/12 C11d-03/43 +C11d-10/02*

A clear stable single phase heavy duty liq. detergent compsn. is prepd. contg. 10-50 wt.% w.r.t. free acid form of anionic detersive surfactant which is a sulphate, a sulphonate or their mixts.; magnesium or calcium ions (or mixts.) to neutralise ≥ 75% free acid; 5-50 wt.% nonionic surfactant prepd. by condensation of 2-15 moles ethylene oxide with 1 mole of prim. or sec. 8-18C straight- or branched-chain alkyl, having HLB of 8-18; 0-10% alkanolamine contg. 2-4C alkanol moiety; balance contg. mixts. of water and water-soluble solvents to lower viscosity to 300 cP.

Compsn. has ≥ 35 wt.% anionic surfactant plus nonionic surfactant, being free of agents causing phase separation and/or gelling.

Prod. is used in cool water fabric laundering. 29.6.76 as 026991 (13pp931)

PROC D25 01850Y/01 =GB 1542-697
Clear, single phase, heavy duty liquid detergent compsn. - contains alkaline earth cations to replace the alkanolamines previously used to avoid brightener pptn.
PROCTER & GAMBLE CO 30.06.75-US-592009
*A97 E24 (21.03.79) *US3998-750 C11d-01 C11d-03/02 +C11d-10*

A homogeneous, single-phase, heavy-duty liq. detergent compsn. is prepd. contg. 10-40 wt.% anionic detersive surfactant or mixts. w.r.t. free acid form; sufficient magnesium or calcium ions or mixts to provide electrical neutrality for free acid form of anionic surfactant; 10-50 wt.% ethyoxylated nonionic detersive surfactant or mixts.; 0.1-1 wt.% water-soluble bis(styrylsulphonate) biphenyl brightener or its water-soluble salt; balance of liq. carrier as water or mixts. of water in miscible solvents.

Compsn. is free of agents at levels causing phase separation or brightener pptn.

Liq. detergent is prepd. contg. effective brightener with clear, homogeneous, builder-free properties. 29.6.76 as 026994 (15pp931)

LIOY ★ D25 23205B/12 ★J5 4021-40
Detergent compsn. contg. alpha-olefin sulphonic acid magnesium salt - is useful for washing cloth or tableware and has good detergent properties
LION FAT & OIL KK 19.07.77-JA-086239
E17 (E12) (17.02.79) C11d-01/37

Compsn. which comprises a magnesium salt mixt. of 10-20C α-olefinsulphonic acids of average chain length 13.5-16C. The amt. of magnesium salt of α-olefinsulphonic acid with a chain length of 14C is 25-75 wt.% and that of disulphonic acid salt 3-13 wt.%.

Magnesium salt of α-olefinsulphonic acid is formed by e.g. sulphonating 10-20C mixed α-olefin with gaseous sulphuric acid anhydride diluted with inert gas, neutralising it with magnesium hydroxide or magnesium oxide, and then hydrolysing it. The ratio of Mg alkenesulphonate to Mg hydroxyalkanesulphonate is 40-60 to 90-10, pref. 50-5 to 80-20. The detergent compsn. may also contain surfactant or additive (e.g. 10-18C alkylbenzenesulphonate, silicate, sodium carbonate, etc.).

The detergent compsn. is excellent in washing powder, foaming, rinsing, finish feeling and biodegradability. 19.7.77 as 086239 (6pp50)

ASAH D25 95088X/51 =J7 9003-676
Porous capsular structure - has specified dimensions and filter pore size to improve the discharging of the nucleus substance
ASAHI CHEMICAL IND KK 13.02.75-JA-017439
*B07 C03 J04 P33 +P75 (26.02.79) *J51125-675 A61k-09/50 B01j-13/02 B41m-05/14 C05g-03*

The capsular structure consists of a hollow part in which nucleus substance (e.g. adsorbent, medicine, perfume, food, enzyme, adhesive, bacteria, virus, catalyst, ink, bleaching agent, dye, pigment, solvent, stabiliser, agricultural chemical, fertiliser, hardening agent, detergent, etc. which are solid, liquid, mixt. of solid and liquid, solution, dispersion liquid, emulsion etc.) is filled and wall film part.

The volume of the hollow part is $>1\ mm^3$, the volume ratio of the hollow part to the wall film part is <4, and the wall film part is made of porous film having filtering property of membrane filter of average pore size 0.01-10 μ thickness 10^2-10^5μ and the rate of vacancy 40-90%. 13.2.75 as 017439. B01j 13/02; A61k 9/50; B41m 5/14; C05g 3/00 (26.2.79) ASAHI CHEMICAL IND. KK (7pp) (J51125675)

SNAM D25 10000U/08 =J7 9003-854
Monoalkyl sulphate prodn - by catalytic reaction between and alcohol, sulphur dioxide and oxygen
SNAMPROGETTI SPA 31.07.71-IT-027013
*E17 (E14) (27.02.79) *DT2235-916 C07c-139 C07c-141/04 +B01j-31/18*

Alcohols having opt. $(CR^1)R^{11})(R^{111})OH)$ (in which R^1 and R^{11} are H, alkyl or opt. substd. aryl; and R^{111} is an opt. branched 1-20C alkyl or a phenyl gp.), are reacted with SO_2 and O_2 in the presence of cpds. of Gp. VIII or Sub-Gp. I metals as catalysts and opt. organic or inorganic bases.

Nonalkyl sulphates or their salts are obtd.; formation of dialkyl sulphates is inhibited. The process is less expensive than the known alcohol-sulphating processes. 31.7.72 as 076051 (clg. 31.7.71-IT-027013) C07c 141/04, 139/00; B01j 31/18 (27.2.79) SNAM PROGETTI S.p.A. (3pp) (J48023728)

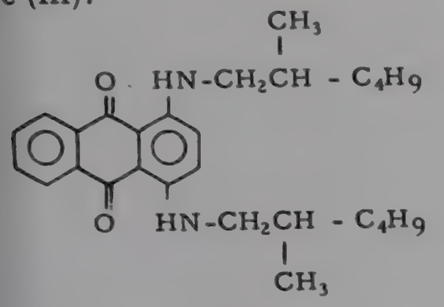
GERS/ ★ D25 23430B/12 ★SU -453-073
Granulated synthetic detergents prodn. - by predrying basic surfactant mixt., adding further components in fluidised bed to improve density and strength of granules
GERSHENOVICH A I 26.01.72-SU-758545 (26.01.72-SU-741862)
A97 E12 (E34) (19.07.78) C11d-11/02

The aq. soln. of surfactant, e.g. alkylbenzenesulphonate is mixed with Na silicate. carboxymethylcellulose, an optical brightener and Na_2SO_4. All are used in proportions of 1-20 wt.% and the mixt. is dried.

Strong dense granules of uniform size are obtd. by treating the dry mixt. in a fluid bed with an aq. soln. of any remaining components, e.g. tripolyphosphates, Na perborate.

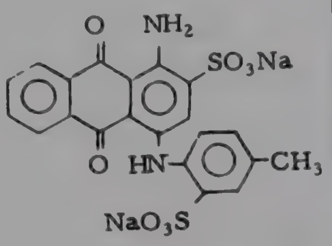
rshenovich A.I., Sverdlov R.Sh., Sheidaev A.G. et al
1. 28/30.7.78 26.1.72 as 741862 (2pp835)

IL ★ D25 23761B/12 ★US 4144-024
louring liquid detergent mixt. - using non-staining mixt. of oil-uble and water soluble dyes
LEVER BROTHERS CO 21.02.78-US-879172
E22 (13.03.79) C09b-01/28 C11d-03/40
quid detergent compsns. are coloured by addition of 0005-0.0030 wt.% 1 4-bis(2-ethylhexylamino)anthra-inone (I), and 0.005-0.025 wt.% 1-amino-2-sulpho-4--sulpho-para toluidino) anthraquinone Na salt (II), and/ 1, 4-bis(3-sodium sulphonate-mesitylidino)anthraquin-e (III).



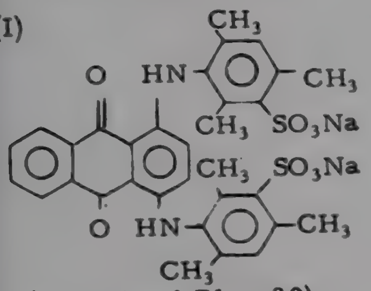
C.I. Solvent Blue 58)

(I)



(C.I. Acid Blue 145)

(II)



(III)

(C.I. Acid Blue 80)

The combination provides an acceptable blue colour without staining natural or synthetic textiles excessively.

21.2.78 as 879172 (8pp955).

HENK D25 50302X/27 =US 4144-093
Machine-washing textiles and dishes - using phosphate-deficient detergent, calcium ion bonding complex-former and water-insoluble cation exchanger (BE180676)
HENKEL KG AUF AKTIEN 20.12.74-OE-010204
*A97 + P28 P41 P42 P43 (13.03.79) *DT2556-827 B08b-07/04*
Machine washing of solid articles (e.g. dishes and clothes) in hard water areas is enhanced when the washing soln. has a dissolved amt. of sequestering agent (I) for Ca ions and is contacted with particulate insol. cation exchange resin (II). The washing soln. is passed through a filter contg. the resin during the wash.

The filter is maintained separate and spaced from the washing area. The resin may be contained in a whirlpool filter so that the particles are maintained in aq. suspension without contacting the materials being washed or it may be contained in a unitary porous lining of a filter.

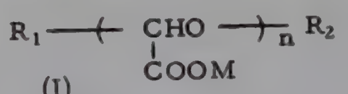
(I) is pref. pyrophosphates, tripolyphosphates or metaphosphates; polycarboxylic acids; hydroxycarboxylic acids; aminocarboxylic acids, carboxyalkyl ethers; polyanionic polymeric acids; polyphosphonic acids or their mixts. Pref. (I) is a copolymer of a molar excess of acrylic acid and hexamethylene-bisacrylamide. 4.8.77 as 821968 (+ 10.12.75 - US - 639465) (9pp393).

UNIL D25 33432A/19 =US 4144-201
Dish-washing compsn. with good drainage properties - contg. casein with alkoxylated alkyl-ether sulphate and amine oxide
LEVER BROTHERS CO 05.11.76-GB-046193
*A97 E17 (E16) (13.03.79) *BE-860-442 C11d-01/14*
Aq. liq. cleaning compsn. free of alkyl benzene sulphonates, alkyl sulphonates and alkyl sulphates comprises 5-35 wt.% 8-24C alkylether sulphate contg. 1-10 alkylene oxide cpds.; 5-35 wt.% non-ionic detergent active cpd.; and 0.25-5.0 wt.% soluble casein.

Detergent active cpd. is amine oxide with general formula $RR_1R_2N \rightarrow O$, where R is straight or branched-chain aliphatic (un)saturated 8-20C hydrocarbon, and R_1 and R_2 are methyl, ethyl, hydroxymethyl and hydroxyethyl; and mixts. of amine oxides and nonionic alkylene oxide condensation prods..

Compsn. has improved drain-dry properties and better mildness. 3.11.77 as 848438 (3pp931).

MONS D25 18418B/10 =US 4144-226
Polymeric acetal carboxylate detergent builders - stable in alkaline solns. but depolymerisable in acid media to biodegradable components
MONSANTO CO 22.08.77-US-826425
*A25 (A97) (13.03.79) *EP---1-004 C08g-02/14 + C08l-59/02*
Acetal carboxylate polymers of formula (I) are novel and useful as substituents for Na tripolyphosphates detergent builders in detergent formulations. (I) are stable under laundry conditions but more readily biodegrate in waste streams.



$$R_1 \text{---}\!\left(\underset{\text{COOM}}{\text{CHO}}\right)_n\!\text{---} R_2$$

(I)

M is alkali metal, NH_4, 1-4C alkyl, tetra 1-4C alkyl ammonium or 1-4C alkanolamine gp. and n averages ≥ 4. R_1 and R_2 are individually any chemically stable gp. which stabilise the polymer against rapid depolymerisation in alkaline ash. 22.8.77 as 826425 (8pp393).

ABBO 01.07.76 ABBOTT LABORATORIES B04 D16 =DS 2729-636
Alpha-amylase enzymatic determination - 10637A/06
AGEN 09.11.72 AGENCY OF IND SCI TECH D16 =J7 9003-946
Lipase prodn by culturing a pseudomonas microorganism - 78218V/45
AIDA/ 05.09.77 AIDA K B05 D16 *DT 2838-252
Fermentative prodn. of coenzyme/Q - 22325B/12
AIDA/ 05.09.77 AIDA K B05 D16 =NL 7808-778
Fermentative prodn. of coenzyme/Q - 22325B/12
AJIN 25.05.68 AJINOMOTO KK D16 E17 =J7 9003-949
D-arabitol prodn - 08965R/06
AJIN 12.07.77 AJINOMOTO KK D15 E19 J01 *J5 4018-480
Sepn. of oil from water - 22657B/12
AJIN 12.07.77 AJINOMOTO KK D15 E19 J01 *J5 4018-481
Sepn. of oil from water - 22658B/12
AJIN 14.07.77 AJINOMOTO KK B02 D16 E11 (D13) *J5 4020-195
Guanosine-5′-phosphoric acid prodn. - 23055B/12
ALBR 15.07.77 BUSH BOAKE ALLEN D23 E17 #J5 4020-144
Perfume compsns. contg. aliphatic mixed acetals - 00557A/01
ALBR 18.08.78 ALBRIGHT & WILSON LTD D21 E16 (D25) =GB 2003-867
Surfactant N-carboxy-alkylated acylated ethylene di:amine cpds. - 18420B/10
ALEX- 04.11.70 ALEXANDRE D21 E17 =J7 9003-936
Hair-treatment compsn - 32174T/20
ALKU 11.10.74 AKZO NV D15 E19 J01 M25 =CA 1049-796
Separating metal ions from aq soln - 32330X/18
ALLC 03.09.77 ALLIED CHEMICAL CORP A85 D15 J03 (A18 A91) #DT 2739-781
Bipolar membrane of polyolefin matrix and vinyl polymer surface - 82742Y/46
ALLD/ 12.09.77 ALLDREDGE R L D15 J01 =EP ---1-183
Graded sand filter with reusable imperforate diaphragm - 15841B/08
ALPU 19.11.74 ALPURA KORECO AG D22 =SU -604-462
Sterile packaging machine chamber - 40372X/22
* ALZA 09.06.77 ALZA CORP A97 D22 E17 *US 4144-309
Formaldehyde microbicide dispensing device - 23885B/12
* AMAN 11.07.77 AMANO PHARM KK A96 B04 D16 (A14) *J5 4020-192
Fixed enzyme prepn. with little enzyme migration - 23054B/12
* AMBS 09.09.77 AMERICAN BRANDS INC D18 E33 *DT 2836-658
Tobacco foils formed from suspensions - 22296B/12
AMBS 09.09.77 AMERICAN BRANDS INC D18 E33 =GB 2003-721
Tobacco foils formed from suspensions - 22296B/12
* AMCE 02.11.70 AMCHEM PROD INC A11 C01 D16 (D17) *US 4144-046
Storage stable compsn. for stimulating latex flow - 23776B/12
AMCY 23.06.70 AMERICAN CYANAMID CO A96 D22 #CA 1049-970
Polyglycol acid suture thread - 74161T/47
* AMCY 19.05.75 AMERICAN CYANAMID CO A96 D21 E16 (A11) *US 4144-326
Oil-free clear creme rinse for hair - 23895B/12
AMMI- 13.01.75 AMERICAN MINECHEM D15 J01 =CA 1050-179
Water recovery from aq. coal suspensions - 56343X/30
* ANON 20.02.79 ANONYMOUS A87 D05 E19 F06 (E37) *RD -179-011
Fabric conditioner articles - 23372B/12
* ANON 20.02.79 ANONYMOUS D13 *RD -179-012
Sweet fried snack prod. - 23373B/12
* ANON 20.02.79 ANONYMOUS D13 E13 *RD -179-018
Substd. thiazolidine carboxylic acid cpds. - 23378B/12
* ANON 20.02.79 ANONYMOUS A14 D15 (A91) *RD -179-019
Stable water-in-oil dispersions of polymers - 23379B/12
* ANON 20.02.79 ANONYMOUS D22 E14 F06 *RD -179-042
Wool finishing compsn. for protecting against pests - 23393B/12
* ANTI= 21.04.76 ANTIBIOTIC RES INST B04 D16 *SU -604-870
Bacteriolytic microbial enzyme complex prodn. - 23591B/12
ANVR 04.05.73 AGENCE NAT VALORISATION B04 D16 =CH -608-962
Vaccines prodn. from toxic materials - 81939V/47
* ANVR 29.10.76 ANVAR AGENCE NAT DE V C03 D16 *FR 2394-606
Protection and preservation of microorganisms with clay - 22459B/12
* ARAI/ 12.09.77 ARAI T B04 D16 *GB 2003-853
Antibacterial and antitumour saframycin(s) A, B, C, D and E - 22518B/12
* ARMA- 06.06.77 INST ARMAND-FRAPPIE D16 *US 4144-136
Cell culture appts. - 23814B/12
* ASAE 06.11.70 ASAHI ELECTROCHEM IND KK D16 E17 *J7 9003-950
Pure sebacic acid prodn. in high yield - 23347B/12
* ASAE 15.07.77 ASAHI ELECTROCHEM IND KK D13 *J5 4020-010
Foamable water-in-oil compsn. for butter cream prodn. - 22961B/12
* ASAG 10.05.68 ASAHI GLASS KK D15 J01 (J03) *J7 9003-826
Electrodialyser for concentration and desalination of solns. - 23321B/12
* ASAG 19.07.77 ASAHI GLASS KK D15 *J5 4021-052
Treating waste water contg. nitrogenous cpds. and oxidisable organics - 23163B/12
ASAH 13.02.75 ASAHI CHEMICAL IND KK B07 C03 D25 J04 =J7 9003-676
Porous capsular structure - 95088X/51
ASAH 11.06.76 ASAHIMATSU KORIDOFU D13 =US 4144-358
Cheese-like food prepd. from soybeans - 09341A/05
* ASAH 14.03.77 ASAHI CHEMICAL IND KK A14 D22 *J5 3112-991
Mouldable plastic with resistance to mould, fungus, etc. - 22557B/12
* ASAH/ 11.04.77 ASAHINA J D15 E36 K08 *J5 3125-994
Ionising stored water - 22574B/12
ASEN- 22.10.73 ASENDORF-ABWASSER-A D15 =DS 2352-917
Sewage aeration basin - 30859W/19
ASIZ- 01.06.70 ASIZAWA TEKKO KK D17 J08 =DS 2125-945
Spray-dried granules prodn - 59583S/37
ASKO- 02.09.77 ASKO-UPO OY D15 =DT 2837-125
Combined biological dry toilet and waste water purifier - 20411B/11
* ATLS 27.03.78 ATLANTIC RESEARCH CORP D15 E19 J04 *US 4144-152
Dehalogenation of halogenated organics - 23821B/12

BADI 30.04.74 BASF AG A60 C03 D22 E19 (C01) =US 4144-260
N-Nitroso N-(cyclo)alkyl hydroxylamine aluminium salts prodn - 70719W/43
BADI 18.06.77 BASF AG A97 D21 E11 (A25) =FR 2394-603
Antifoam agent for detergent compsn. - 00488B/01
BANE- 28.06.71 BANEXI BANQUE EXPAN D15 F09 H04 =SU -604-464
Petrol and cellulosic waste - 79860T/50
* BARA/ 15.02.78 BARABAS J D13 *CS 7800-976
Casein prodn. from milk protein - B/12
* BARA/ 23.02.78 BARABAS J D13 *CS 7801-151
Liquid concentrates of milk protein - B/12
BARH 17.08.73 BARNES HIND PHARM INC B05 D21 E13 =DS 2439-388
Abrasive skin cleansing cream - 14767W/09
BATT 01.04.77 BATTELLE MEMOR INST D17 =CH -609-092
Sugars prodn. by hydrolysis of lignocellulosic material - 72708A/41
* BAUQ/ 15.06.77 BAUQUIS C D13 *FR 2394-254
Ready to cook food prods. based on dehydrated vegetables - 22437B/12
BECI 14.10.75 BECKMAN INSTRUMENTS INC B04 D16 =DS 2646-244
Fluorometric isoenzyme analysis - 12820Y/08
BECI 13.02.76 BECKMAN INSTRUMENTS INC B04 D16 J04 =FR 2394-804
Analysis of alpha and beta amylase in body fluids - 59735Y/34
BECK- 24.11.73 NATURIN-WERK BECKER A97 D12 (A94) =DS 2358-560
Laminated tubular film for packaging cookable sausage - 53170V/29
BEEC 21.05.75 BEECHAM GROUP LTD B04 D16 =US 4144-126
Culturing animal cells in vitro - 90600X/49
* BEEC 14.07.77 BEECHAM GROUP LTD B04 D16 *J5 4020-194
Production of antibiotics - B/12
BEGH- 25.07.77 BEGHIN-SAY D22 =GB 2001-236
Disposable nappies with integral elastic tie tapes - 72808A/41
* BENN/ 03.01.78 BENNECKE E J D15 J01 *US 4144-172
Solid waste separator for cleaning industrial liq. - 23833B/12
BERG 12.09.77 BERGWERKSVERBAND GMBH A97 D25 =GB 2003-913
Particulate phosphate free washing product - 06094B/04
BERO- 11.07.77 BERO-ENERGIE BERATU D15 J08 =SF 7802-178
Recovering waste heat from buildings - 23309A/13
* BERP 10.11.72 BEROL KEMI AB A97 D22 E16 F09 (A25) *US 4144-122
Cellulose pulp fibre web of low mechanical strength - 23810B/12
* BETI/ 29.06.76 BETINA V B04 D16 *CS 7604-255
Repentine B antibiotic isolation - B/12
* BETI/ 29.06.76 BETINA V B04 D16 *CS 7604-256
Repentine A antibiotic prepn. - B/12
* BETT- 09.09.77 BETTER BUILT MACHIN A88 D22 *GB 2004-020
Sliding door with inflatable seal for steriliser - 22546B/12
BIER- 11.08.77 BIER-DRIVE AG D16 =WP 7900-091
Pressurised beer tank fitting - 16150B/09
BIER- 11.08.77 BIER-DRIVE AG A92 D16 =WP 7900-092
Beer tank charging system - 16151B/09
* BIKO- 20.07.77 BIKOEN KK A14 D21 (A60 A96) *J5 4021-500
Amphoteric high molecular surface activating cpds. - 23270B/12
* BIOM- 14.09.77 INST BIOMED TECH D22 *DT 2741-317
Anodic oxidn. sterilisation of fluids - 22267B/12
* BIOS= 20.10.76 BIOSYNTHESIS PROTIE D16 *SU -604-869
Microorganisms culture foam breaker - 23590B/12
BIOT- 14.04.76 GES BIOTECH FORSCH A97 D16 =US 4144-130
Enzymes sepn. from cells after solubilisation - 78841Y/44
* BIOT= 30.06.76 BIOTECH RES INST D16 *SU -604-543
Photo-autotrophic microorganisms culture unit - 23467B/12
* BLUE- 22.12.75 BLUE WING CORP C03 D13 *US 4144-355
Recovery of vegetable waste solids from aq. slurry - 23905B/12
BLUE- 08.03.76 BLUE WING CORP C03 D13 =WP 7900-111
Microencapsulation of lipids in protein to prepare foods - 01951B/02
BOEF 17.05.72 BOEHRINGER MANNHEIM GMBH B01 D16 =US 4144-129
Cholesteroloxidase prepn - 74988U/49
BOEF 29.08.73 BOEHRINGER MANNHEIM GMBH B01 D16 =DS 2343-400
12 beta-Hydroxylation of Digitalis glycosides - 22633W/14
BONA/ 05.06.75 BONACINA E D13 =CH -608-944
Preservation of chestnuts - 20433Y/12
BOPP- 30.09.76 BOPP G & CO AG D15 J01 =CH -608-975
Metal fabric filters for treating drinking water etc. - 46231A/26
* BOSC 06.09.77 BOSCH R GMBH D15 *DT 2740-031
Industrial waste disposal - 22237B/12
BRAU- 12.10.76 BRAUKMANN ARMATUREN D15 J01 =GB 1542-389
Domestic water supply filter with backwash valve - 08398A/05
BRAU- 18.08.77 BRAUN K O KG A96 D22 F07 =DT 2738 933
Readily torn elastic bandage for surgical and sports usage - 80224A/45

*BRIM 09.09.77 BRISTOL MYERS CO D22 *EP ---1-151
Heatable article for application to the body - 22415B/12

BROV 06.04.77 BBC BROWN BOVERI D15 L03 M13 =US 4144-149
Purifying aq. residues from spent electroplating baths - 74644A/42

*BRPE 13 06 77 SOC FR PETROLES BP C03 D13 *FR 2394-252
Protein-rich animal feed prodn. from dairy by/products - 22436B/12

BRTA 24.06.74 BRIT AMER TOBACCO LTD A88 D18 (A14) =CH -609-218
Material for filtering tobacco smoke - 77116W/47

BRTA 06.09.77 BAT CIGARETTEN-FAB- D18 J01 =GB 2003-720
Eliminating nitric or carbon mon:oxide(s) from tobacco smoke - 04112B/03

BRTA 06.09.77 BAT CIGARETTEN-FAB D18 J01 =NL 7809-099
Eliminating nitric or carbon mon:oxide(s) from tobacco smoke - 04112B/03

BRUN/ 04.08.77 BRUNDBJERG N D22 =DK 7703-499
Charge absorbing, insulating casing for regenerating type air purifier - 12339B/07

BUHL 14.06.76 BUHLER GEBR AG D11 =CH -608-943
Fluidised bed drying tunnel for pasta prods. - 33193Y/19

*BURD/ 10.03.78 BURDOVA V D13 *CS 7801-512
Dry milk mixtures prepn. - B/12

*BURK/ 14.04.77 BURKETT A L D15 *US 4144-167
Sewage treatment plant with centrifugal mill - 23829B/12

BURN- 02.08.77 BURNS FOODS LTD D12 =DK 7704-553
Food product similar to bacon prepd. by extrusion - 19718A/11

*BURY/ 10.06.75 BURY J R D15 *CA 1050-136
Adding treatment liquid to water - 22127B/12

*CALP- 15.07.77 CALPIS SHOKUHIN KOG D13 *J5 4020-169
Yogurt prodn. - 23047B/12

CAMP- 24.12.75 CAMPBELL AND KRAFT FOO A97 B04 D13 J01 =US 4144-373
Absorbent and magnetic particles dispersion in porous polymer matrix - 49081Y/28

CAPM/ 08.04.77 CAP M C03 D13 =CS 7702-354
Cereal product processing for animal foodstuffs - 76786A/43

CARG/ 14.09.76 CARGILL J M T D17 J04 =GB 1542-482
Multistage diffusion (extn.) plant - 23601A/13

*CARO 16.05.75 CARBORUNDUM CO D15 E36 J01 *US 4144-193
Activated carbon mfr. from sub-bituminous coal - 23841B/12

*CECA- 31.08.77 CECA SA A11 C03 D22 (A97) *EP ---1-190
Gel compsn. based on carboxymethylated galactomannan - 22428B/12

*CECA- 12.09.77 CECA SA A11 D13 K04 (D17 D22) *EP ---1-192
Aq. gels based on de:acetylated xanthan and galactomannan - 22429B/12

CEDE- 11.07.77 CEDERROTHS AB D22 =SF 7801-420
Adhesive medical plaster with impregnated gauze dressing - 80223A/45

CELA 16.01.78 CELANESE CORP C03 D13 =US RE29-933
Ruminant feed supplement - 52084Y/29

CELF- 11.08.77 CELFIL CO ETS D18 F09 =SW 7808-510
Mfr. of paper band for cigarette filter tips - 89704A/50

CHCC 08.05.76 CHISSO CORP D15 F07 J01 =GB 1542-537
Filter fibre cylinder mfg. - 85033Y/48

CHEM- 22.08.75 CHEMAP AG D11 =CH -609-378
Recovering food values from bakery wastes - 66744Y/37

*CHEN/ 28.07.75 CHENEY P L D13 *CA 1049-799
Freezing food while suspended in cold gas stream - 22119B/12

CHIN 01.07.77 CHINOIN GYOGYSZER A97 D13 (A11) =SF 7802-113
Food flavours contained in cyclodextrin complex - 78426A/44

*CHRI/ 28.04.78 CHRIASTELL L D11 *CS 7802-749
Thermal energy recovery from bakery products - B/12

*CHRI/ 28.04.78 CHRIASTELL L D11 *CS 7802-757
Vacuum cooling of bakery products - B/12

*CHUD/ 26.05.76 CHUDINOV V S D15 J04 *SU -605-164
Measuring gas content in liquids - 23664B/12

CHUS 18.08.77 CHUGAI SEIYAKU KK B02 C02 D13 =GB 2003-728
Animal e.g. cattle, sheep or pigs growth promotion - 16289B/09

CHUS 18.08.77 CHUGAI SEIYAKU KK B02 C02 D13 =GB 2003-728
Animal e.g. cattle, sheep or pigs growth promotion - 16289B/09

CIBA 08.07.76 CIBA GEIGY AG A97 D15 J01 =US 4144-190
Adsorbent for heavy metal ions - 04773A/03

CIBA 04.07.77 CIBA GEIGY AG A60 D25 E23 F06 =SF 7802-107
Bis:triazinyl-amino-stilbene derivs. - 01921B/02

*CNRS 09.02.77 INST NAT SANTE RECH MED A97 B04 D16 *FR 2394-553
3-Alpha and beta hydroxy-steroid dehydrogenase purification - 22454B/12

CNSF 15.06.77 CONSOLIDATED FOODS CORP D15 =FR 2394-495
Drinking water treatment - 03428B/02

COAF 07.09.77 CREUSOT-LOIRE D15 H03 J01 =GB 2003-739
Treatment for effluent with emulsified hydrocarbon(s) - 20287B/11

*COHE/ 16.12.76 COHEN I K A96 D22 *US 4143-428
Filling augmentation mammary silicone prosthesis - 23681B/12

COLG 01.09.71 COLGATE PALMOLIVE CO A97 D25 (A11) =CH -609-373
Sulphonate detergent - 10940U/08

COLG 01.09.71 COLGATE PALMOLIVE CO A97 D21 E34 F06 =CH -609-374
Detergent compsns contng detergent ether sulphates - 13882U/10

COLG 12.06.73 COLGATE PALMOLIVE CO D24 =CA 1049-725
Continuous mfr. of striped soap - 75847V/44

COLG 28.01.75 COLGATE PALMOLIVE CO D21 E37 =US 4144-322
Dental care compsns. contg. hard abrasives - 50101A/28

COLG 15.06.77 COLGATE PALMOLIVE CO B05 D21 E11 #FR 2394-294
Buccal hygiene composition or dentifrice - 75934Y/43

COLG 15.07.77 COLGATE PALMOLIVE CO D25 =J5 4020-012
Toilet soap contg. polyethylene oxide and fatty acids - 82204A/46

COLG 12.09.77 COLGATE PALMOLIVE CO A97 D25 =GB 2003-913
Particulate phosphate free washing product - 06094B/04

*COLG 12.11.77 COLGATE PALMOLIVE CO B05 C03 D21 E11 (D13) *US 4144-324
Oral anti:calculus compsns. for ingestion, esp. foods - 23893B/12

CORG 18.09.74 CORNING GLASS WORKS D17 E13 L02 (D16 E36) =CA 1049-943
Magnesia/alumina support of specified particle and pore size - 14965X/09

CORP 30.06.69 CPC INTERNATIONAL INC D13 =J7 9003-943
Peanut butter - 28164S/16

CORP 19.12.73 CPC INTERNATIONAL INC D21 E14 =CH -608-960
Improved sunscreen compsn with desirable colour and solubility - 32394W/19

CORP 02.04.76 CPC INTERNATIONAL INC D16 (D17) =US 4144-127
Immobilisation of glucose isomerase - 70736Y/40

CORP 22.10.76 CPC INTERNATIONAL INC D13 (D17) =US 4144-087
Sepg. a corn starch milk into protein and starch - 15966A/09

CORP 16.06.77 CPC INTERNATIONAL INC B03 C02 D13 (D16 D17) =FR 2394-253
Syrups of high fructose content prodn. from sucrose - 91482A/51

CORP 16.06.77 CPC INTERNATIONAL INC B03 C02 D13 (D16 D17) =SF 7801-911
Syrups of high fructose content prodn. from sucrose - 91482A/51

CRDC 23.04.77 CORDIS DOW CORP A88 D15 F01 J01 (A17) #DT 2718-155
Microporous hollow polyethylene fibres - 81520A/45

CSIR 24.12.75 COMMONWEALTH SCIENT ORG A97 B04 D13 J01 =US 4144-373
Absorbent and magnetic particles dispersion in porous polymer matrix - 49081Y/28

*CSIR 06.09.77 COMMONWEALTH SCIENT ORG C01 D22 E11 F06 *DT 2838-898
Fibre-reactive organo-phosphorus insecticide derivs. - 22345B/12

CSIR 06.09.77 COMMONWEALTH SCIENT ORG C01 D22 E11 F06 =GB 2003-883
Fibre-reactive organo-phosphorus insecticide derivs. - 22345B/12

DAIL 13.06.77 DAICEL KK D15 J01 =FR 2394-318
Liquid treatment using folded membrane - 00305B/01

DAMB- 01.07.76 DAMBACH-INDUSTRIEAN D15 =DS 2629-603
Canal cleaning grate - 04385A/03

DASU- 28.09.76 DANSKE SUKKERFAB AS D17 J01 =GB 1542-753
Continuous vertical crystalliser with axial tubular cooler - 25704A/14

*DEBB/ 03.09.77 DEBBELER B D15 *DT 2739-737
Sewage sludge feeder - 22211B/12

DEGS 07.09.73 DEUTSCHE GOLD AND SILBER D15 J01 =GB 1483-610
Cation exchanger aluminium silicates - 19560W/12

*DEGS 00.00.74 DEUTSCHE GOLD & SILBER D21 M26 *DS 2751-547
Yellow gold alloy - 22149B/12

DEGS 27.01.77 DEUTSCHE GOLD & SILBER A21 D14 E14 H09 (A41 E17) =FR 2394-497
Treating waste water contg. phenol cpds. and opt. formaldehyde - 56790A/32

DEGS 18.06.77 DEUTSCHE GOLD AND SILBE D25 E33 =FR 2394-494
Aluminosilicate cpds. contg. combined surfactants - 91495A/51

DEGS 05.08.77 DEUTSCHE GOLD AND SIL D15 E33 J01 =SW 7807-777
Mfr. of aluminosilicate cation exchangers contg. surfactants - 09982B/06

DHVR- 04.04.72 DHV RAADGEVEND INGE D15 =DS 2316-483
Chemical water treatment - 64261U/43

DMON/ 30.01.70 DE MONTMOLLIN R A64 D18 E21 F06 =CS 7100-271
Monoazo sulphonic acid dyes - 52033S/32

*DOLE/ 04.03.76 DOLEZILEK B D16 *CS 7601-417
Cuvette for microorganisms cultivation - B/12

*DORI- 16.07.77 DORIKO KK D15 *J5 4021-057
Waste water treatment - 23165B/12

*DORI- 16.07.77 DORIKO KK D15 *J5 4021-058
BOD-rich waste water treatment - 23166B/12

DOUW 06.12.74 DOUWE EGBERTS KON D13 J01 =US 4143-524
Crystallisable matl septd from liq multicomponent system - 46063X/25

*DOWC 06.09.77 DOW CHEMICAL CO A26 D22 *US 4144-211
Solid complex of oxazoline or oxazine polymer and halogen - 23849B/12

DREA/ 27.04.77 DREANO C D12 =FR 2394-250
Brine pickling process for meat, esp. hams - 78350A/44

DRES 14.07.77 DRESSER INDUSTRIES INC D15 =US 4144-174
Sludge siphon collector for settling tank - 06444B/04

*DSOM/ 10.11.78 DE SOMER A D16 *BE -871-899
Continuous-discontinuous malting and drying process for grain - 22088B/12

DUNK/ 29.09.76 DUNKERS K R D15 =GB 1542-755
Sepg. heavy and lightweight materials e.g. oil, sand etc. from water - 25715A/14

DUNK/ 29.09.76 DUNKERS K R D15 =US 4144-170
Sepg. heavy and lightweight materials e.g. oil, sand etc. from water - 25715A/14

*DURD/ 00.00.77 DURDA A D23 *CS 7701-595
Beeswax isolation - B/12

DUSE/ 09.03.78 DUSEK S D17 *CS 7801-487
Sugar beet pulp separation from diffusion juice - B/12
DYNI 13.07.77 DYNIC CORP A96 D22 F07 *J5 4020-128
Base cloth for medical plaster - 23031B/12
DYNL 30.11.73 DYNAPOL A97 D13 E24 (D16) =CH -609-216
Non-toxic food colouring compsns - 27537W/17
DYNL 24.02.75 DYNAPOL A12 B07 D13 =J7 9003-798
Polymers having hydroquinone structural units - 54246X/29
DYNL 07.02.77 DYNAPOL A60 B04 D13 E24 (A96 A97) =US 4144-252
Water soluble amine linked polymeric colourants - 72318Y/40
DYNN 08.09.77 DYNAMIT NOBEL AG B04 D16 =DT 2740-380
Racemisation of optically active N-acyl-aminoacid(s) - 04131B/03
DYNO 23.05.75 DYNO INDUSTRIER A/S C03 D15 E16 K04 =GB 1542-712
Nitroglycerin recovery from waste liquids in explosives prodn. - 92871X/50

EAST 07.11.75 EASTMAN KODAK CO A97 B04 D16 =DS 2650-753
Cholesterol oxidase prodn. in surfactant-contg. medium - 32799Y/19
*EBAI 13.07.77 EBARA INFILCO KK D15 *J5 4019-551
Biological denitrification of human waste - 22863B/12
*EIKE- 13.07.77 EIKEN KAGAKU KK D13 (D16) *J5 4020-162
Improving digestibility of edible algae - 23044B/12
*EIKE- 15.07.77 EIKEN KAGAKU KK D13 (D16) *J5 4020-175
Preparing water-soluble extract from edible algae - 23050B/12
ELEX 23.10.75 ELECTROLUX GMBH D15 =CH -609-402
Combined sewerage system - 31172Y/18
ELIL 05.08.77 ELI LILLY & CO A96 D21 G02 (A14 A82) =DK 7705-597
Nail varnish based on aq. polymer emulsion - 42204A/24
ELLE/ 05.08.77 ELLENBERGER W C03 D13 =DK 7803-439
Hydrolysing casein with aq. acid avoiding darkening - 87876A/49
*ENGI= 06.04.76 ENG EQUIPT RES INST D15 *SU -604-826
Domestic and industrial effluent surface aerator - 23550B/12
ERAP 26.11.74 ELF AQUITAINE PRODU D15 H01 =CH -609-018
Purifying oil drilling effluent - 42019X/23
ETHI 13.06.77 ETHICON INC A97 D22 F01 (A25) =FR 2394-624
Synthetic absorbable fibres for high strength sutures - 00314B/01

FARB 11.05.73 BAYER AG B04 C03 D16 =DS 2323-847
Immunising cattle against para-influenza-3 virus - 84693V/49
FARB 20.08.75 BAYER AG C01 D22 E11 =SU -604-459
Phenyl-carbalkoxy-vinyl esters of thiono phosphoric acid - 12754Y/08
FARB 03.05.76 BAYER AG A97 B04 D16 =US 4144-128
Coupling ligands to polymeric supports - 79350Y/45
FARB 13.07.76 BAYER AG D22 =DS 2631-352
Radiation sterilisation in solid-particle-free atmos. - 09739A/05
FARB 22.07.76 BAYER AG D15 J09 =US 4144-311
Organically charged industrial waste salts treated by oxidn. - 08524A/05
FARB 01.07.77 BAYER AG D18 E12 (E16) =SF 7802-088
Smokable prods. based on cellulose and combustion modifiers - 02458B/02
FARB 15.07.77 BAYER AG B02 C02 D22 E13 =J5 4019-991
Broad-spectrum antibacterial 6-alkoxy-penicillin derivs. - 08243B/05
FARB 16.07.77 BAYER AG B02 C02 D22 E13 =J5 4019-992
Antibacterial cephalosporin cpds. - 08261B/05
*FARB 01.09.77 BAYER AG A60 D25 E16 F06 *DT 2739-343
Basic ester(s) of amino-carboxylic acids and aliphatic poly:ol(s) - 22199B/12
*FARB 01.09.77 BAYER AG A25 D18 (A97) *DT 2739-378
Water-soluble oligo-urethane resins contg. quat. gps. - 22205B/12
FARB 01.09.77 BAYER AG A25 D18 (A97) =EP ---1-067
Water-soluble oligo-urethane resins contg. quat. gps. - 22205B/12
FARB 03.09.77 BAYER AG D18 =NL 7808-959
Chrome tanning of hides and pelts - 20218B/11
*FARB 13.09.77 BAYER AG A14 D21 (A25 A96) *DT 2741-196
Two/phase pearl polymers - 22260B/12
*FARB 13.09.77 BAYER AG C03 D16 E13 (D13 D17) *EP ---1-099
Continuous sucrose conversion to iso:maltulose - 22393B/12
FARH 22.11.73 HOECHST AG A96 D22 (A11) =CH -609-067
Water-absorbing water-insoluble cellulose ethers - 37847W/23
FARH 18.12.73 HOECHST AG D18 E21 =CH -609-083
Trisazo dyes for leather and hides - 42922W/26
*FARH 00.00.76 HOECHST AG D25 E11 *DT 2739-916
Mixed acid orthophosphate ester prodn. - 22228B/12
*FARH 19.09.77 HOECHST AG D15 E19 M14 *BE -870-598
Anticorrosion compsn. for ferrous metals - 22078B/12
*FARM- 09.09.77 FAR-MAR-CO INC D13 (D11) *DT 2812-920
Whole wheat grain fractionation - 22280B/12
*FATS= 09.01.76 FATS RES INST D13 *SU -604-552
Solid confectionery fat prodn. - 23470B/12
FERO 20.04.76 FERROSAN B05 D21 =US 4144-320
Oral hygiene compsn. contg. amino-alcohol - 59442Y/34
FERR/ 04.07.77 FERRARI L A96 B04 C03 D13 =SF 7802-151
Lysozyme isolation on ion-exchange resins with carboxylic acid gps. - 84134A/47
FINI- 23.04.76 MACH FINIS BV D14 =US 4143-593
Vegetable peeling machine with air and water sprays - 59474Y/34
FIRM 23.12.75 FIRMENICH SA D23 E15 (E17) =CH -609-029
Gamma, delta-unsatd. carboxylic acid esters prodn. - 49053Y/28
FIRM 06.05.77 FIRMENICH SA D23 E14 =US 4144-200
Perfume compsns. contg. 3-phenyl-cyclopentenone - 82568A/46
*FIRM 07.09.77 FIRMENICH SA B07 D23 E13 (B03 D13) *DT 2837-935
Methyl-substd. 6-methylene-1-oxa-spiro-decene or deca-di:ene - 22319B/12
FIRM 07.09.77 FIRMENICH SA B07 D23 E13 (B03 D13) =NL 7809-036
Methyl-substd. 6-methylene-1-oxa-spiro-decene or deca-di:ene - 22319B/12
FRES- 14.06.77 FRESENIUS CHEM PHAR D16 J04 =FR 2394-801
Multiple electrochemical measurement system - 00515B/01
*FUJI 14.09.77 FUJISAWA PHARM IND KK B02 C02 D13 *GB 2003-727
Aminal feed compsn. contain bicyclomycin - 22499B/12
FUKO 06.12.72 FUJI OIL KK D13 =J4 9080-263
Mixing bean protein, oil, starch and water to form a paste - 23343B/12
*FUKO 06.12.72 FUJI OIL KK D13 *J7 9003-941
Mixing bean protein, oil, starch and water to form a paste - 23343B/12
*FUKO 08.09.77 FUJI OIL KK D13 *GB 2003-912
Hard vegetable butter compsn. for chocolate - 22530B/12
*FUKU/ 05.04.77 FUKUMOTO S D13 *J5 3124-644
Electrifying rice to improve taste and flavour - 22572B/12

*GALL- 16.09.77 GALLAHER LTD A97 D18 *BE -870-521
Preparing wrappings for smoking prods., esp. cigarette paper - 22053B/12
GDAN 22.04.76 GDANSKA POLITECH B05 C03 D16 =CS 7702-666
(N)-Glucosyl derivs. of polyene macrolide antibiotics - 59473Y/34
*GEAT 08.09.77 GENERAL ATOMIC CO D22 L02 *EP ---1-147
Joint prosthesis element - 22411B/12
GEMI- 18.10.76 GEN MINING & FINANC D16 E31 M25 =GB 1542-600
Bacterial oxidation of ferrous sulphate soln. - 32390A/18
GENO 12.07.77 GENERAL FOODS CORP A97 D13 #J5 4020-168
Dry mix for milk-based drinks - 08149B/05
GENO 29.08.77 GENERAL FOODS CORP D13 E24 =DT 2837-409
Solubilising erythrosine food dye under acid conditions - 01971B/02
GENO 29.08.77 GENERAL FOODS CORP A97 D13 E23 =DT 2837-684
Stabilising erythrosine in acid food prods., esp. drinks - 04084B/03
*GERS/ 26.01.72 GERSHENOVICH A I A97 D25 E12 (E34) *SU -453-073
Granulated synthetic detergents prodn. - 23430B/12
GESL 06.03.76 GES KERNFORSCHUNG MBH D15 E37 K07 L01 (E17) =US 4144-186
Treatment of aq. radioactive waste contg. nitric acid or nitrate - 67046Y/38
GESL 12.05.77 KERNFORSCHUNGS KARL D15 =DS 2721-298
Purifying phosphate- contg. waste water - 84285A/47
GESL 10.06.77 KERNFORSCHUNG KARLS D15 E33 =GB 2001-306
Treating waste water using aluminium oxide - 20342B/11
GIVA 15.03.74 GIVAUDAN L & CIE SA D23 E17 =CH -609-243
2,6,8- and 2,2,8-trimethylol-7 (or 8)-nonen-3-ol perfume components - 64288W/39
GLAX 07.10.71 GLAXO LAB LTD B02 D16 =CH -609-458
Substd 3-styryl cephalosporins - 23381U/17
*GLIA/ 28.10.76 TAGLIAGAMBE M D16 *FR 2394-605
Wine compsn. drinkable by diabetics - 22458B/12
GLOB- 18.03.74 GLOBOL-WERK GMBH D22 =CH -609-245
Controlled-release solid air deodorants - 39260W/24
*GOEP= 28.12.72 GORKI EPIDEMIOLOGY B04 D16 *SU -508-078
Nutrient medium for dysentery bacteriophage prodn. - 23440B/12
*GORS= 15.09.75 GORSK AGRIC INST D13 (D16) *SU -604-551
Soured milk based foodstuff prodn. - 23469B/12
GOTZ- 03.05.77 GOTZELMANN KG D15 M11 =US 4144-148
Recovery of metal from effluent in electrolytic process - 85247A/47
GRAC 02.08.77 GRACE W R CO B02 D16 =DK 7803-405
Tetra:cyclic antitumour agent quadrone - 87867A/49
GRAC 02.08.77 GRACE W R CO B02 D16 =NO 7802-635
Tetra:cyclic antitumour agent quadrone - 87867A/49
*GRIF/ 21.01.77 GRIFFIN L E D14 *US 4143-665
Appts. for shelling beans and peas - 23710B/12
GROS/ 07.03.69 GROSS G D15 =DS 2010-897
Multi-path valve for water treatment plant - 64949R/36

HAAG- 05.09.77 HAAGSE BAK KALMEIJE D11 =NL 7709-766
Dough portion moulding machine - 20310B/11
HAAR 13.07.77 HAARMANN & REIMER GMBH D23 E13 =J5 4019-989
Natural musk odorant cyclopenta:decanolide prodn. - 06252B/04
*HACH- 15.07.77 HACHIYA KOGYO KK D15 *J5 4019-552
Biological denitrification of human waste, etc. - 22864B/12
*HAFE/ 04.02.78 HAFELE J D11 *DS 2804-795
Brine treated pastry baking - 22153B/12
*HAGE- 29.04.77 HAGER AB C03 D22 E17 F09 (E34 E36) *GB 1542-390
Preservative compsn. for protecting wood against blue stain - 22472B/1
HAGG 16.06.77 HAG AG D13 =FR 2394-547
Decaffeinating vegetable materials esp. coffee - 76360A/43

HANR/ 30.09.75 HANRAHAN J R A83 D22 F07 =CA 1049-802
Circular knit therapeutic hosiery - 45476A/25

*HASE 14.07.77 HASEGAWA KK B05 D13 E17 (D21 D23) *J5 4019-908
Cis-5-undecen-2-one prepn. from corresp. undecynone - 22906B/12

*HASE 14.07.77 HASEGAWA KK D13 E13 *J5 4019-962
2,5-Di:methyl-4-hydroxy-2,3,-di:hydrofuran-3-one prepn. - 22937B/12

HAUC/ 14.05.76 HAUCHE H D16 H04 (D13) =CS 7703-166
Cultivation of microorganisms for protein production - 36420Y/21

*HAYA- 18.07.77 HAYASHIKANE KANZUME D13 *J5 4020-158
Orange flesh treatment - 23042B/12

HAYB 01.04.68 HAYASHIBARA KK D17 =J7 9003-939
Preparation of starch syrups containing straight chain - 08152R/06

HAYB 18.11.68 HAYASHIBARA KK D17 =J7 9003-937
Preparation of maltose - 35836R/20

HAYB 26.11.68 HAYASHIBARA KK D17 =J7 9003-938
Pure maltose - 39604R/22

HENK 27.08.73 HENKEL KG AUF AKTIEN B02 C01 D13 E11 (D15 D21 D25) =CH -609-353
Cyclic amino phosphonic acids - 17440W/11

HENK 07.09.73 HENKEL KG AUF AKTIEN D15 J01 =GB 1483-610
Cation exchanger aluminium silicates - 19560W/12

HENK 14.12.73 HENKEL KG AUF AKTIEN A97 D25 =CH -609-090
Liq. foam-controlled detergent and cleansing compsn. - 44554W/27

HENK 29.01.74 HENKEL KG AUF AKTIEN D21 E15 (E12) =CH -609-239
Skin care compsns - 54015W/33

HENK 29.01.74 HENKEL KG AUF AKTIEN D21 E16 (E13) =CH -609-240
Skin care and protection prods - 54012W/33

HENK 20.12.74 HENKEL KG AUF AKTIEN A97 D25 =US 4144-093
Machine-washing textiles and dishes - 50302X/27

HENK 09.07.75 HENKEL KG AUF AKTIEN D22 E17 (E19) =GB 1542-520
Lower alkyl laurates as foam inhibitors - 05914Y/04

HENK 18.06.77 HENKEL KG AUF AKTIEN D25 E33 =FR 2394-494
Aluminosilicate cpds. contg. combined surfactants - 91495A/51

HENK 27.06.77 HENKEL KG AUF AKTIEN A97 D18 E33 (D25) =SF 7801-153
Use of alkali metal aluminosilicate(s) for cleaning crude skins - 01896B/02

HENK 11.07.77 HENKEL KG AUF AKTIEN A96 D23 E17 (A25) =J5 4020-146
Clear, stable solns. of oil-soluble perfume oils - 10055B/06

HENK 16.07.77 HENKEL KG AUF AKTIEN D18 E33 =J5 4020-102
Additives for defatting and tanning in leather mfr. - 10088B/06

HENK 05.08.77 HENKEL KG AUF AKTIEN D15 E33 J01 =SW 7807-777
Mfr. of aluminosilicate cation exchangers contg. surfactants - 09982B/06

*HEXC 22.08.77 HEXCEL CORP A96 D22 (A13 A17) *US 4143-655
Orthopaedic bandage assembly - 23706B/12

HIEJ 26.05.76 HITACHI PLANT ENG AND CO D15 J01 =GB 1542-540
Dialyser with ion exchange membranes - 05231A/03

HIGA- 28.02.72 HIGASHIMARU SHOYU D13 =J4 8088-291
Squeezing of soy from unrefined soy - 23351B/12

*HIGA- 28.02.72 HIGASHIMARU SHOYU D13 *J7 9003-959
Squeezing of soy from unrefined soy - 23351B/12

HISM 16.06.77 HISAMITSU PHARM KK A60 B05 D21 E19 (D25) =FR 2394-514
4-Iso:hexyl-cyclohexane-carboxylic acid derivs. - 03426B/02

HITA 26.05.76 HITACHI KK D15 J01 =GB 1542-540
Dialyser with ion exchange membranes - 05231A/03

*HITF 18.07.77 HITACHI SHIPBLD ENGG KK D15 *J5 4021-054
Biological denitrification of organic waste water - 23164B/12

*HITK 15.07.77 HITACHI METAL KK D15 *J5 4019-552
Biological denitrification of human waste, etc. - 22864B/12

HOFF 20.06.74 HOFFMANN-LA ROCHE AG B05 C03 D13 E15 (B07 D21 E24) =CH -609-320
Di-nor-carotenoid colourants for foods, cosmetics - 01963X/02

HOFF 00.00.77 HOFFMANN-LA ROCHE AG B02 D22 =CH -609-059
3-(Heterocyclylthio methyl) cephalosporins - 01980X/02

*HOFF 02.09.77 HOFFMANN-LA ROCHE AG B01 D16 *EP ---1-102
7 Alpha-hydroxy-steroid cpds. prepn. - 22394B/12

*HOFF 12.09.77 HOFFMANN-LA ROCHE AG B05 D13 E17 (D16) *EP ---1-122
D-Arabitol prepn. by Pichia haplophila microorganism fermentation - 22403B/12

HOFF 12.09.77 HOFFMANN-LA ROCHE AG B05 D13 E17 (D16) =GB 2003-884
D-Arabitol prepn. by Pichia haplophila microorganism fermentation - 22403B/12

*HOFF 14.09.77 HOFFMANN-LA ROCHE AG D21 E16 (E13) *EP ---1-079
Cosmetic compsn. having anti-seborrhoea activity - 22379B/12

HOIS/ 07.01.76 HOISS J D15 =GB 1542-473
Crude water distillation system - 50577Y/29

*HOLT/ 00.00.77 HOLTER H D22 E19 J01 *DT 2739-966
Removal of odour and toxic substances - 22231B/12

*HONP 14.07.77 HONSHU PAPER MFG KK D18 F08 *J5 4020-104
Reclaiming leather wastes - 23024B/12

*HUBE 06.09.72 HUBER J M CORP D21 E36 *US 4144-321
Transparent tooth paste compsn. - 23891B/12

*HUBN/ 03.11.77 HUBNER P D15 E35 *CS 7707-180
Ammonia recovery from waste waters - B/12

HULE- 12.09.77 HULETTS SUGAR LTD D17 =GB 2003-741
Vertical cylindrical continuous vacuum crystalliser esp. for sugar pro - 06105B/04

*HVIZ/ 28.12.77 HVIZDAL Z D15 F09 *CS 7708-923
Feed of oxygen into activation vessel - B/12

ICIL 23.06.77 IMPERIAL CHEM INDS LTD B06 D21 E33 =SF 7802-004
Cleaning teeth using specified rare earth element cations - 00007B/01

ICIL 09.08.77 IMPERIAL CHEM INDS LTD D16 (D13) =SW 7808-479
Industrial aerobic fermentation - 11897B/07

ICIL 02.09.77 IMPERIAL CHEM INDS LTD D25 E16 =DT 2837-880
Hypochlorite bleaching and cleaning compsn. - 20424B/11

ICIL 20.07.78 IMPERIAL CHEM INDS LTD A97 D16 E13 (D17) =NO 7802-627
Enzyme fixed to support - 08018B/05

ICIL 29.08.78 IMPERIAL CHEM INDS LTD D16 (D13) =GB 2003-926
Microbiological prodn. of single cell protein - 18028B/10

*IKED/ 11.07.77 IKEDA S B04 D16 *J5 4020-120
Eye lotion contg. caropeptide(s) from Zalophus family of animal
23028B/12

INFL 10.03.71 INT FLAVORS & FRAGR INC D13 E13 (D23) =J7 9003-878
Odoriferous pyrimidine derivs - 14519T/09

*INPR= 03.03.76 IND PROD PROC AUTOM D13 *SU -585-832
Tea leaf wilting automatic control - 23448B/12

*INRG 29.10.76 INST NAT RECH AGRON C03 D16 *FR 2394-606
Protection and preservation of microorganisms with clay - 22459B/12

INSF 25.07.77 INST FRANCAIS DU PETROLE D17 E34 H01 (D16) =GB 2001-376
Extraction of oil by flooding with bio:polymer solns. - 14436B/08

INSP 06.04.72 INST PASTEUR B06 D16 =DS 2316-911
Calcium phosphate gels - 64840U/43

ISTE/ 27.09.74 ISTERI P H D15 J01 =CA 1050-178
Oxygen enrichment of liqs - 28647X/16

ITRE- 17.06.77 INT REFINING EQUIPM D15 J08 (D13 J01) =FR 2394-671
Climbing film heat exchanger - 00434B/01

*JAOR 13.07.77 JAPAN ORGANO KK D15 *J5 4018-473
Neutralising waste soln. obtd. on regenerating ion exchange resi
22653B/12

*JAOR 18.07.77 JAPAN ORGANO KK B03 D13 E13 *J5 4020-000
Purificn. of stevioside from its aq. extract - 22953B/12

*JAPA 22.07.68 JAPAN ANTIBIOTICS RES B04 D16 *J7 9003-957
Anticancer rinfomycin prepn. - 23349B/12

*JETT/ 18.02.77 JETTER G D22 *FR 2394-298
Controlled rate vaporiser for volatile prod. e.g. deodorant - 22440B/1

*JOHJ 22.06.77 JOHNSON & JOHNSON D13 *US 4144-357
Preventing the Maillard reaction in synthetic dietary compsn
23907B/12

KABI 06.10.75 KABI AB B04 D16 J04 =CS 7606-435
Determining enzymatic and other biological activity - 11217Y/07

*KADL/ 14.11.77 KADLEC V D15 E35 *CS 7707-458
Ammonium hydroxide recovery from waste water - B/12

*KAKE 29.12.70 KAKEN CHEM KK B04 D16 *J7 9003-958
Antibiotic H-60 prepn. from Streptomyces microorganism - 23350B/12

*KANE 24.10.68 KANEBO KK D21 *J7 9003-935
Skin cosmetic prepn. - 23342B/12

KANE 14.06.77 KANEBO KK A35 D21 E36 L02 (A21) =FR 2394-507
Carbon-carbon composite with fibrous reinforcement - 02480B/02

KAOS 11.05.76 KAO SOAP KK A97 D25 E11 (E16) =GB 1542-387
Cleaning compsn. for removing viscous dirt or wax stains - 85014Y/48

KAOS 14.06.77 KAO SOAP KK A97 D25 E33 =FR 2394-604
Granular or powdery detergent contg. absorbed nonionic surfact
74487A/42

KAOS 17.06.77 KAO SOAP KK D22 F07 =FR 2394-287
Sanitary towel with cover of nonwoven fibrous material - 76351A/43

*KAOS 11.07.77 KAO SOAP KK D13 E15 (D21 D23) *J5 4019-957
Acyloxy-tri:cyclo-undecane used as aromatic material for cosmet
22934B/12

KAOS 01.08.77 KAO SOAP KK D25 E13 (D16) =DT 2834-118
Dehydration purification of hydrated sophorolipid - 14599B/08

*KATA- 15.07.77 KATAOKA KIKAI SEISA C03 D13 *J5 4020-883
Chemical fishing method - 23104B/12

KATS/ 16.08.77 KATSUNUMA N B04 D16 =GB 2003-902
Oligosaccharide prepd. from Enterobacteriaceae - 18337B/10

*KAWA/ 12.07.77 KAWANISHI M B02 C02 D23 E13 *J5 4019-960
Bi:cycloheptane cpds. - 22936B/12

*KAWA/ 14.07.77 KAWAHARA T D13 *J5 4020-152
Treatment of foods contg. beta-form rice starch - 23041B/12

*KCEN- 01.03.77 KC ENTERPRISES D12 *US 4143-444
Opening oyster shells - 23683B/12

*KEEF/ 15.06.77 KEEFER B G D15 J01 *FR 2394-319
Reverse osmosis via selective membrane subjected to liq. pres
22441B/12

*KIDA/ 12.09.77 KIDANI Y B02 D22 *EP ---1-126
Cis-platinum complexes - 22405B/12

JMA- 15.06.77 K J MASKINFABRIKEN D12 = FR 2394-248
Cutting tool for removing fat from a side of cutlets - 03429B/02
LIM/ 03.08.76 KLIMAN C D16 *CS 7605-055
Alcohol-wine distillates refining - B/12
OBE 01.04.71 SHIN KOBE ELEC MACH D22 J01 = J4 7027-173
Appts. for removing carbon mon:oxide from air - 23319B/12
OBE 01.04.71 SHIN KOBE ELEC MACH D22 J01 *J7 9003-820
Appts. for removing carbon mon:oxide from air - 23319B/12
OEN- 09.03.76 KOENIG KESSELSCHMIE D13 *CH -608-938
Load distributor for cheese moulds in press - 22129B/12
OLL/ 30.06.77 KOLLROSS G D12 = SF 7802-111
Machine to fold sausage casings while inflated - 78454A/44
OPS 00.00.73 KRUPP-KOPPERS GMBH D15 H09 *DS 2755-830
Coke oven gas waste water desulphurisation - 22151B/12
ORY- 15.07.77 KORYU KOGYO KK A97 D15 (A14) *J5 4020-451
Water treatment to prevent scaling and sludge formation - 23078B/12
ORY- 16.07.77 KORYU KOGYO KK D15 E11 M12 *J5 4020-978
Scale removal from metal, e.g. boiler evapn., tubes - 23143B/12
OTA/ 23.08.77 KOTAL V C03 D13 (D16 D17) *CS 7705-523
Enzymatic hydrolysate prepn. - B/12
RPP 19.11.77 KRUPP F GMBH D14 (D23) *BE -871-990
Multistage screw press to expel liq. from oil seed etc. - 22106B/12
KUES/ 11.08.77 KUEST J D14 *US 4143-592
Domestic appliance for food dehydration or dough raising - 23700B/12
KUKI- 00.00.73 KUKIDENT K KRISP A97 D21 (A25) *DT 2741-072
Tablet-form cleaning agent for dental braces etc. - 22259B/12
KURK 18.07.77 KURITA WATER IND KK A85 D15 J03 (J01) *J5 4020-964
Regeneration of ion exchange resin - 23133B/12
KURS 15.07.77 KURARAY KK A14 B07 C03 D16 (B04) *J5 4020-093
Water absorbing high molecular material mfr. - 23019B/12
KYOK- 15.07.77 KYOKUYO KK C03 D13 *J5 4020-894
Fishing bait prepn. from live okiami - 23107B/12
KYOW 31.08.71 KYOWA FERMENTATION KK B04 D16 = J7 9003-956
5'-Ribonucleotides by RNA hydrolysis - 33204V/18
KYOW 12.02.76 KYOWA HAKKO KOGYO B04 C03 D13 (D16) = US 4144-
354
Promoting milk secretion in dairy animals - 61469Y/35
KYOW 13.07.77 KYOWA FERMENTATION KK B03 D22 E13 = J5 4019-939
Antibacterial amino-glycoside antibiotics XK-62-3 XK-62-4 - 89953A/50

*LABA/ 14.10.76 LABADIE G D12 *FR 2394-249
Poultry feather plucking machine - 22434B/12
LAHE- 10.11.75 LAHEY CLINIC FOUNDA D16 #CA 1049-812
Size analysis of microparticles e.g. cells - 79984W/48
*LANG/ 28.02.77 LANGER O D17 (D16) *CS 7701-289
Liquid starch prodn. from natural starch - B/12
LASK/ 08.08.75 LASKA F D12 #CS 7505-510
Sausage prodn without bacterial contamination or flavour loss -
59822X/32
LEPE 27.07.74 GRUPPO LEPETIT SPA B04 D16 = CH -609-377
Gardimycin antibiotics - 85017W/52
*LERO= 04.01.76 LENGD ROSREMMEKHPRO D12 *SU -604-549
Pedal operated sausage filling injector - 23468B/12
LEUT/ 25.02.77 LEUTHARD P E A96 D21 L02 = CH -608-957
Porous ceramic inlay for dental fillings - 63818A/36
*LINE/ 11.08.77 LINES K K D16 (D13) *US 4144-132
Single cell protein prodn. - 23812B/12
LINM 25.08.77 LINDE AG D15 (D17) = DT 2738-309
Purifying organically contaminated waste waters contg. calcium -
18363B/10
*LIOY 18.07.77 LION FAT & OIL KK D16 E12 (D15) *J5 4020-189
Culturing bacteria showing surfactant decomposing activity - 23051B/12
*LIOY 19.07.77 LION FAT & OIL KK D25 E17 (E12) *J5 4021-405
Detergent compsn. contg. alpha-olefin sulphonic acid magnesium salt -
23205B/12

MACK/ 28.01.77 MACKRLE S D15 = CS 7700-564
Continuous sewage cleaning reactor - 59051A/33
MACK/ 03.08.77 MACKRIE S D15 = CS 7705-141
Multicompartment activated sludge treatment tank - 87870A/49
*MACK/ 09.01.78 MACKO O C03 D13 *CS 7800-175
Feedstuff contg. nutritional elements - B/12
MACL/ 14.06.77 MACLEOD N A97 D15 (D22) = FR 2394-496
Algicidal, bactericidal swimming-pool water treatment - 02204B/02
MANW- 15.04.69 MAN WERME & LUFTTEC D15 = J7 9003-824
Ion-exchange water-softening - 76204R/41
*MASI 12.12.74 MASSACHUSETTS INST TECH A88 B04 D16 J01 (A14 A17)
*US 4144-374
Conductive perfluorinated olefin polymer membrane - 23915B/12
MASI 15.07.75 MASSACHUSETTS INST TECH A11 B04 D22 (A96) = J7
9003-779
Composite polymers of collagen and micro-polysaccarides - 11480Y/07
MASZ- 19.04.75 INST MASZYN SPOZYWC D12 #CS 7502-737
Proteinaceous collagen covering mfg. equipment - 91415Y/51
*MCDA/ 25.04.77 MCDANIEL D G D11 *US 4144-356
Deep fried doughnut on stick - 23906B/12
*MEDV/ 01.04.76 MEDVECKY D D16 (D17) *CS 7602-101
Dried starch hydrolysate prepn. - B/12
*MEIJ 14.07.77 MEIJI KK B04 D16 *J5 4020-197
Fermentative prodn. of antibiotic-(SF-837M-1) - 23056B/12
*MELY/ 26.04.74 MELYAKOV V S D18 *SU -604-871
Twisted belts forming unit - 23592B/12
MERI 01.08.77 MERCK & CO INC B04 D16 = DK 7803-085
Antigenic meningococcal polysaccharide with high mol. wt. - 82019A/45
MERI 05.08.77 MERCK & CO INC B04 D16 = DK 7803-197
Preserving vaccine from polysaccharide(s) of Neisseria meningitidis -
07792B/04
MERI 05.08.77 MERCK & CO INC B04 D16 = SW 7807-976
Preserving vaccine from polysaccharide(s) of Neisseria meningitidis -
07792B/04
METG 08.09.75 DRAVO CORP D13 = US 4144-229
Protein concentrate prodn. by oil seed extraction with alcohol -
25276A/14
MICA- 08.01.76 MICARNA AG D12 = CH -609-213
Meat cleaving machine to split animal carcase - 32822Y/19
*MIKA 15.07.77 MIKASA KAGAKU KOGYO KK C03 D13 *J5 4020-139
Muscardine control in silkworms - 23036B/12
MILE 22.12.75 MILES LABORATORIES INC D13 E16 = DS 2657-913
Glycinamide salt food seasoning compsns. - 29162Y/17
*MITK 13.07.77 MITSUI TOATSU CHEM INC A60 D15 *J5 4018-467
Solvent and complexing agent recovery from Ziegler-Natta catalyst mfr. -
22647B/12
*MITO 13.07.77 MITSUBISHI HEAVY IND KK D15 *J5 4019-474
Continuous vacuum condensn. appts. - 22837B/12
*MITP 13.07.77 MITSUBISHI PETROCH KK D15 E36 J01 (J03) *J5 4019-
467
Reduction of nitrogen oxide to nitrogen in waste gas - 22830B/12
*MITQ 15.07.77 MITSUBISHI ELECTRIC CORP D15 *J5 4020-959
Appts. for feeding sludge into treatment tank contg. heat exchangers -
23130B/12
MITU 22.03.73 MITSUBISHI CHEM IND KK B05 D16 E14 = J7 9003-952
L-Beta-henylserine prepn. - 31430W/19
*MITU 11.07.77 MITSUBISHI CHEM IND KK B05 C03 D13 *J5 4020-141
Preventing gastroentropathy in domestic animals - 23037B/12
MIYO 13.08.76 MIYOSHI YUSHI KK A91 D15 J01 (A28) = J7 9003-920
Chelating resin for heavy metal adsorption - 27885A/15
MLCW 15.07.77 MALLINCKRODT INC A96 D21 E17 (A14 E14) = J5
4020-143
Nail varnish compsns. - 09322B/05
MOEB/ 15.12.76 MOEBUS O D16 E35 = GB 1542-750
Growing yeast on lactose-contg. dairy residues - 49085A/27
*MOMD 17.10.75 MOSCOW MEAT DAIRY INST D14 J01 *SU -604-586
Centrifugal vortex separator - 23492B/12
*MOME= 21.04.76 MOSC MEDICINE INST B04 D16 *SU -604-870
Bacteriolytic microbial enzyme complex prodn. - 23591B/12
*MONM/ 18.07.77 MONMA K D22 E37 J01 *J5 4020-956
Cleaning air in room - 23127B/12
MONS 10.09.70 MONSANTO CO D15 E11 = J7 9003-829
Inhibition of pptn from aq soln - 19617T/12
MONS 29.12.75 MONSANTO CO D23 E15 = GB 1542-741
Odorant compositions contg. polycyclic aliphatic cpds. - 49103Y/28
MONS 29.12.75 MONSANTO CO D23 E15 = GB 1542-742
Odorant compositions contg. polycyclic aliphatic cpds. - 49103Y/28
MONS 22.08.77 MONSANTO CO A25 D25 (A97) = US 4144-226
Polymeric acetal carboxylate detergent builders - 18418B/10
*MONT 15.09.78 MONTEDISON SPA D18 E12 *BE -870-528
Tanning skins using mixt. contg. aluminium salts - 22054B/12
MPJD- 31.07.76 MPJ DEV LTD D16 = US 4144-135
Vaccine spreading appliance - 10729A/06
MULT- 08.09.75 MULTORGAN SA D15 = CA 1049-737
Denucleation of water - 20392Y/12
MUNT 31.08.77 MUNTERS C AB D15 J08 = DT 2836-113
Spray device for distribution of liquid over a treatment bed - 21212B/11

NAAR 22.02.74 NAARDEN INT NV B07 D23 E15 (D13) = CA 1050-043
Safranic acid esters as aromatising cpds. - 58736W/36
NAAR 22.02.74 NAARDEN INT NV B07 D23 E15 (D13) = US 4144-199
Safranic acid esters as aromatising cpds. - 58736W/36
NALC 01.07.76 NALCO CHEMICAL CO D15 E11 H07 M14 = DS 2720-
551
Phosphino substd. aliphatic carboxylic acids prepn. - 86524Y/49
NATT 21.12.72 NAT STARCH & CHEM CORP A11 D13 E16 (A97) = J7
9003-706
Cross-linked, hydroxy propylated, high amylose, starch prod - 50665V/28
NEST 09.03.76 SOC PROD NESTLE SA D13 = CH -609-215
Aromatic spice extract used for food flavouring - 57506Y/33
*NEST 23.12.77 SOC PRODS NESTLE SA B07 D14 *BE -870-561
Batch steriliser for particulate food or pharmaceutical prodn. - 22068B/12
*NEUK/ 29.09.75 NEUKOMM S D18 E12 *CH -609-217
Tobacco smoke filter contg. iron complex pigment - 22138B/12
*NEUM/ 00.00.77 NEUMAIER R C03 D13 *DT 2759-347
Animal feedstuff prodn. by fermentation of straw - 22276B/12

*NIDE 15.07.77 NIPPON ELECTRIC KK D15 *J5 4021-051
Heavy metal sepn. from waste water - 23162B/12

NIED/ 17.10.73 NIEDECKER H D12 =CS 7407-015
Sausage suspension loop feed system - 64771V/37

*NIHA 13.07.77 NIPPON MINING KK D15 *J5 4018-473
Neutralising waste soln. obtd. on regenerating ion exchange resins - 22653B/12

NIIG 16.07.77 NIIGATA ENG KK D12 =J5 4020-875
Heat sterilisation of blood powder - 06436B/04

*NIKS 13.07.77 NIPPON KASEI KK D22 J01 *J5 4019-475
Deodorising appts. for gas - 22838B/12

*NIPA 12.07.77 NIPPON PAINT KK C03 D13 *J5 4020-873
Feedstuff prodn. for livestock, fish, etc. - 23099B/12

*NIPA 12.07.77 NIPPON PAINT KK C03 D13 *J5 4020-890
Nutritious feedstuff for fish - 23105B/12

*NIPA 12.07.77 NIPPON PAINT KK C03 D13 *J5 4020-891
Fish feedstuff prepn. - 23106B/12

*NIPC 18.07.77 NIPPON CHEM IND KK D18 E34 *J5 4020-101
Acidic sodium sulphate pickling agent prepn. - 23023B/12

NIPK 25.05.73 NIPPON KAYAKU KK D18 E21 F06 =CH -609-365
Reactive monoazo dyes - 87590V/51

*NISW 11.07.77 NISSHIN OIL MILLS KK C03 D13 *J5 4020-881
Artificial feedstuff for silkworm - 23102B/12

*NISW 11.07.77 NISSHIN OIL MILLS KK C03 D13 *J5 4020-882
Synthetic feedstuff for silkworms - 23103B/12

*NISW 15.07.77 NISSHIN OIL MILLS KK D13 (D12) *J5 4020-167
Frozen minced fish meat prepn. - 23046B/12

*NMHB 08.09.77 NORDISCH MASCH R BAADER D12 *DT 2740-459
Fish position device - 22248B/12

*NMHB 22.07.78 NORDISCH MASCH R BAADER D12 *DS 2832-329
Fish filleting machine - 22154B/12

*ODFO= 23.02.76 ODESS FOOD IND TECH D14 *SU -578-052
Leaf vegetables washing appts. - 23445B/12

OREA 02.03.67 L'OREAL SA A96 D21 E16 =DS 1667-882
Keratin-reinforcing agent containing methylol - 12547Q/00

OREA 31.12.74 L'OREAL SA B05 D21 E16 (E14) =CH -609-241
Novel sulphoxide derivs of cysteamine and compns - 54190X/29

OREA 07.09.77 L'OREAL SA A96 D21 E19 =GB 2003-938
Hair dyeing compsn. contg. specified cationic polymer - 20012B/11

OREA 07.09.77 L'OREAL SA A96 D21 E19 =NL 7809-040
Hair dyeing compsn. contg. specified cationic polymer - 20012B/11

*OREA 20.09.77 L'OREAL SA A96 D21 *BE -870-586
Cosmetic compsn. for hair or skin contg. cationic polymers - 22076B/12

*ORIY 02.06.70 ORIENTAL YEAST KK B04 D16 *J7 9003-948
Fermentative uricase prepn. - 23346B/12

*ORIY 19.07.77 ORIENTAL YEAST KK C03 D13 *J5 4020-871
Culture medium for breeding muscid larva - 23098B/12

*PACJ 04.05.77 PATTERSON C J CO B05 D21 E17 *J5 3136-529
Water-in-oil emulsion for toilet or medical material - 22581B/12

PALM/ 02.09.77 PALMER W F A88 D15 =EP ---1-101
Communal and industrial wastes treatment - 20214B/11

PASE 01.08.77 PASSAVANTW MICHELBACHER D15 =DK 7803-394
Sewage aerator cowl - 12204B/07

PATP- 06.09.76 PATPAN INC D18 =CH -609-442
Whole cow hide vacuum dryer - 21825A/12

PAUL/ 09.04.75 PAULICH H D16 =CS 7602-332
Hydrothermic prehandling and grinding of grain, esp for brewing - 75856X/41

PAUL/ 02.04.76 PAULUCCI J F D11 =DS 2714-761
Rotary oven for heating prepd. pizzas - 74430Y/42

PENT- 02.07.74 PENTAPHARM AG B04 D16 =CH -609-154
Peptides contg. chromogenic or fluorescent groups - 80267W/49

PETL 13.06.77 PETROLITE CORP D23 (D13) #FR 2394-601
Colour improvement of organic liquid - 70460Y/39

PHAR- 18.03.75 PHARMA-VERTRIEB AG A97 B05 C03 D22 =CH -609-246
Potentiated germicidal compns - 61601X/33

PHIM 15.02.77 PHILIP MORRIS INC D18 (D17) =US 4143-666
Tobacco substitute material - 13296Y/08

PHIM 08.08.77 PHILIP MORRIS INC D18 =SW 7808-443
Swelling tobacco by impregnating with liquid carbon di:oxide - 87871A/49

*PISH= 06.08.75 PISHCHEPROMAVTOMATI D17 *SU -604-569
Periodically-operating sugar-beet filter thickener control - 23480B/12

*POKK 14.07.77 POLA KASEI KOGYO KK D21 *J5 4020-145
Fragrance e.g. perfume - 23039B/12

PROC 11.01.74 PROCTER & GAMBLE CO A97 D25 =CH -609-375
Granular low foaming detergent compsn. - 49693W/30

PROC 05.05.75 PROCTER & GAMBLE CO A97 D25 E34 G04 (E19) =GB 1542-456
Aq. composn. for refreshing slightly soiled clothes - 88763X/48

PROC 30.06.75 PROCTER & GAMBLE CO A97 D25 E19 =GB 1542-696
Clear stable, liq. washing agents for cold water use - 05092Y/03

PROC 30.06.75 PROCTER & GAMBLE CO A97 D25 E24 =GB 1542-697
Clear, single phase, heavy duty liquid detergent compsn. - 01850Y/01

PROC 30.06.75 PROCTER & GAMBLE CO D13 =GB 1542-698
Frozen dessert product and prepn. process - 30080X/16

*PROK/ 30.04.75 PROKOP A D16 *CS 7503-012
Microorganism aerobic cultivation - B/12

PROP/ 28.10.74 PROPFE H D22 E15 G02 =DS 2451-093
Temporary prevention of refuse rotting - 34213X/19

PROV= 28.06.76 PROVISIONS EQUIP D12 =US 4143-591
Solid particles condensed from fish roe soln. or suspension - 04701A/03

*PURK/ 23.02.77 PURKRABEK F D17 *CS 7701-178
Mechanical cleaning of cutting knives - B/12

*QPPP 11.07.77 Q.P. CORP D13 *J5 4020-166
Frozen heat-coagulated egg white prodn. - 23045B/12

*RACK- 19.07.77 RACK ENG KK C04 D15 *J5 4020-856
Treating animal excrement - 23092B/12

RECK 08.11.74 RECKITT & COLMAN PR A96 D21 E19 (E33 E34) =CH -608-959
Acid and bleach contg. dentrifice compsn. - 38426X/21

RHON 04.04.75 RHONE-POULENC INDUSTRIES A97 B04 D16 J01 (A26) =CH -609-352
Mineral supports grafted with silanes - 77554X/42

RHON 22.04.77 RHONE-POULENC INDUSTRIES A81 D22 F04 (A14) =SW 7804-606
Nonwovens binder with low water-soluble cpd. content - 76331A/43

RHON 25.07.77 RHONE-POULENC INDS D17 E34 H01 (D16) =GB 2001-376
Extraction of oil by flooding with bio:polymer solns. - 14436B/08

RHON 04.08.77 RHONE-POULENC INDUSTRIES B02 C02 D13 =DK 7803-451
Antibiotic 35665 RP useful as animal growth promoter - 09974B/06

RISD 23.07.76 RISDON MFG CO D22 =CA 1049-963
Device producing air stream contg. vaporised cpds., e.g. deodorant
52074Y/29

ROHG 16.07.77 ROHM GMBH A96 B04 D16 =J5 4019-901
Stabilisation of immobilised protein(s) - 08258B/05

ROHM 27.06.77 ROHM & HAAS CO A91 B04 D15 E19 (A13 D13 D17) =SF 7801-995
Crosslinked anion-exchange resin - 05441B/03

ROHM 30.08.77 ROHM & HAAS CO A88 D15 J01 (A14 A91) =DT 2837-845
High flux cation-rejecting membrane for water deionisation - 85961A/4

*ROKK- 14.07.77 ROKKO BUTTER KK D13 E24 *J5 4020-173
Curry powder with excellent light resistance - 23048B/12

ROMO- 03.08.77 ROMO N P D15 =DK 7803-311
Multicompartment activated sludge treatment tank - 87870A/49

*ROSN/ 26.10.77 ROSNER J D16 J04 *CS 7706-971
Appts. for simultaneous processing of material in various reagents
B/12

*RUZI/ 08.03.78 RUZICKA J D17 *CS 7801-464
Vibration separator for dry layering of sugar beet - B/12

*SAGA 15.07.77 SAGAMI CHEM RES CENTRE B05 C03 D23 E16 *J5 4019-909
1,2-Di:halo-2-methyl-3-alkyl-4-pentanone - 22907B/12

*SAKA 14.07.77 OTSUKA PHARM KK B04 D13 *J5 4020-174
Compsn. for supplying nutrients direct to digestion system - 23049B/12

SAKB 30.10.68 OTSUKA KAGAKU YAKUHIN D16 =J7 9003-947
Protease production from bacillus species o-20 - 32943R/19

SANO 13.07.77 SANDOZ LTD B04 C03 D16 =GB 2001-326
Isolating antigenic glyco:protein from para:myxovirus - 04043B/03

SANO 13.07.77 SANDOZ AG B04 C03 D16 =J5 4020-130
Isolating antigenic glyco:protein from para:myxovirus - 04043B/03

SANO 13.07.77 SANDOZ AG B04 C03 D16 =SF 7802-155
Isolating antigenic glyco:protein from para:myxovirus - 04043B/03

*SASA- 11.07.77 SASAKURA KIKAI SEIS D15 *J5 4018-469
Multistage flash evaporator for sea water, brine, etc. - 22649B/12

SCHA/ 14.07.77 SCHANZE R C03 D13 =GB 2001-233
Dairy by/products, e.g. whey, conversion into animal feed - 10072B/0

SCHE- 08.09.77 SCHEID L GMBH D12 =DT 2740-429
Injecting powdered salt to cure meat, fish etc. - 04097B/03

SCHE/ 06.08.77 SCHENCK G O D22 (D15) =DK 7803-156
Multichamber sterilising photo-reactor - 12217B/07

SCHW- 28.07.77 SYNTHESEW SCHWARZHE A96 D22 (A25) =NO 7802
507
Medical dressing prepd. from soft polyurethane foam - 86171A/48

SCMZ 18.10.76 SCM CORP D23 =GB 1542-379
Rapid hydrogenation of soap-contaminated glyceride oil - 30207A/17

SCOP 10.04.75 SCOTT PAPER CO D22 F04 =CA 1049-731
Forming staple fibre webs on suction surfaces - 83500X/45

SEAR 20.03.78 SEARLE G D & CO B04 C03 D16 #US 4144-327
Antimycotic compositions - 74694A/42

SEIK- 26.08 77 SEIKEN KAI FOUNDATI B04 D16 #DT 2738-652
Lactobacillus preparation for treating inflammatory diseases - 71815Y

*SEKI 11.07 77 SEKISUI CHEMI IND KK B04 C03 D16 (D13) *J5 4020-190
Microorganism fungi body prodn. - 23052B/12

*SHAF 30.09.76 SHARP KK D13 *US 4144-293

HEL 08.11.72 SHELL INT RES MIJ BV C03 D16 =CS 7307-612
Insecticidal virus prepns - 36488V/20

HER/ 12.05.77 SHERBROWN D D13 *J5 3139-759
Raw material prodn. for soybean beverage - 22591B/12

HIO 29.12.70 SHIONOGI KK B04 C03 D16 =DS 2165-401
(mixed) vaccines against infectious coryza, infectious - 45384T/28

HMU/ 05.03.76 SHMUKLER M L D13 *SU -605-151
Fats hardness controller - 23657B/12

HOW 14.07.77 SHOWA DENKO KK D15 *J5 4019-550
Anaerobic fermentation of calcium-contg. waste water - 22862B/12

MEK/ 01.03.77 SMEKAL F B05 D16 E16 *CS 7701-365
L-Lysine prepn. by fermentation - B/12

SNAM 31.07.71 SNAMPROGETTI SPA D25 E17 (E14) =J7 9003-854
Monoalkyl sulphate prodn - 10000U/08

SNAM 01.09.76 SNAMPROGETTI SPA D15 H03 =FR 2394-498
Microbiological purification of water contaminated with mineral oil - 18159A/10

SNAM 12.07.77 SNAMPROGETTI SPA D14 =J5 4020-150
Sterilising milk and other liquid foods with hydrogen peroxide - 04054B/03

SODA- 29.07.77 SODASTREAM LTD D15 =NO 7802-591
Portable water carbonator for sparkling drinks - 84161A/47

SODE- 29.08.77 SODES SA D13 (D11) *DT 2837-294
Food prods contg. bran, gluten and flour - 22304B/12

SORG/ 11.08.77 SORG E C03 D16 (D13) =SW 7808-440
Protein-rich nutrient material prepn. from cellulose material - 16143B/09

SQUI 30.07.73 SQUIBB E R & SONS INC B05 D15 E15 (B03 E13) =CA 1050-025
1,2-Trans-4,5-trans-cyclohexane tetrol tetra-esters - 10840W/07

STAL 01.03.73 STALEY A E MFG CO A11 D17 G05 =J7 9003-705
Cross-linked cereal starches - 58424V/33

STAL 14.07.75 STALEY A E MFG CO D17 G05 #CA 1050-015
Protective coating for pressure sensitive microcapsules - 00013X/01

STAL 09.09.77 STALEY A E MFG CO C03 D13 =GB 2003-718
Animal foodstuff block of good stability - 20013B/11

STAU 21.05.74 STAUFFER CHEMICAL CO D11 E33 =CA 1049-746
Non-agglomerating monocalcium phosphate prepn. - 80255W/49

*STEN- 17.12.75 STENVAL SA D13 (D16) *FR 2394-251
Dietetic fermented milk products esp. yoghurt, cheese and milk drink - 22435B/12

*STEP 17.04.74 STEPAN CHEMICAL CO D23 E15 *CH -609-316
Oxo-bi:cyclohexadecene isomer perfume components - 22139B/12

STER 05.07.74 STERLING DRUG INC C04 D15 =CH -609-017
Conditioning sewage sludge for disposal on the land - 06728X/04

STER 06.09.77 STERLING DRUG INC B05 C03 D22 (B03 C02) =DT 2838-276
4-Benzyl or cyclohexyl or 2-furfuryl heptane-3,5 di:one derivs. - 18014B/10

STER 06.09.77 STERLING DRUG INC B05 C03 D22 (B03 C02) =NL 7808-946
4-Benzyl or cyclohexyl or 2-furfuryl heptane-3,5 di:one derivs. - 18014B/10

*STER 19.09.77 STERLING DRUG INC D15 *BE -870-540
Treating waste water using rotating biological contactor - 22060B/12

*STER/ 25.10.77 STERNLIEB J J A96 B07 D22 E12 (E34) *US 4143-423
Lubrication of surgical devices - 23679B/12

*STIL 09.09.77 STIERLEN-MAQUET AG D22 *EP ---1-048
Disinfecting hospital operating theatres and other rooms - 22368B/12

STLW 01.09.77 STILLE WERNER AB D22 =NL 7808-754
Easy removal of tubular surgical splint from encased limb - 01976B/02

SUCR- 17.06.77 SUC SUCRIERE ATLANT D17 =FR 2394-608
Extn. of sugar juice from cane without milling - 91490A/51

*SUGI/ 11.07.77 SUGIMOTO H D22 J01 *J5 4018-472
Air conditioner for use in automobiles - 22652B/12

SULZ 12.09.75 SULZER BROTHERS LTD D15 K08 =US 4144-456
Radioactive treatment of sewage sludge - 18166Y/11

SUMO 29.03.74 SUMITOMO CHEMICAL KK A87 D17 F06 (A18 D16 F09) =J7 9003-707
Pullulan as dispersant in emulsion polymerisation - 71101W/43

SUMO 08.09.76 SUMITOMO CHEMICAL KK B05 D16 E16 =GB 1542-551
Prepn. of L-lysine from DL-lysine alkyl ester - 21861A/12

SUMO 11.07.77 SUMITOMO CHEMICAL KK B04 D16 =J5 4020-196
Potent antitumour and immunostimulating substance - 04521B/03

*SUMO 19.07.77 SUMITOMO CHEMICAL KK C03 D13 *J5 4020-871
Culture medium for breeding muscid larva - 23098B/12

*SUNZ 11.07.77 SUNSTAR HAMIGAKI KK B05 D21 E14 (E16) *J5 4020-138
Compsn. for treating buccal cavity - 23035B/12

*SUNZ 11.07.77 SUN STAR HAMIGAKI K A96 B05 D21 E19 (A25 E37) *J5 4020-142
Dentfrice compsn. which does not change the taste of food - 23038B/12

SWIF 03.02.77 SWIFT & CO D14 =US 4143-773
Assembling items for packaging - 73878Y/41

SYNT 14.07.77 SYVA CO B04 D16 J04 =J5 4020-134
Competitive protein binding assay - 06499B/04

*TAKA- 30.09.76 TAKARABUNE KK D13 *US 4144-293
Appts. for forming whipped cream - 23875B/12

*TAKE- 12.07.77 TAKENI SENKA KK C03 D13 *J5 4020-874
Coloured feedstuff for growing Annelida larva - 23100B/12

TAKS 11.04.73 TAKASAGO PERFUMERY KK D13 =J4 9125-544
Solvent extn. of plant or animal texture - 23344B/12

*TAKS 11.04.73 TAKASAGO PERFUMERY KK D13 *J7 9003-942
Solvent extn. of plant or animal texture - 23344B/12

TAKS 05.10.73 TAKASAGO PERFUMERY KK B05 D23 E19 #US 4144-257
Conjugated diene dimer deriv. prodn. - 83539V/48

*TANA 12.07.77 TANABE PHARMACEUTICAL KK A97 B04 D16 (A14) *J5 4020-191
Purifying urokinase by gel filtration - 23053B/12

TANA 12.07.77 TANABE PHARMACEUTICAL KK A96 B04 D16 E19 (B05) =J5 4020-193
Amino:acylase immobilised on water-insoluble tannin preparation - 08306B/05

TATL 26.10.73 TATE & LYLE LTD D17 E13 =CH -609-063
6,6′-Dichloro-6,6′-didesoxy-sucrose prodn - 30990W/19

TATL 06.04.74 TATE & LYLE LTD A13 D17 =J7 9003-785
Production of sugar derivs - 04705X/03

TECN- 03.10.75 TECNECO SPA D15 J01 =GB 1542-667
Sepn. of metallic mercury from solns. - 25588Y/15

*TEHO- 05.09.77 TECHN HOCHSCHULE KA D18 *DT 2830-991
Chrome-tanning of leather - 22287B/12

TEIN- 10.08.77 CENT TECH INTERPROF D14 =SW 7808-006
Centrifugal disc husking machine for small seeds, e.g. rapeseed - 09971B/06

*TEKH= 30.12.75 TEKHRYBPROM D12 *SU -568-427
Fish-washing equipment - 23443B/12

TENC 29.11.74 TENNECO CHEM A96 B05 C03 D22 (B03 C02) =CH -608-965
Iodine and tert. amine oxide compsns - 31928X/18

TENC 12.07.77 TENNECO CHEMICALS I D22 E13 H08 =GB 2001-245
Inhibiting microbial growth in functional fluid - 82191A/46

TENC 12.07.77 TENNECO CHEMICALS D22 E13 H08 =J5 4018-482
Inhibiting microbial growth in functional fluid - 82191A/46

TERP/ 09.09.77 TERPLAN G D13 =GB 2003-719
Preventing formation of harmful substances in molten cheeses - 04123B/03

TEXC 30.12.75 TEXACO BELGIUM NV D23 E13 =US 4144-249
Bis cyclic acetals esp. (2,2,6,6)-tetramethyl benzo bis dioxole - 43428Y/25

THOM/ 25.02.74 THOMAS A A96 B04 D21 (D22) =CH -609-356
Glyco protein and mucopolysaccharides extraction - 46135W/28

*THOM/ 06.09.77 THOMAS F G C03 D13 *GB 2003-711
Treating fish to produce auto-immune response - 22497B/12

*TIVE- 14.09.77 TIVET DEVELOPMENTS D12 *BE -870-429
Moulding sausages etc. with coherent skin-like surfaces - 22039B/12

*TOAG 14.07.77 TOA GOSEI CHEM IND LTD D15 *J5 4019-549
Treating water from biologically oxidised human waste - 22861B/12

*TOKA- 18.07.77 TOKAI PULP KK C04 D16 F09 *J5 4020-859
Compost mfr. - 23095B/12

*TOKA- 18.07.77 TOKAI PULP KK C04 D16 F09 *J5 4020-863
Compost prodn. from sludge from kraft pulp or paper mfr. - 23096B/12

*TOKA- 18.07.77 TOKAI PULP KK D15 L02 *J5 4020-960
Utilising waste sludge from water purificn. for plastering, etc. - 23131B/12

*TOKE 12.07.77 TOKYO SHIBAURA ELEC LTD D15 *J5 4018-468
Appts. for contacting gas with liq. flowing countercurrently - 22648B/12

TOPP 13.07.77 TOPPAN PRINTING KK D13 E37 =J5 4020-148
Foodstuff freshness keeping agent - 02461B/02

*TOYJ 15.07.77 TOYO SODA KK C03 D13 *J5 4020-876
Antifungal compsn. for feedstuff - 23101B/12

*TREJ/ 29.12.77 TREJTNAR J D15 *CS 7708-969
Water treatment plant - B/12

TREK 17.10.72 TORE KK B05 D16 E16 =J7 9003-951
L-lysine microbial prodn. - 71796V/41

*TSVO= 27.05.75 TASHK VODOKANAL WATER D15 *SU -604-827
Domestic aq. waste sediment treatment - 23551B/12

TSZE 05.08.77 TATABANYAI SZENBANYAK D15 #DK 7703-525
Purifying dung water from cattle stables - 57918Y/33

*UGIN 25.03.77 UGINE KUHLMANN A97 D15 E11 H03 (A25 D25) *FR 2394-602
Biodegradable cleaning compsn. for hydrocarbon spillages - 22457B/12

UGIN 29.07.77 UGINE KUHLMANN D15 J01 =NO 7802-606
Continuous prepn. of zeolite-A of uniform quality - 06080B/04

*ULRI/ 06.09.77 ULRICH F C03 D14 *DT 2740-029
Chewing strap for pigs bred under intensive conditions - 22235B/12

UNAC 28.06.77 UNITED TECHNOLOGIES CORP A97 D12 =SF 7802-023
Food casings providing brown smoke colour - 02455B/02

UNDE- 19.07.77 UNDERBERG-HANDELS A D16 =GB 2001-341
Prepn. of bubbling, sparkling and champagne type wines - 84154A/47

UNIC 11.04.72 UNION CARBIDE CORP D12 =DT 2366-226
End closure - 66569U/44

UNIC 02.05.72 UNION CARBIDE CORP D15 #DS 2221-498
Sewage sludge treatment - 52810T/33

UNIC 08.05.74 UNION CARBIDE CORP D12 =CA 1049-921
Auto cutter for concertina-pleated sausage skins, etc - 78698W/48

UNIC 30.06.77 UNION CARBIDE CORP D12 =SF 7802-061
Stuffing horn assembly with flow control device - 02456B/02
UNIL 01.04.70 UNILEVER NV D13 =J7 9003-882
Edible fat emulsions prodn - 65971S/41
UNIL 22.08.75 UNILEVER NV A96 D22 F07 =CH -608-987
Fluid absorbing article with absorbent gel stripes - 18449Y/11
UNIL 05.11.76 LEVER BROTHERS CO A97 D25 E17 (E16) =US 4144-201
Dish-washing compsn. with good drainage properties - 33432A/19
• UNIL 13.06.77 UNILEVER NV D22 E19 *FR 2394-290
Deodorising compsns. not contg. antiperspirants - 22438B/12
UNIL 28.07.77 UNILEVER NV A96 D21 =NO 7802-578
Sprayable hair lacquer compsn. - 08019B/05
UNIL 26.08.77 UNILEVER NV A96 D21 =EP ---1-162
Non-irritant, non-tacky antiperspiration compsn. - 20277B/11
UNIL 30.08.77 UNILEVER NV D13 =DT 2837-848
Iced confectionery esp. ice lollipops - 18000B/10
• UNIL 21.02.78 LEVER BROTHERS CO D25 E22 *US 4144-024
Colouring liquid detergent mixt. - 23761B/12
• UNIL 15.06.78 LEVER BROTHERS CO B05 D21 E12 *US 4144-323
Oral anti:calculus compsns. - 23892B/12
UNIL 23.08.78 UNILEVER LTD A96 D21 =GB 2003-730
Non-irritant, non-tacky antiperspiration compsn. - 20277B/11
UNIU 18.09.73 UNIV OF GLASGOW B04 C03 D16 =CH -609-091
Feline leukemia vaccine - 22483W/14
• UPJO 06.09.77 UPJOHN CO B03 D22 E13 F09 *DT 2836-913
Antibacterial deoxy-neamine derivs. and precursors - 22298B/12
UPJO 06.09.77 UPJOHN CO B03 D22 E13 F09 =NL 7809-034
Antibacterial deoxy-neamine derivs. and precursors - 22298B/12
UPJO 19.09.77 UPJOHN CO B04 C03 D16 (D22) =BE -870-597
Antibiotic 354 and its salts and derivs. - 09910B/05
• USAS 19.01.77 NAT AERO & SPACE ADMIN B04 D16 *J5 3139-785
Detecting bacteria in blood for diagnostic purposes - 22592B/12
• USSI 24.02.78 US SEC OF INTERIOR D15 E19 J01 (E37 J03) *US 4144-185
Calcium sulphate scale removal - 23836B/12

VARO- 04.08.77 VAROSEPITESI TUDOMA D15 =SW 7808-373
Biological surface water purificn. - 14435B/08
VEHN- 21.07.77 VEHNA AB OY D17 F09 G03 =GB 2001-332
Unmodified starch adhesives for corrugated cardboard - 11280B/06
• VENG/ 30.09.77 VENGLOVSKY J D16 *CS 7705-641
Bacterial culture monitor - B/12
VEOS 28.06.77 VER OSTERR EISEN & STAHL D15 J02 =SF 7802-042
Sewage aeration device - 02213B/02
VIBR- 09.04.69 VIBRASUG AB D22 =DS 2016-698
Disinfection chamber evaporator - 76950R/42
VILJ/ 06.09.77 VILJANMAA A K D18 =DT 2838-018
Stretching hides in frames for drying - 04115B/03
VILJ/ 06.09.77 VILJANMAA A K D18 =NL 7809-070
Stretching hides in frames for drying - 04115B/03
VITA- 31.01.77 VITATECT CORP B04 D16 H04 =US 4144-134
Determining bacterial concn. by luminescence - 57199A/32
• VODG= 27.05.75 VODGEO WATER SUPPLY D15 *SU -604-827
Domestic aq. waste sediment treatment - 23551B/12
• VOLL- 31.08.77 FA VOLLMAR O D15 *DT 2739-126
Storm sewage tank emptying system - 22185B/12
• VOSS/ 03.09.77 VOSS G M D13 *DT 2739-849
Confectionery contg. guarana - 22220B/12
• VOYT/ 10.11.76 VOYT W F D21 E13 *US 4144-325
Preventing erythema of the skin dye to UV absorption - 23894B/12

• WADL 25.08.77 WADLEY RES INST BLOOD BK B04 D16 *US 4144-133
Fungal growth medium containing purified saponin - 23813B/12
WHEE 03.06.75 WHEELABRATOR INCINE D15 J09 M28 =GB 1542-658
Multiple hearth furnace operation control - 43671X/23
• WICH/ 21.03.77 WICHMAN H D22 *US 4143-653
Adjustable bend finger splint - 23705B/12
WISC 29.09.72 WISCONSIN ALU RES FOUND B05 D16 =J7 9003-953
Cyclopentane-1,3-diones inters to prostaglandins - 73644U/48
• WISC 23.05.74 WISCONSIN ALU RES FOUND B04 D16 *US 4144-131
Enzyme immobilisation on human tissue or erythrocytes - 23811B/12
WISC 28.02.75 WISCONSIN ALU RES FOUND B05 D13 =SW 7811-147
1-Alpha, 25-Dihydroxy-cholecalciferol prepn - 71626X/38
WIST- 15.06.77 WISTAR INSTITUTE B04 D16 =FR 2394-607
Viral antibody prodn. using hybrid cells - 74495A/42
WORL- 29.08.77 WORLD DEV LAB D15 J01 =DT 2837-489
Reducing impurity concn. of solution by reverse osmosis - 18520B/10

YAMA/ 09.08.77 YAMAMURA Y A96 B04 D16 =SW 7808-414
Antitumour compsn. , 14567B/08
• YASU/ 15.07.77 YASUMOTO M D15 J01 *J5 4020-958
Sludge dewatering by pneumatic pressure - 23129B/12
• YOSH/ 13.07.77 YOSHIKAWA Y D13 E33 *J5 4020-159
Deodorising garlic - 23043B/12
• YOSH/ 15.07.77 YOSHIKAWA T D13 E12 (E36) *J5 4020-149
Preserving perishable, oxidisable materials - 23040B/12
• YOUN- 15.07.75 YOUNGS SEAFOODS LTD D12 *GB 1542-403
Appts. for deveining crustacea clamped in indexable holders - 22474B/

ZAID 14.01.76 MICROBIAL CHEM RES B03 C02 D16 =J7 9003-871
Antibiotic anthracycline glycoside - 62170Y/35
ZAID 07.04.76 ZH BISEIBUTSU KAGAKU KEN B03 D16 =US 4144-329
Anthracyclin glycoside antibiotics MA 144-M1 and -M2 - 55824Y/32
• ZANU 16.06.77 ZANUSSI INDUSTRIE SPA D15 F07 *FR 2394-968
Isolation of washing machine water supplies from contaminatio
22471B/12
• ZAPL/ 03.06.77 ZAPLETAL O C03 D13 *CS 7703-655
Bait for vertebrate pests - B/12
• ZARA/ 10.12.76 ZARAGOZA J C C03 D13 *US 4144-353
Grapes as artificial fish egg bait - 23904B/12
ZIEG/ 09.05.77 ZIEGLER-HASLER R D11 =CH -609-212
Dough extracting and metering device - 90463Y/51

-Q ADE
711-309 Q00
491-645 R34
222-833 S07
834-394 Q01
667-882 B12

2-R D
2005-305 R06
-507-371 S27
1268-272 T13
-518-367 T20
-960-170 W03
9003-939 B12

5-R DE
1926-178 R06
2009-331 R16
1233-146 S20
3607-652 S42
1926-178 V26
9003-949 B12

3-R D
6916-325 R19
1954-218 R20
2021-949 R46
1239-870 S28
3674-646 T29
-925-038 U19
1954-218 V03
9003-947 B12

36-R D
-741-824 R20
6917-283 R21
1958-014 R26
2023-548 R48
6907-957 S04
-518-368 T20
3677-896 T31
1292-291 T41
-951-664 V32
9003-937 B12

504-R D
-742-209 R22
A 6908-247 S04
A -882-703 S41
9003-938 B12

949-R D
E -746-875 R36
T 2010-897 R42
R 2037-368 S10
H -505-029 S24
B 1305-785 U06
S 2010-897 B12

6204-R D
E -748-896 R41
L 7005-297 R43
R 2039-194 S12
T 1918-986 S13
L --81-646 S29
GB 1317-910 U21
DS 1918-986 A41
7 9003-824 B12

6950-R D
DT 2016-698 R42
FR 2038-341 S12
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GB 1269-184 T14
CA -919-756 U06
SU -388-387 V17
DS 2016-698 B12

28164-S D
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US 3671-267 T27
CA -924-319 U17
US 3766-226 U44
J7 9003-943 B12

52033-S ADEF
DT 2103-299 S32+
NL 7101-223 S33
BE -762-252 S36
ZA 7008-601 S44
FR 2072-323 T01
J7 2045-810 T47
CA -926-388 U22
GB 1332-223 U40
CH -561-766 W25
CS 7100-271 B12+

59583-S DJ
NL 7107-488 S37
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US 3735-792 U24
GB 1350-098 V16
CA -946-730 V21
OE 7104-662 W35
NL -150-347 X38
DS 2125-945 B12

65971-S D
BE -765-177 S41
NL 7104-406 S42
DT 2115-447 S46
J4 6003-973 S47
FR 2090-503 T14
ZA 7102-101 T52
GB 1346-645 V07
CH -561-563 W25
US 3889-004 W25
CA -984-656 X12
J7 9003-882 B12

14519-T DE
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NL 7111-351 T11
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CA -923-899 U16
US 3726-692 U17
CA -927-828 U26
US 3764-601 U42
CH -545-071 V07+
GB 1354-733 V22+
US 3843-804 V44
US 3857-972 W02
J5 0131-973 W50+
CA -978-952 W51
US 3942-537 X12
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US 3960-860 X24
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J7 7021-072 Y26+
NL -153-936 Y31+
J7 9003-878 B12+

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45384-T BCD
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GB 1324-618 U30
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US 3876-763 W16
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52810-T D
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74161-T AD
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CH -551-390 V36
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J7 9003-854 B12

10940-U AD
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ZA 7305-999 V43
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OE 7308-395 X20
IL --43-146 X27
CA -997-696 X42
CH -601-143 A28
J7 9003-953 B12

74988-U BD
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BE -799-542 U49
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DT 2224-133 V02
FR 2184-968 V08+
J4 9047-582 V28+
DT 2307-518 V42+
ZA 7303-259 V22
DS 2224-133 V26
DS 2224-131 V27
DT 2264-646 V30
GB 1391-876 W17+
HU T012-414 X47
IL --42-292 Y07+
CH -592-108 Y48+
GB 1391-876 A11+
HU T014-958 A23+
DS 2307-518 A43+
SU -584-801 A45
US 4144-129 B12+

33204-V BD
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J7 9003-956 B12

36488-V CD
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NL 7315-167 V21
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FR 2205-572 V36
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ZA 7308-536 V47
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IL --43-575 X51
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CA 1017-671 Y40
CS 7307-612 B12

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CA 1008-450 Y17
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J7 9003-706 B12

53170-V AD
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BE -809-195 V34+
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OE 7310-881 X40+
GB 1461-401 Y02+
GB 1461-402 Y02+
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DS 2358-560 B12

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NL 7402-700 V38
SW 7401-924 V44
SF 7304-018 V49
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J7 9003-705 B1

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DK 7405-428 W29
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OE 7407-749 W35
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J7 9003-951 B12

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US 4075-321 A10
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US 3927-209 W52
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DK 7404-044 W17
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US 4078-066 A13+
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14767-W BDE
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19560-W DJ
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DK 7404-366 W23+
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OE 7308-328 W35
OE 7307-771 W35
OE 7310-098 W35
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GB 1486-186 Y38
US 4086-134 A24
US 4117-112 A40
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22633-W BD
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CA 1039-712 A42
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30859-W D
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30990-W DE
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DK 7405-602 W29
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IT 1024-697 A39
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31430-W BDE
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J7 9003-952 B12

32394-W DE
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37847-W AD
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CH -609-245 B12

42922-W DE
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FR 2254-611 W40
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GB 1491-693 Y45
IT 1027-728 B11
CH -609-083 B12

44554-W AD
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NL 7414-945 W27
SW 7414-417 W32
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ZA 7407-983 X13
BR 7410-317 X28
OE 7409-950 X46
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IT 1027-067 B06
CH -609-090 B12

46135-W ABD
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NL 7502-236 W37+
DT 2508-082 W41+
SW 7502-053 W43
DK 7500-696 W48+
FR 2261-755 W50
J5 0160-413 X05+
ZA 7501-124 X13
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PT --63-395 X22+
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49693-W AD
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SF 7500-059 W40+
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DK 7505-386 X35+
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BE -843-636 Y04+
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SW 7607-414 Y07+
FR 2316-325 Y15+
J5 2030-807 Y16+
CH -599-973 A28+
OE 7604-775 A40+
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DS 2646-244 B12+

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SW 7614-403 Y31
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DK 7605-771 Y37+
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31172-Y D
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62170-Y BCD
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66744-Y D
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7502-737 B12+

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DK 7803-197 B12
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22260-B AD
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22280-B D
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NL 7809-036 B12

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12 79984W D16+R1
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WEEK B13
16 MAY 79
23945B - 25900B

CENTRAL PATENTS INDEX

CLASSIFIED ALERTING BULLETIN

Section D:

FOOD
DETERGENTS

ABSTRACTS

INDEXES

- II - PATENTEE
- V - BASIC NUMBER
- VII - PATENT NUMBER

COUNTRY	PUB. DATE(S)	NUMBER RANGE
BELGIUM		
-Delayed	20 MAR - 26 MAR 79	870,610 - 870,774
-Non Delayed	16 MAR 79	872,035 - 872,241
BRAZIL	6 MAR 79 + 13 MAR 79	7,705,029 - 7,805,081
CANADA	20 MAR 79	1,050,701 - 1,051,150
DENMARK	5 MAR 79	7,703,528 - 7,803,582
W.GERMANY		
-DAS	22 MAR 79	1,468,530 - 2,836,493
-OLS	22 MAR 79	2,712,648 - 2,841,134
FRANCE*	19 JAN 79 (BOPI 23 FEB 79)	2,394,971 - 2,395,687
UNITED KINGDOM	28 MAR 79	1,542,761 - 1,543,280 2,004,171 - 2,004,450
JAPAN		
-Unexamined	—	47,023,088 - 53,023,170
	18 FEB - 24 FEB 79	54,021,601 - 54,025,200
-Examined	1 MAR - 7 MAR 79	79,004,001 - 79,004,560
NETHERLANDS	15 MAR 79	159,559 - 159,855
	12 MAR - 18 MAR 79	7,709,867 - 7,809,392
NORWAY	5 MAR 79	7,702,732 - 7,900,163
AUSTRIA	15 MAR 79	6,912,074 - 7,806,194
SOVIET UNION	—	604,737 - 606,785
SWEDEN**	12 MAR 79	7,703,249 - 7,810,813
UNITED STATES***		
-Reissues	5 SEP 78	Re29,750 - Re29,756
-Defensives	5 SEP 78	T974,001 - T974,003
-Patents	5 SEP 78	4,110,845 - 4,112,520
PCT	22 MAR 79	7,900,119 - 7,900,151

*Printed patents actually published late February - mid March, 1979

**Includes numbered Basics from Weeks B1, B3, B4 and B5

***Printed patents actually published 5 December 1978

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Arrangement of Abstracts

See Appendix I for definition of 'Major' and 'Minor' Countries.

'MAJOR' COUNTRIES – An alerting abstract of every basic and examined equivalent document is provided except for equivalents from Canada, East Germany and Switzerland. The abstracts are arranged in CPI class order and within any one of the 135 classes are in country and patent number order.

'MINOR' COUNTRIES – Basic headings are included in sequence with the entries from the 'Major' countries.

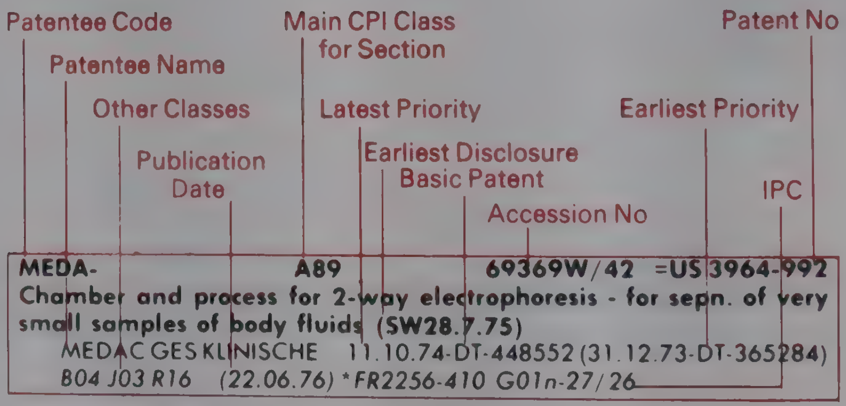
CPI Section Headings

See inside cover for further details.

A	Polymer Chemistry
A+	Polymer Applns.
AE	Polymer & General Chemistry
B	Pharmaceuticals
C	Agricultural Chemistry
D	Food, Disinfectants, Detergents
E	General Chemistry
E+	General Chemistry Applns.
F	Textiles, Paper, Cellulose
G	Printing, Coating, Photographic Chemistry
H	Petroleum
J	Chemical Engineering
K	Nucleonics, Explosives, Protection
L	Refractories, Ceramics
M	Metallurgy

Typical Abstract Heading

See CPI/WPI Instruction Manual No. 1A for explanation of the various flagged descriptors.


Patentee Code
Main CPI Class for Section
Patent No
Patentee Name
Other Classes
Latest Priority
Earliest Priority
Publication Date
Earliest Disclosure
Basic Patent
IPC
Accession No

MEDA- **A89** **69369W/42** **=US 3964-992**
Chamber and process for 2-way electrophoresis - for sepn. of very small samples of body fluids (SW28.7.75)
MEDAC GES KLINISCHE 11.10.74-DT-448552 (31.12.73-DT-365284)
*B04 J03 R16 (22.06.76) *FR2256-410 G01n-27/26*

Copies of Specifications may be ordered from our PATENTS SUPPLY DIVISION.

D1: FOOD; FERMENTATION

D11 : BAKING

ASP/ D11 46190X/25 =DS 2455-997
**ough rolling machine - with belt-type stretching units separated by
utes and elevator with flights**
KASPER J 27.11.74-DT-455997
*(22.03.79) *DT2455-997 A21c-07/**

a machine for the rolling-out and elongating of dough
r the manufacture of pretzels, adequate time must be
llowed for the stresses induced in the dough to be relie-
ed. The first endless-belt operated rolling-out station
erefore discharges the dough on an inclined belt convey-
r with flights, pref. at an angle of 60°. During its travel
this, the dough is exposed to a hot air stream. A chute
lso at ana angle of 60°) discharges the dough to the se-
ond rolling-out station, with an active upper and lower
trand of the belt before the dough is discharged on the
orktable.
This prevents tearing of the dough rolls. 27.11.74. as
55997 (6pp39)

UND- ★ D11 24043B/13 ★DS 2815-417
**ass produced cake mould - bent from flexible material and fixed
y punchings**
GUNDLACH E KG 10.04.78-DT-815417
(22.03.79) A21b-03/13

cake mould is made from strips of flexible material
hich are extracted from a magazine and passed through
station where one end is slightly turned over and ripp-
ed. In the next station each strip is bent to a ring and
ixed together by four partly punched out and bent out-
ard circles. These four punched circles are arranged
a square. The turned-over flange is finally used to
upport a bottom disc.
This required few tools and is ideal for mass prodn.
0.4.78. as 815417 (6pp39)

ANG- ★ D11 24111B/13 ★DT 2741-294
**Waffle moulding machine - with roll faces sealed by block with
urved scraper recesses**
DANGER H KG 14.09.77-DT-741294
(22.03.79) A21b-05/02 A21c-09/04

A waffle moulding machine with contrarotating rolls pre-
vents the leakage of the sugary mass at the face ends of
he rolls by spring-loaded sealing blocks with scraper re-
cesses. These recesses are curved and extend from out-
side the roll periphery to a point above the roll gap.
This prevents any leaking mass from contaminating the
conveyor for the waffle discharge or from accumulating at
other undesirable spots. It avoids the use of lip seals
which have a short life because of the abrasive nature of
he mass. All parts are easily detachable for cleaning.
4.9.77 as 741294. (14pp39)

RRR ★ D11 24151B/13 ★DT 2800-310
**akery products for use with e.g. milk instead of known cereals -
repd. by baking in hot air spherical bodies made from pref. yeast-
ree dough contg. proteins**
FERRERO P & CIA SPA 21.09.77-IT-069082
(22.03.79) A21d-13/08

Pref. spherical, seam-free bakery prods. having a dia. of
10-20 mm. are produced by baking pref. in hot air (not in
a boiling fat) spheres formed pref. from a yeast-free
dough contg. egg-white. The surface of these prods. is
relatively impermeable to air and moisture. The prod.
has relatively coarse pores decreasing from the inner to-
wards the surface. The moisture content is below 1%.
This prod. can also be used for coating other food prods.,
(e.g. chocolate or cream).
These prods. are pref. used as additives for e.g. milk
or fruit juices instead of the known cereals. They are not
ively fatty, as they contain only the moderate quantity of fat contained in the dough. They are not imbried with liqs. and, hence, they float on the surface and remain crisp. 4.1.78 as 800310. (7pp70)

RIKV ★ D11 24717B/13 ★J5 4023-167
Choux mix - including mix of dry powdery gluten contg. oil and fat and starch
RIKEN VITAMIN OIL KK 25.07.77-JA-089100
(21.02.79) A21d-13/08

Dry powdery choux mix comprises a mixt. of dry powdery gluten including oil and fat and starch or a compsn. obtd. by combining ≥1 kind of powdery oil and fat prepd. by using sodium casein as the major powdering agent, powdery skimmed milk, sodium casein and sugar to the mixt. as above.

Powdery choux mix is convenient to handle and has excellent keeping properties and with it excellent dough for choux can be prepd. 25.7.77 as 089100 (5pp5)

KONI/ ★ D11 B/13 ★OE 7709-051
Portioning and cutting device for dough pieces
KONIG H 16.12.77-OE-009051
(15.03.79) A21c-05/04

BREA= ★ D11 25199B/13 ★SU -605-588
Bread of improved quality and storage life - is obtd. by adding mono-glyceride ester to the dough during initial and final stages of prepn.
BREAD BAKING IND (MOFA=) 24.09.76-SU-408667
(17.04.78) A21d-08/04

Bread is manufactured by blending flour and various additives, incorporating a dispersion contg. monoglyceride esters, fatty acid monoglycerides, sugar and vegetable oil. Quality is improved and storage life extended by mixing the dispersion with water in the ratio 1:2-1:4 at 35-45°C and introducing it in small amts. both at the beginning and end of the mixing process. In this way blending is conducted with sp. energy expenditure of 40-50 J/g dough.
Goryacheva, A.F., Shkvarkina, T.I., Semenova, V.S. et al. Bul. 17/5.5.78. 24.9.76. as 408667 (2pp835)

HANS/ ★ D11 25646B/13 ★US 4111-624
Imprinting irregularly spaced dough pieces - by passing pieces on conveyor past sensor then releasing frictionally driven print wheel
HANSON D R 28.10.76-US-736382
(05.09.78) A21c-11/02

A dough imprinting device includes a conveyor for carrying dough pieces through an imprinting station. Upstream of this station is a sensor which detects the presence of a dough piece on the conveyor. The imprinting station comprises a rotating head carrying the imprinting design.

Although the shaft of the imprinting head rotates continuously a slipping clutch allows the imprinting head to be held stationary by a latch. When a dough piece is sensed the imprinting head is unlatched after a predetermined delay and applies the design to the dough piece as it passes beneath it.

The appts. applies an imprint e.g. a trademark, to a dough piece. The appts. prints on parallel lines of dough pieces using independently activated sensors and corresp. imprint heads. The appts. can imprint accurately on irregularly spaced dough pieces on the conveyor. 28.10.76 as 736382 (12pp295)

POPJ ★ D11 25832B/13 ★US 4112-127
Dough processing - by passing repeatedly through pair of parallel rollers with adjustable spacing
POPEIL BROS INC 09.07.76-US-703918
(05.09.78) A21d-08/02

The method comprises mixing the dough and kneading it until the required consistency is achieved. The dough is then preformed using an open-ended blank cutter which is filled to overflowing with the dough and is then passed between a pair of opposed rollers to form a blank. The blank is removed from the cutter.

The blank is then passed between the rollers repeatedly until it is flat and dimensionally stable. The spacing between the rollers is next reduced and the dough again is reprocessed until it has the desired thickness. The flattened dough body is then positioned on an open-faced mould having upstanding cutting edges. The rollers are readjusted t accomodate the open-faced mould which is then passed between the rollers to sever the dough into its desired configuration.

The appts. is used to form dough into noodles or raviol The appts. may be used in the home. 9.7.76 as 703918 (7pp295)

See Also

D13 US 4112122

D12 : MEAT ; FISH PROCESSING

KURE D12 39246W/24 =DS 2501-287
Curved plastic sausage casings - by inflating non-drawn thermoplastic tube as it advances along cylindrical shaping device
KUREHA KAGAKU KOGYO 19.01.74-JA-008704
*A97 (A14) (22.03.79) *BE-824-476 B29c-17/02*

Prodn. of crimped, heat treated thermoplastic foil tube, esp. from vinylidene dichloride copolymers, comprises continuous extrusion of these plastics in tubular form, machining the external surface to obtain a helical or screw pattern (pref. 1-4 times the length of the tube), followed by release of stress in the surface. 15.1.75. as 501287 (6pp047)

TECH- D12 88029A/49 =DS 2724-394
Individual clip separating machine - with fingers on endless chain passing through slot in clip magazine
TECHNOPACK EWALD HA 28.05.77-DT-724394
*Q35 (22.03.79) *DT2724-394 A22c-11/12 B65g-47/14* .

Machine to extract U-shaped clips from a magazine one-by-one and to feed them in proper alignment to a sausage closing or a packaging machine has an endless chain with finger flights which pass through a bottom slit in the magazine and have at the end a notched recess for one clip. A guide strip allows each flight to dip into the magazine to the multiple thickness of a clip. In the further path, the guide strip draws nearer to the end of each flight until finally it allows just one clip to hang in the notch. This is aligned by side strips.

The device is reliable and simple. 28.5.77. as 724394 (4pp39)

ANDE/ ★ D12 24224B/13 ★DT 2839-719
Poultry liver and heart separation - from gall bladder and guts by slotted chute and revolving cutter (NL 16.3.79)
ANDERSEN B C 14.09.77-DK-004073
(22.03.79) A22b-05 A22c-21/06

A device for the sepn. of the liver and heart of poultry from the guts and gall bladder consists of two parallel strips which leave a gap between them. The gap is such that the guts fall through but liver and heart remain above it. These strips are first steeply inclined and then flatten out as they approach a rotating cutter disc which severs the two parts.

This saves damage to the gall bladder which spoils the innards, saves damage to the liver, and saves manual labour. 13.9.78 as 839719. (9pp39)

NISH- ★ D12 24713B/13 ★J5 4023-158
Food prepd. from milt of fish and shellfish - by adding sodium chloride, poly-phosphate, ethanol, and antioxidant and kneading the mixt.
NISHIMURA KK 20.07.77-JA-086048
(21.02.79) A23l-01/32

Common salt, polyphosphate, ethanol or ethanol-contg. substance and antioxidant are added to the testiculus (milt) of fishes or shell fishes. Then, the mixt. is kneaded to a paste.

The testiculus of fishes and shellfishes is delicious and rich in precious nucleoprotein. However, previously it has been discarded because it is easily oxidised or autolysed, and its processing and preservation is difficult. This method is used for prepn. of delicious, nutritive food from testiculus of fishes or shell fishes, such as salmon, cod, scallop, etc., with prevention of oxidation, autolysis and putrefaction of the testiculus. The obtd. food can be preserved by freeze-storage, refrigeration-storage, etc.

Common salt, polyphosphate and antioxidant (e.g. L-ascorbic acid, its salt, erythorbic acid and its salt) are added in amts. 2-10 w/w%, 0.2-0.5 w/w% and 0.5-2 w/w% and 0.5-2 w/w% respectively w.r.t. wt. of testiculus (milt). As ethanol-contg. substance, wind, 'sake', etc. can be used and it is combined so that the ethanol concn. in the paste is 5-10%. Antioxidant is used to stabilise the testiculus, and common salt and ethanol are used to prevent putrefaction. Further the fishy smell can be masked with ethanol or ethanol-contg. substance, and polyphosphate is combined to maintain good pasty condition. 20.7.77 as 086048 (3pp5)

SHIM- ★ D12 24714B/13 ★J5 4023-159
Preserving Crustacea or coloured fish - using compsn. contg. sodium bi:sulphide or sodium sulphide
SHIMAKYU YAKUHIN KK 19.07.77-JA-087025
(21.02.79) A23b-04/02

Pref. < 20 pts. wt. L-tryptophane is used with 100 pts. wt. sodium bisulphide for better freshness-retaining effect. A binder such as sodium polyphosphate, acidic sodium pyrophosphate or sodium metaphosphate 5-15 pts. wt. on 100 pts. wt. sodium bisulphide or sodium sulphide is also used.

The compsn. is used as an aq. soln. or aq. saline soln. having a concn. of sodium bisulphide or sodium sulphide of 0.1-3.0 w/w% esp. 0.3-0.5 w/w%. Crustacea or coloured fish are immersed in the soln. for 5-10 secs. at room temp.

Residual sulphur dioxide in the treated Crustacea or fish is as low as < 10 ppm. 19.7.77 as 087025 (5pp5)

NIKK- ★ D12 24715B/13 ★J5 4023-162
Sausage prepn. - by adding coagulated milk protein to meat mixt.; adding skimmed milk and lactic acid bacteria; kneading; packaging etc.
NIKKEN FOOD 19.07.77-JA-086545
(21.02.79) A22c-11 A23l-01/31

Process comprises (1) inoculating lactic acid bacteria starter in cow milk or skimmed milk previously sterilised (2) fermenting; (3) adding thus obtd. coagulated milk protein ca. 10% in meat material; (4) adding powdery skimmed milk and lactic acid bacteria to the mixt.; (5) kneading the mixt. to obtain an emulsion; (6) packaging in casings; (7) tieing them up; (8) drying and smoking them at 32°C for 20-24 hrs.; and (9) boiling or steaming.

Additional preservatives such as Na nitrite need not be added. 19.7.77 as 086545 (4pp5)

NITT- ★ D12 25062B/13 ★J5 4024-898
Collagen sol prepn. - by dipping animal tissue in acidic soln., heating, finely dividing and treating with caustic soln. in presence of swelling retarder
NITTA GELATIN KK 26.07.77-JA-089531
(D18 D22) (24.02.79) C09h-03

Collagen sol. prepn. by dipping broken pieces of connective tissue of animals in an acidic soln. at pH $\leqslant 3$, heating the pieces at $\leqslant$ 65°C, finely dividing the heated pieces at low temp. (< 10°C) or in a frozen state and treating with caustic soda in the presence of a collagen swelling retarder.

The cohesive force of the connective tissue can be decreased without decomposing the collagen molecules.

The acidic soln. is pref. a buffer soln. The finely dividing of the tissue is pref. conducted in a frozen state. The treatment with caustic soda is conducted at 10-20°C for 1-7 days. The collagen swelling retarder includes known sulphates, sulphites or halides.

In an example, 1 kg of defatted ox-hide cut into 10 cm square was dipped in 5 litres of an HCl soln. at pH 3 at room temp. for 24 hrs. The swollen ox-hide pieces were heated at 55°C in a bath for 15 mins., followed by cooling in ice-water. The cooled pieces were neutralised with a 20% caustic soda soln. to pH 7 while gently stirring, followed by standing for 1 hr. and then washing with ice-water for 3 hrs. The ox-hide pieces were frozen at -30°C and pulverised to fine particles of 0.1 mm in dia. while keeping the temp. at ⩽ -5°C. A soln. (4 litres) contg. 2% caustic soda and 20% sodium sulphate was added to the particles (900 g) and maintained at 10°C for 4 days to obtain a sol. dispersion. 26.7.77 as 089531 (3pp140)

UNIC D12 64975R/36 =NL-159-565

Tubular skin for packing foodstuffs eg - sausages

UNION CARBIDE CORP 05.03.69-US-804452

*A92 Q32 +Q31 (15.03.79) *BE-746-922 +A22c-13 B65b-09/10*

Synthetic casings for sausages are packed in folded form into a hollow cylindrical stick which can then be placed onto the sausage machine and the casings drawn out and filled with sausage meat. Each stick is packed into a flexible permeable membrane which is wrapped over the outside and inside wall of the stick.

The membrane holds the stick in compression until it is placed in position onto the sausage machine. The risk of damage during transit is thus minimised and it is possible to moisten the casings without unpacking them since the wrapping is permeable. 5.3.74 as 003174. (7pp1370)

LEME= ★ D12 25200B/13 ★SU-605-589

Heat treatment installation sausage packing mechanism - has pan conveyor for filling individual sections of loading frame

LENGD MEAT IND PROD 03.12.75-SU-195560

(14.04.78) A22c-15 A23b-04/04

Device for packing sausage-like articles for heat treatment, includes a loading mechanism and a frame. Productivity is increased by making the former as a pan-conveyor, installed so that it can move intermittently. A pusher is positioned above the conveyor. The latter comprises a framework with holders mounted cantilever-wise in rows one above the other. These holders can move intermittently upwards and have pusher-ejectors.

These are made up of carriers with vertical supports connected to horizontal crossbeams, the number of which equals the number of rows in the frame. The horizontal crossbeams have projections, the number depending on the number of holders in each row.

Nevskii, M.A., Zhdanov, A.A. Bul. 17/5.5.78. 3.12.75. as 195560 (4pp29)

UMEA= ★ D12 25201B/13 ★SU-605-590

Meat brining appts. - with perforated false bottom close under conveyor, with perforated blades for reduced process time

UKR MEAT DAIRY IND 09.08.76-SU-391979

(14.07.78) A23b-04/02

Process time is reduced and yield increased by using appts. comprising a tank with a perforated false bottom under a conveyor, which has perforated blades, and brine recirculation system. The profile of the bottom corresponds to the shape of the conveyor lower run.

Meat pieces are carried through the tank by the blades, the blade perforations ensuring maximum liquid contact. The perforated base and minimum gap between base and conveyor ensures continuous movement of meat pieces and prevents the pieces from being trapped under the blades.

Galushchenko, V.A., Timoshchuk, I.I., Zhirnyi, P.A. et al. Bul. 17/5.5.78. 9.8.76. as 391979(2pp1358)

KLAI= ★ D12 25202B/13 ★SU-605-591

Ice glazing frozen food blocks - by applying water through relatively moving contacting absorbent material for uniform film formation

KLAIPEDA OCEAN FISH 01.08.76-SU-389228

(14.04.78) A23b-04/06

A uniform film of ice is formed on blocks, particularly of fish, by applying water through water-absorbent material in contact with the block surface. A frozen block is brought into surface contact with the absorbent material, e.g., cotton fabric, with relative movement. The material is continuously wetted with water so that a uniform film runs on to the block surface. The thickness of the glaze can be varied by adjusting the relative speed of block and material and the contact time. All sides can be glazed by tilting the block. A uniform and strong glaze is obtained.

Dubrovin, L.V., Isaev, A.G. Bul. 17/5.5.78. 1.8.76. as 389228 (1pp1358)

MEAT= ★ D12 25463B/13 ★SU-606-570

Animal carcass processor - with overhead suspension conveyor, curved guides, ripping knife and inspection table for internal organs

MEAT DAILY IND DES 08.06.76-SU-369663

(26.04.78) A22b-05/20

Device for preparing animal carcasses, e.g. in the first stage of processing cattle meat, comprises a mechanism for turning the carcass, conveyor with turnover pins, curved guides, pressing orientator, knife element for ripping open the abdomen, and knife-cutter with limiters, which works from underneath. Carcasses of different categories can be cut by hingeing the two knives-cutters on the curved guides using brackets. The abdomen knife-element is connected to one of the brackets by clamps, the shape duplicating that of the cavity in the abdomen. The knife which cuts from beneath is hinged to a spring-loaded plate. The curved guides are installed so that the distance between them can be controlled.

Graf, V.A., Afanasev, Yu.I., Gavrilov, V.M. et al. Bul 18/15.5.78. 8.6.76. as 369663(4pp29)

LERE= ★ D12 25464B/13 ★SU-606-571

Sausage meat injector - generating additional pressure to fill skins, by combining rotary screws and spring-link operating while valve is closed

LENGD REFRIG IND 19.10.76-SU-413769

(27.04.78) A22c-11/08

Injector for filling sausage skins, which can also be used in other fields of the food ind. where similar filling processes are done, consists of a loading hopper, body contg. screws, attachment with teat, and motor drive. Productivity is increased, due to increased pressure in the pressure zone, by making each screw in two parts i.e., a feeder and a thruster, linked together by a spring-loaded connection.

Gorban, M.V., Gruzdev, I.E., Kornilev, I .V. et al. Bul. 18/15.5.78. 19.10.76. as 413769 (3pp29)

JOHJ ★ D12 25574B/13 ★US 4110-871

Sausage stuffing horn - with deflector to mix sausage meat passing through horn

DEVRO INC 20.10.75-CA-237988

(05.09.78) A22c-11

A sausage stuffing horn comprises an elongate body with an inlet opening at one end and a discharge opening at the other. Between the two openings is a confined channel along which sausage meat flows. A fixed deflecting member is located in the channel spaced inwardly from the discharge opening.

The deflecting member lies at 5-85° (35-55)° to the direction of flow of sausage meat and exchanges the inner portion of the flowing sausage meat with the other portion. Pref. the deflecting member is in the shape of a curved moldboard plowshare.

The stuffing horn is used to insert sausage meat into a casing. The outer fatty portions of the meat emulsion are exchanged with the inner portions of the meat emulsion. This prevents smearing of the meat emulsion during packaging. Also cooking of the resultant sausage does not result in loss of the meat juices and thus a more moist prod. is obtd. 20. 10. 76 as 734226 (5pp295)

CARN- ★ D12 25831B/13 ★US 4112-126

Counter colouring of denatured meat prods. - with FD and C colours complementary to the denaturing FD and C colours used

CARNATION CO 28.02.77-US-772466

E24 (05.09.78) A22c-17/10 A23k-01/10

Treating meat inedible to humans for use in animal foods comprises contacting the meat with an amt. of an approved FD&C denaturing colour sufficient to decharacterise it and then contacting it with an amt. of a counter-colouring agent sufficient to provide it with a meat-like colour, the agent being the complementary colour of the FD&C colour.

Generally an aq. soln. contg. about 0. 1-2 wt. % of the denaturing colour is used although dry colour may also be used. Suitable colours are FD&C blue No. 2, FD&C blue No. 1 and FD&C green No. 3. The amt. of colour provided is 1-100 (5-30) ppm of meat. 28. 2. 77 as 772466 (4pp476)

See Also

D13 CA 1049837

D13: OTHER FOODSTUFFS

NEWG- ★ D13 23989B/13 ★BE -872-093

Expanded foodstuff prepd. from high protein wheat - by addn. of edible acid, pref. lactic acid, before extrusion

NEW GENERATION FOOD 06.11.78-US-956661 (17.11.77-US-852288)

(16.03.79) A23l

An expaned foodstuff of high protein content contains, on a dry base, ground whole wheat contg. ≥ 11% proteins, an edible acid at a level of 0. 01-0. 05, pref. 0. 02-0. 04, wt % lactic acid equiv. w. r. t. the wheat, and 0. 04-3 wt % of an extrusion aid. The product has a density of 0. 056-0. 076 kg/dm^3.

At least 95. 5% of the wheat should pass a 0. 84 mm. mesh sieve, the max. dia. being 1. 01 mm. The product can be curled or waved, and can be coated with liq. vegetable oil, hydrogenated vegetable oil, and flavouring material, pref. by pre-coating with 1. 5-5 wt % liq. oil, then with 10-35% of the mixt. It can also contain 5-20% of a yeast.

It has not hitherto been possible to produce an expanded foodstuff satisfactorily from wheat of high protein content. This problem is overcome in the present invention by the incorporation of the edible acid. 17. 11. 78 as 872093 (26pp)

WORL- ★ D13 24002B/13 ★BE -872-136

Precooked potato prods. - made by cooking raw potato, heating in air, and cooking again

WORLD POTATO CORP 21.11.77-US-853717

(16.03.79) A23l A23p

In making cooked potato prods., raw potatoes are first washed and peeled. They are then cooked at a temp. below the temp. at which matter becomes detached from the surface of the potato when the whole potato is cooked to the centre at that temp. The cooked potato is then heated in air, and finally cooked at 50-100°C.

The process gives pre-cooked potato prods. which can be preserved by sterilisation in plastic bags or cans or by freezing. The prods. can be prepd. for consumption by frying or boiling to give potato pieces with excellent texture and a fresh cooked taste. 20. 11. 78 as 872136 (23pp513)(F1)

CHAR/ ★ D13 24010B/13 ★BE -872-177

Detection of antibiotics in liquid samples e.g. milk, body fluid - by incubation with sensitive microorganism, incubation with marked substance, and determn. of marked cpd.

CHARM S E 12.06.78-US-914414 (21.11.77-US-853541)

B04 J04 R16 (16.03.79) G01n

Process for the detection of the presence of antibiotics in a liq. sample comprises (a) incubation of the sample with a microorganism or a part of a microorganism which has receptor sites capable of binding with the antibiotic, under conditions such that any antibiotics present in the sample are bound to the receptor sites, (b) incubation of the mixt. from a) with a marked substance, selected from antibiotics their derivs. or precursors which is capable of binding to the receptor sites, (c) sepn. of the solid and liq. phases, (d) determination of the quantity of marked substance in the solid phase or the liq. phase, and (e) comparison of the determination with a standard so as to indicate whether an antibiotic is present in the sample.

Process gives rapid and sensitive detection of antibiotics in liquids, such as milk, body fluids, meat extracts, fermentation broths etc. Compared with known methods, the present process is rapid (less than 10 mins. known processes take at least 1 hr) and sensitive (quantities of 0. 001 Iu/ml of penicillin are readily detected). 21. 11. 78 as 872177 (27pp395)

MJOL- ★ D13 24015B/13 ★BE -872-22

Protein concentrate prodn. from skimmed milk - giving prod suitable for mfr. of low calorific margarine

MJOLKCENT EKONOMISK 23.11.77-SW-013274

(16.03.79) A23d A23j

The process involves the following steps (a) skimmed mil and/or powdered skimmed milk, is acidified to pH 4-5 to ppte. protein, (b) It is heated to 35-65°C, pref. 52-55°C, and maintained at this temp. for at least 15 mins. (c) the temp. is raised rapidly to 60-95°C, pref. 65-70°C, the pptd. protein being conc. immediately after having attaine the desired temp. (d) the protein concentrate is cooled to a temp. suitable for formation of an emulsion in an oil phase, or to a lower temp. at which it can be preserved.

Before acidification, 5-40 ml of cheese rennet per 100 litres of raw material is pref. added. A small quantity of lecithin or cheese culture can also be added to the skimmed milk to reduce foaming, as well as a small quantity of whey protein. A saline citrate or phosphate can be added before heating to stabilise the albumen and/or compensate for seasonal fluctuations in the milk.

The process utilises the more readily available skimmed milk, rather than butermilk, and overcomes the disadvantages encountered with previous methods using skimmed milk. No membrane filtration or long pasteurisation is required, nor does it involve the use of organic or minera acids which have to be washed out. 22. 11. 78 as 872223 (15pp1331)

MJOL- ★ D13 24016B/13 ★BE -872-22

Low calorie margarine mfr. - using protein concentrate prepd. fron skimmed milk

MJOLKCENT EKONOMISK 23.11.77-SW-013275

(16.03.79) A23d A23j

The process involves the following steps (a) skimmed mil and/or powdered skimmed milk is acidified to pH 4-5 to ppte. protein (b) it is heated to 35-65°C, pref. 52-55°C, and maintained at this temp. for at least 15 mins. (c) the temp. is raised rapidly to 60-95°C, pref. 65-70°C, the pptd. protein being conc. immediately after having attaine the desired temp. (d) the protein concentrate is cooled to temp. suitable for formation of an emulsion (e) an oil pha is prepd. independently, in a classical manner from fats and/or oils (and constitutes 35-65% of the water-in-oil en ulsion), (f) it is heated to 38-55°C, and the aq. phase add ed to form an emulsion, (g) the emulsion is pasterurised e. g. at 72°C for 15 secs. (h) it is cooled and packed.

Margarine of low calorific value and high protein conte is mfd. utilising the more readily available skimmed mill rather than buttermilk. The process overcomes the disad vantages encountered with previous methods using skimmed milk. No membrane filtration or long pasteruisation is required. nor does it involve the use of organic or mineral acids which have to be washed out. 22.11.78 as 872224 (19pp1331)

UNMA-★ D13 24022B/13 ★CA 1049-837
Stable food flavours and colours prodn. - by grinding shellfish waste, etc., and incubating with proteolytic enzyme
UNITED MARITIME FIS 04.10.74-CA-210795
(D12) (06.03.79) A23l-01/23

A food flavouring prod. is obtd. by wet milling or macerating the inedible portions (shell and adherent tissue) of constacea or molluses in weak salt soln., after cooking and removing meat and ciscera. The obtd. slurry is filtered and the residue is suspended in water and treated with a proteolytic enzyme to form a water-soluble extract which is filtered off and pref. spray-dried. Concn. of salt soln. is pref. 0.1-1%.

Pref. bacterial growth inhibitors are present in the suspension. Enzyme treatment is pref. at 40°C for ca 48 hrs. Pref. enzymes are Rhozyme P-11 (RTM) or Fungal protease (for crab, shrimp, periwinkle or lobster) and Pancreatin, Bromelin and HT-Proteolytic enzymes (for lobster). Opt the residue obtd. after filtration of the enzyme treated slurry is solvent extracted to give a colour extract. 4.10.74 as 210795 (13pp949)

UNIL D13 11883R/08 =DS 1914-056
Prepn of esters of delta hydroxy carboxylic acids and - phenols
UNILEVER NV 21.03.68-GB-013776
*E19 (22.03.79) *FR2004-412 C07c-69/67*

Aliphatic δ -hydroxy carboxylic acid esters are prepd. by reacting an (optically active lactone of a 6-24C aliphatic hydroxy acid, e.g. δ -dodecalactone, with a multivalent alcohol, e.g. glycerol. Reaction is carried out with an initial molar ratio of lactone: alcohol of 0.3-1.2:1, at $\leqslant$ 50°C in the presence of an acid catalyst to an ester content of $\geqslant$80% of the equilibrium value. The catalyst is removed or inactivated before 10% polymer lactone, based on total wt. of lactone, polymer lactone and ester, has been formed. 19.3.69. as 914056 (5pp068)

HENN/ D13 87395V/51 =DS 2325-900
Smoking aroma agent for foodstuffs - adsorbed from purified smoke and incorporated into a pulverulent food additive
HENNING W 22.05.73-DT-325900
*(22.03.79) *DT2325-900 A23l-01/23*

A smokey aroma for food is prepd. by contacting sugar, salt or hot spices in granular form with cold smoke and then treating with water or aq. soln. to dissolve the sol. smoke constituents. The clear soln. of smoke constituents is mixed immediately after its formation with a powdery food (additive) e.g. salt. The soln. absorbs the powder to form a storage stable, dried, smoked spice prod. 22.5.73. as 325900 (3pp068)

CHIM- D13 14659W/09 =DS 2434-483
Saccharin or cyclamate sugar substitute - contg. food acid salts as filling agents
CHIMICASA GMBH 28.12.73-LU-069089 (10.08.73-LU-068202)
*B05 E12 (22.03.79) *DT2434-483 A23l-01/23*

Sweetening agent as an alternative to sugar comprises (a) Na or Ca saccharinate, (1 pt. wt.), or Na or Ca cyclamate, (10 pts. wt.), or their mixts.; (b) filler, (20-40 pts. wt.), comprising Na or K acetate, citrate, tartrate or malate, Ca lactate or their mixts., (97.5-100%), and albumin, glucose, maltose, dextrin or their mixts., (0-2.5%); (c) water-soluble vitamins, (0-0.02 pt.wt.); and (d) water, (2.0-7.5 pts. wt. per 10 pts. wt. of dry mixt)

The mixt. is dissolved in aq. soln. and evapd. to obtain a granulate, esp. by spray drying into a hot air chamber at 130-300°. 18.7.74. as 434483 (+18.12.73-LU-069020) (5pp047)

MEGG D13 74334Y/42 =DS 2615-715
Dry, antimycotic hexamethylene-tetramine thiocyanate compsns. - produced by adding carrier material to aq. soln. and drying
09.04.76-DT-615715

Prepn. of solid veterinary compsn. contg. hexamethylenetetramine thiocyanate comprises reaction of hexamethylene, (1 mole), with an alkali or alkaline earth thiocyanate, (1 mole), in aq. soln. in the presence of mineral acid, (about 2 moles H^+); the soln. is then mixed with a compatible inert carrier, (esp. native starch), and the soln. is spray-dried into air at 150-200° (exhaust temp. 50-100°).

The prods. are used for the treatment of bacterial and fungal infection. 9.4.76. as 615715 (3pp047)

MEGG ★ D13 24140B/13 ★DT 2742-08
Protein-rich snack-like foamed food prepn. - by extruding mil protein with water, inert gas releasing agent and decompositio agent (NL 21.3.79
MEGGLE MILCHIND 19.09.77-DT-742083
(22.03.79) A23j-03

A mixt. of milk protein, decomposition agent, water, opt flavour-forming foodstuffs and a substance or substance mixt. releasing inert gas under extruder pressure and temp. conditions, is passed through an extruder, with heating, pref. to 80-160°C. The mixt. is left to expand freely at extruder outlet, to a foamed, dimensionally stal le extrudate having specific wt. < 0.4 g./cm^3; opt. after dried and/or comminuted.

The prods. may be used directly as protein-rich, crackly snacks. A homogeneous, non-horny, milk protein decomposition prod. is obtd., using a min. quantity of water to be removed. Heat-degradation is prevented by using low extrusion temps. The inert gas, e.g. CO_2, also exerts a protective gas activity on milk protein, pre vents heat-damage and also deodorises the prod. 19.9.77 as 742083. (18pp200)

EAST ★ D13 24176B/13 ★DT 2838-3
Pill for ruminants resistant to conditions in the rumen - contai active core mixed with base and polymeric coating
EASTMAN KODAK CO 02.09.77-US-830299 (02.09.77-US-83028
A96 C03 (22.03.79) A23k-01/18 A61k-09/32

Prepn. of pills for oral administration to ruminants comprises first mixing the core material with a physiologica ly acceptable base (I) to give a mixt. of pH $>$5.5. This mixt. is fashioned into self-supporting particles then coa ed with a polymer (II) which is resistant to conditions in the rumen but decomposes in the rennet stomach or abom asum.

Alternatively particles of the core material are first coated with 1-20wt.% (I), then coated with (II).

Suitable (II) have sticking temp. $>$50°C and pref. contain basic amino gps. and 3-14wt.% N e.g. cellulose prop ionate morpholino-butyrate; polymers with aromatic NH gps.; di(1-6C)alkylaminoethyl acrylates or methacrylate condensation polyesters or polyamides.

For administration of nutrients (esp. essential amino acids), medicaments etc. which are advantageously released after passing through the rumen. Inclusion of (I) improves stability in the rumen and improves utilisation of the core material. 1.9.78 as 838308. (25pp1251)

ANVR ★ D13 24207B/13 ★DT 2839-4
Foam-forming egg-white substitute for confectionery - prepd. acidifying protein- contg. lactoserum, heating and cooling quick and basifying (NL 16.3.79)
AGENCE NAT VALORISATION 14.09.77-FR-027797
Q73 (22.03.79) A21d-02/26 A23c-05 A23j-03/02 F23j-03/02

Egg white substitutes are prepd. by: (a) setting a lactoserum-based substance contg. 2-15% protein to pH 2-6(2 4) esp. 2; (b) heating substance soln. for 1-10 mins. to 45-80°C, and keeping up this temp. for 5-20 mins.; (c) quickly cooling the soln. to 14-25°C and then (d) basifyin the soln., esp. with NaOH, KOH or $Ca(OH)_2$ soln., to pH 7-9 (8), to form a liq., foam-forming prod.

The prods. are used for confectionery, e.g. biscuits, macaroons, meringnes, almond pastry and nougat, mars mallow, paste, etc., and cakes.

Prods. have a pleasant taste and odour. In whipping, the foams are analogous to those obtd. from egg-whi can be baked to meringnes at low temps. 11.9.78 a 839466. (25pp200)

WELC- ★ D13 24208B/13 ★DT 2839-502
Anthocyanin pigment recovery from plant materials - by ultrafiltration, esp. from black grape solids extracted with aq. sulphur di:oxide solns. (NL 15.3.79)
WELCH C FOODS INC 13.09.77-US-832814
B07 E24 (B04 D21) (22.03.79) C07d-311/62 C07h-17/06 C09b-61

Anthocyan pigment (I), is recovered from a mixt. of discrete anthocyan monomers and macromolecular materials (A), e.g. proteins, tannins, pectins and their complexes, by ultrafiltration, using a membrane which allows the passage of (I) but retains (A) and pref. has pore size 10-50 (30-40) Å.

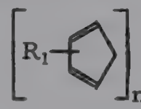
Pink to scarlet, blue and violet (I) are recovered, pref. as conc., and used as food dyes, e.g. in soft or alcoholic drinks, puddings, ice-cream, pastries, pharmaceuticals and also cosmetics, opt. in 0.05-4% concn. Liq. or powdered (I) obtd. can be stored >1 year at 0°C and are stable to light, without cloudiness on storage. 11.9.78 as 839502. (24pp200)

FIRM ★ D13 24225B/13 ★DT 2839-814
2-Formyl-bi:cyclo-heptane-3-carboxylate derivs. prodn. - from cyclopentadiene and vinyl ester, useful as perfumes and flavours for pharmaceuticals etc. (NL 19.3.79)
FIRMENICH SA 03.10.77-LU-078234 (15.09.77-CH-011281)
B07 E13 P15 (B05 D23) (22.03.79) A23l-01/22 A23l-02/26 A24b-15 A61k-07/46 A61k-47 C07c-69/74

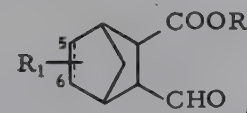
Prodn. of bicyclic ketones of formula (I) comprises reacting a vinyl ester (II) with a cyclopentane deriv. of formula (III) in an inert organic solvent, then opt. hydrogenating to saturate the 5,6-double bond.

$OHC\cdot CH{=}CH\cdot COOR_2$

(II)



(III)



(I)

(R_1 = H or CH_3; R_2 = opt. branched 1-6C alkyl; n = 1 or 2). (I) are new cpds. except when R_1 = H and R_2 = CH_3.

(I) are used to improve, modify or intensify the organoleptic properties of perfumes, foods, beverages, pharmaceutical formulations, tobacco etc. Cpds. with the double cond have a melon-like odour without unwanted additional notes. 13.9.78 as 839814. (29pp1251)

SWAN- ★ D13 24242B/13 ★FR 2394-982
Treating potatoes for dry storage in flexible containers - by immersion in three aq. solns., packing and sterilising
SWAN VALLEY FOODS 20.06.77-FR-018806 (07.05.75-FR-014327)
A92 Q31 (23.02.79) A23b-07/10 B65b-31/04

The potatoes previously stored at 4-8°C are peeled and then immersed successively in the following aq. solns. (a) 0.2-4% citric acid and/or Na or K salt and 0.005-0.8% SO_2 in free from or as Na or K sulphite, bisulphite or metabisulphite. The soln is of pH 2.3-6.5 and the immersion time is from 1 min. at 88°C to 5 mins. at 43°C; (b) 0.5-1.5% K or Na pyraphosphate opt. with 0.5-2.5% reducing saccharide and the immersion time is from 15 secs at 100°C to 60 secs. at 60°C; (c) 0.05-0.5%. Non-toxic alkaline earth metal salt and opt. 0.5-8% of KCl or NaCl and the immersion time is from 15 secs. at 100°C to 60 secs at 60°C. The potatoes are then placed into flexible receivers. Opt. after a treatment to prevent the potatoes sticking together, they are then heat sterilised.

Process is a particular adaption of the parent patent for storage fruit and vegetables in flexible containers. It enables dry storage without discolouration, colour change, or after taste in the prod. The elasticity of the potatoes is also improved making them less liable to damage in storage. 20.6.77 as 018806 Add to 7.5.75-014327 (13pp597)

SOUL/ ★ D13 24243B/13 ★FR 2394-983
Preparing high fat content crusty cheeses from milk and cream - with decreasing controlled pH values during process
SOULIE Y A H 22.06.77-FR-019109
(23.02.79) A23c-19/02

The process for treating a mixt. of cows milk and cream by inoculating with Penicillium Candidum, treating with rennet after inoculating with selected lactic ferments, cogulating, cutting up, remixing the layers, standing, moulding and draining with controlled syneresis before brining and ripening comprises controlling the pH to enable decreasing values from the rennet treatment to the draining.

Process is used to prepare ripened cheeses with florid crusts contg. 75% fats on a dry basis. The above enables greater control with avoidance of accidental production of cheese with a rancid taste or having crusts of fatty appearance. 22.6.77 as 019109 (5pp597)

PPNP- ★ D13 24268B/13 ★FR 2395-288
Treatment of disorders caused by over eating - using compsns. contg. soya protein and dietetic fibre
PPN PHARMACOL PHARM 23.06.77-FR-019303
B04 (23.02.79) A61k-35/78 A61k-37/02 C08l

Therapeutic compsns. contg. 20-80% soya protein and 20-80% dietetic fibres are new. These are used for prevention and treatment of disorders caused by overeating such as constipation, obesity, prediabetes, diabetes and metabolic and vascular disorders.

Synergism between the protein and the fibres, and better organoleptic properties are provided.

The fibrous material may be dietetic fibres having a fibrous structure, such as bran or bagasse, or having an amorphous structure such as pectin or guar gum or resin, or a mixt. of these in any proportion. The compositions may further contain Na, Ca, Mg or Fe cations and SO_4 and PO_4 anions, and may be in the form of powders, granules, rusks, biscuits, etc. 23.6.77 as 019303 (17pp520)

OYFA D13 69238Y/39 =GB 1542-802
Fodder additive for ruminants - contains sugar alcohols to increase blood sugar level and milk yield (NL 21.9.77)
FARMOS OY 19.03.76-SF-000746
*C03 (28.03.79) *DT2710-930 A23k-01/16*

Foodstuff which increases the blood sugar level and milk yield of ruminants (cows) comprises ⩾10 wt.% (dry basis) penta- and/or hexahydric sugar alcohol(s).

The sugar alcohols are esp. by-prods. obtd. in xylitol prodn. from plant material and may comprise (dry basis) 5-25% xylitol, 20-35% arabitol, 10-25% mannitol, 5-15% sorbitol, 5-15% dulcitol and 4-10% rhamnitol.

The fodder component may be a by-prod. from a nutrient prodn. process and a glucogenic substance such as propylene glycol may be present. 15.3.77 as 010841 (5pp945).

UYLE- ★ D13 24293B/13 ★GB 1542-838
Treating cows to prevent milk fever - by controlling calcium intake before and after parturition
UNIV LEEDS IND SERV 20.11.74-GB-050362
B06 C03 P14 (28.03.79) A01k-05

Method comprises maintaining the available Ca intake at a low level for ⩾7 days (esp. ⩾4 weeks), ending ⩾1 day (pref. 2-3 days) before parturition, then increasing available Ca intake by 20-100 g/day.

The low Ca level is pref. 20-40 g/day and the high level is pref. maintained for 2 days after parturition. Esp. Ca and P are supplied together at wt. ratio 1:1-2:1, best intakes of the two are about the same.

Esp. the Ca and P are supplied as diCa phosphate and the low level is esp. about 30g/day. Thereafter the intake of both elements is increased to 50-130g each. 20.11.74 as 050362 (2pp1251).

WINC- D13 63492X/34 =GB 1542-844
Production of blocks of natural cheese - by submitting a column of curds to differential pressure achieved by pulling vacuum below column
WINCANTON ENG LTD 04.04.75-GB-014002
*P13 (28.03.79) *BE-840-192 A23c-19/02*

Cheese is produced by forming blocks of prepd. cheese curd into a pillar in a chamber, the curd towards the bottom of the pillar being compressed by that above it to press out whey and to effect consolidation; the pillar is lowered, bottom portion is severed to form a block of cheese, and the process continued.

The pillar is urged downwards during the lowering operation by subjecting the top of the pillar to a higher gas pressure than the base. Whey and air are extracted from the chamber. The process avoids difficulties associated with frictional resistance between the pillar and a hollow column in a previous process. 26.3.76 (8pp1379).

UNIL D13 70472X/38 =GB 1542-864
Plastic fat prod for magarine derived from palm oil - contg cotrans esterified triglycerides giving acceptable hardness
UNILEVER LTD 04.03.75-GB-008937
*(D23) (28.03.79) *BE-839-107 A23d-03 A23d-05*

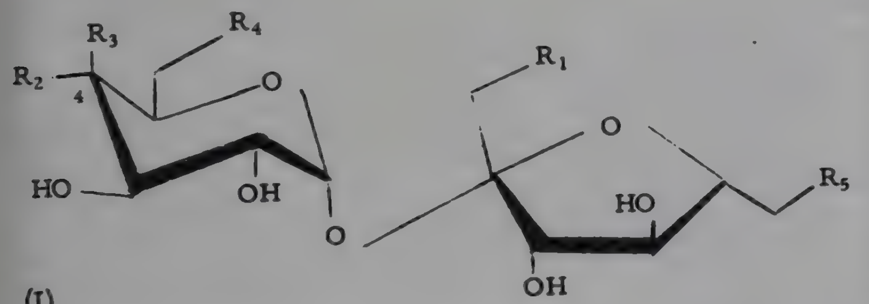
A plastic palm-based fat prod. is prepd. contg. both co-randomised and non-randomised constituents derived from palm oil contg. SUS and SSU triglycerides to provide 12-25% of SUS triglycerides and a wt. ratio of SUS-SSU of 0.5-2.5.

Pref. SUS content is 15-22% in wt. ratio with SSU of 0.8-1.5. Fat prod. contains 38-45% saturated fatty acid residues. Prod. contains 50-75% of palm-based fats, part of which is co-randomised with fats contg. $\geqslant$ 8% of 18C fatty acids.

Prods. are used for prepn. of shortenings and emulsified food spreads such as margarines and low fat spreads. 3.3.76 (5pp931).

TATL D13 32845Y/19 =GB 1543-167
Sweetening compsns. contg. chlorinated saccharose derivs. - as powerful as saccharin without bitter aftertaste
TATE & LYLE LTD 08.01.76-GB-000616
*B03 E13 (28.03.79) *BE-850-180 A23l-01/23 C07d-307/20 C07d-309/10 +A23l-02 A61k-07/16 C07d-407/12*

Substances are sweetened by incorporating in them a substance of formula (I). In (I) R_1 is H or Cl. R_2 and R_3 are OH and H, Cl and Cl, Cl and H or H and Cl, resp.. R_4 is OH or, if $\geqslant 2$ of R_{1-3} and R_5 are Cl, may be Cl. R_5 is OH or Cl. The 4-position is in the D-configuration and $\geqslant 1$ of R_{1-3} is Cl.



(I)

Specifically claimed cpds. include 1'-chloro-1'-deoxysucrose. 15.12.76 (7pp974).

RESE D13 52593Y/30 =GB 1543-168
Di-, tri- and tetra-chloro derivs. of sucrose - useful as intermediates and sweeteners with higher sweetening power than sucrose
RESEARCH CORP 12.05.76-GB-019570 (08.01.76-GB-000616)
*B03 E13 (28.03.79) *DT2700-917 +C07d-307/20 C07d-309/10 C07d-407/12*

4, 6-Dichloro-4, 6-dideoxy-α-D-galactopyranosyl 1, 6-dichloro-1, 6-dideoxy-β-D-fructofuranoside (I) and α-D-glucopyranosyl-1, 6-dichloro-1, 6-dideoxy-β-D-fructofuranoside (II) are both new.

Cpds. are useful as organic inters. and have a very sweet taste, comparable in intensity to that of saccharin but with a quality similar to that of sucrose. They are used in ingestible prods., oral compsns. and sweetening compsns.. 7.4.77 Div.ex. 1543167 (4pp974).

BIND- ★ D13 24342B/13 ★GB 2004-393
Measuring material moisture content in powdered milk processing - in which moisture content initially exhibits wide spatial variation and subsequently is uniformly distributed
BINDICATOR CO 15.09.77-US-833563
R26 (28.03.79) G05d-22/02

Material moisture content in a processing system, in which the material assumes a first state in which the moisture content exhibits wide spatial variation on a short term basis followed by a second state in which the moisture content is uniformly distributed, is controlled by measuring the moisture content in a selected no. of samples when the material is in the first state. An apparent av. value of moisture content in the first state is calculated from these samples. This is treated as an actual

and used to control a drier unit which regulates the moisture content of the material.

The process is controlled on the basis of measurements made on samples taken from the drier output without waiting, e.g. 3-4 hrs., until the ultimate moisture content of the material is known. 14.9.78 as 036891 (6pp).

KANE ★ D13 24711B/13 ★J5 4023-139
Instant fried vegetables prepn. - by coating vegetables with alkaline swelling agent, edible oil, flour and water, frying and drying
KANEBO KK 19.07.77-JA-087057
(21.02.79) A23l-01/34

The method comprises (1) combining alkaline swelling agent and edible oil in a coating liq. of flour and water, (2) coating vegetables with the obtd. liq., (3) frying them to distribute the water in them, and (4) drying the fried prods.

By applying the coating liq. contg. alkaline swelling agent, a vivid green colour of vegetables can be maintained when frying and the coating can be well swollen. Instant fried vegetables, which maintain a vivid green colour and can be restored with hot water within 3 mins., can be prepd. The specific heat of the coating liq. is decreased and the frying time can be shortened. Pref. the alkaline swelling agent is sodium bicarbonate in an amt. of 0.05-0.6 w/w% of the flour; the edible oil is used in an amt. of 2-30 w/w% of the flour; the coating liq. is used in an amt. of 0.5-2 times the vegetable wt.; the frying is at 140-190° C until the moisture content is 25-50 esp. 3-45 w/w% and the drying is with hot air at < 100°C until the moisture content is < 13 w/w%. 19.7.77 as 087057 (7pp5)

YAMA/ ★ D13 24712B/13 ★J5 4023-140
Extn. of egg-shell membrane protein used for heavy metal removal - by treating with reductant to break di:sulphide bond, acidifying and sepg. the protein by isoelectric point pptn.
YAMAGUCHI M 23.07.77-JA-087895
(21.02.79) A23j-01/08

Method comprises (a) treating egg shell membrane as it is or after sepg. it from egg shell mechanically with the reducing agent for disulphide bond such as Na_2S, (b) adjusting pH of the obtd. extract to 3.5-5.5 with mineral acid or organic acid and (c) sepg. the solubilised egg shell membrane by isoelectric point pptn.

The extn. is practiced by adding 0.05-10 M reducing agent soln. to egg shell membrane, of which amt. is above 10 times in wt. as egg shell membrane protein, and heating the mixt. at > 90°C at pH 7-13 for 0.5-1 hr. As the reducing agent for disulphide bond, Na_2S, thioglycollic acid, its alkali metal salt, 2-mercaptoethanol, etc. can be used.

Egg shell is ca. 8-11 w/w% on egg and it contains 4-5 w/w% of shell membrane, which is structured of pseudo-keratin, mucin-like protein, etc. The egg shell membrane protein which can bond with heavy metal such as Pb, Cu, Hg, etc. except hexa-valent chrome and iron, can be obtd. Being indigestible, the protein is bonded with heavy metals in digestive organs and can be evacuate as excrements with heavy metals. It can be also used as the removing agent for heavy metalsin food industry. The method can be also used for prepg. the protein showing bonding ability with heavy metals from keratin protein material such as wool, feather, etc. The egg shell discarded is free of proteins and can be used as excellent Ca source for food, feed, etc. 23.7.77 as 087895 (3pp5)

NIOF ★ D13 24716B/13 ★J5 4023-166
Conc. cream prepn. - with addn. of viscosity-increasing agent prior to emulsification
NIPPON OILS & FATS KK 19.07.77-JA-085581
(21.02.79) A23c-13

Prepn. of synthetic cream from oil and fat, emulsifier and additives is characterised by using (a) 30-60 w/w% of animal or vegetable oil and fat, (b) 0.1-4 w/w% of glycerin fatty acid ester and other emulsifier together, and making the viscosity of the aq. phase before the emulsification to > 65 cp. at 20°C with viscosity-increasing agent.

Prod. is plastic solid at ambient temp., is stable an er or milk and the properties of the obtd. cream can be freely regulated by changing the amt. of water or milk. 19.7.77 as 085581 (5pp5)

DNIN ★ D13 24718B/13 ★J5 4023-168

Coloured ice cakes prepn. - using blue pigment extracted from cyanophyta of Spirulina

DAINIPPON INK CHEM KK 19.07.77-JA-085628
E24 (21.02.79) A23g-09

The blue pigment extracted from cyanophyta of Spirulina is a nontoxic inexpensive pigment. Species of Spirulina are platensis, S. maxima, S. geitleri, etc. The blue pigment can be extracted by adding 10 g of the dry algal body in 150 cc of phosphoric acid buffer soln. of pH 4-7 and standing the mixt. at 0-40 °C for > 10 mins. in dark place.

After sepg. the liq. extract the extract is salted out with ammonium sulphate and the ppte. is sepd. by centrifuging. The ppte. is dissolved in water and the aq. soln. is dialysed through cellophane film and is concd. Finally the concentrateis freeze-dried or spray-dried. Thus obtd. pigment of phycocianin is highly soluble in water and shows high affinity to protein. 19.7.77 as 085628 (3pp5)

GREE- ★ D13 24719B/13 ★J5 4023-170

Prepn. of chlorella extract of good taste and flavour - by placing hot water extract of Chlorella in surge tank, removing solid and obtaining fine extract

GREEN FOODS KK 20.07.77-JA-086144
(D16) (21.02.79) A23l-01/22 C12k-01

The method comprises (a) putting hot water extract of chlorella which is previously treated for protein pptn. in a surge tank, (b) taking out a part of the content, sepg. the solid by centrifuging or decanting and returning thus obtd. clear liq. in the tank, (c) taking out a part of the content, treating it by ultrafiltration, sepg. the refined extract and returning the concentrate to the tank and (d) repeating the processes (a)-(c).

The obtd. extract is clear, free of odour and excellent in preservation property. 20.7.77 as 086144 (4pp5)

SAPB ★ D13 24720B/13 ★J5 4023-171

Yeast extract with good taste and flavour - is obtd. by adding fruit wine or its analogue to the extract before heat treatment

SAPPORO BREWERIES 21.07.77-JA-086637
(D16) (21.02.79) A23l-01/28

Pref. the fruit wine is red wine or wine which has been previously treated to make it inedible by adding common salt; the wine can be used in an amt. of 1-100 pts. wt. per 100 pts. wt. of solids in the yeast extract. The method can be used for yeast extract prepd. by autolysis, acid decomposition, etc. The taste and flavour of the yeast extract can be further improved by heat-treating it, after the addn. of wind or its analogue, at 40-120°C for 0.5-90 mins. 21.7.77 as 086637 (4pp5)

IBAY/ ★ D13 24721B/13 ★J5 4023-173

Nourishing food tonic prepn. - using the odourless ingredients of garlic, enzyme and yeast

IBAYASHI T 23.07.77-JA-088539
C03 (21.02.79) A23l-01/34 A61k-35

The odourless nitritive ingredient of garlic is called sativamin complex and scordinin. This is combined with enzyme and yeast (extract) which is rich in endoenzymes, exoenzymes and vitamin B.

The food gives growth microorganisms, stimulates the apetite, excites the sexual desire and promotes the prodn. of sperm, et c.

The agent shows tonic nourishing, nutrient and regulating effects on the physical condition, and can be served not only to healthy people, but also to sick people and domestic animals. 23.7.77 as 088539 (4pp5)

NISH/ ★ D13 24722B/13 ★J5 4023-174

Medicinal food for patients using artificial kidney - is prepd. by mixing milk, eggs, butter, cheese, sugar, flour, soy bean, etc., adding essential aminoacid(s) and baking

NISHIMOTO Y 25.07.77-JA-088971
(21.02.79) A23l-01/34

The medicinal food is prepd. by kneading the mixt. of milk, egg, butter, cheese, sugar, flour, soy bean, fish, potato, fruit, etc. properly, combining essential amino acids such as isoleucine, leucine, lysine, methionine, cystine, phenyl-alanine, tyrosine, threonine, tryptophane valine, glutamine, etc. in the mixt. and baking the obtd. dough in cookies (sic.).

With the medicinal food, the nutrient control of the patients can be practiced easily. Using the food, the patient can ingest essential amino acids in proper proportion. 25.7.77 as 088971 (2pp5)

MITK ★ D13 24910B/13 ★J5 4024-085

Reagent for determn. of l-lysine e.g. in foods etc. - contains L-lysine-alpha-keto-glutaric acid epsilon-transaminase, L-glutamic acid dehydrogenase, coenzyme and electron transfer complex

MITSUI TOATSU CHEM INC 26.07.77-JA-088803
B05 E16 J04 R16 (B04 D16) (23.02.79) G01n-31/22

Reagent comprises L-lysine-α-ketoglutaric acid-ε-transaminase (enzyme I), L-glutamic acid dehydrogenase (enzyme III), coenzyme (pyridoxal-5'-phosphate), electron transferring intermediate (e.g. phenazine methosulphate) and tetrazolium salt (e.g. neotetrazolium chloride or m-nitro-blue tetrazolium chloride, etc.).

L-lysine can be very precisely determined colorimetrically in short time by simple operation even in the presence of other amino acids. The reagent is useful for the determination of L-lysine contained in foods, natural substances, clinical test sample, cultured liquid, etc. In the enzymatic reaction with the reagent, formazan is formed via L-glutamic acid from L- lysine. By determining the absorbance of formazan, the amount of L-lysine in an object to be analysed can be obtained. 26.7.77. as 088803 (5pp50)

MITK ★ D13 25010B/13 ★J5 4024-69

Reagent for L-lysine analysis - contains L-lysine-alpha-keto:glutari acid epsilon-transaminase

MITSUI TOATSU CHEM INC 27.07.77-JA-089347
B04 E16 J04 R16 (B05) (24.02.79) G01n-31/22

L-lysine alone can be precisely determined colorimetrica ly in a short time by a simple operation, even in the pres ence of other amino acids, by using L-lysine-α-ketoglutar ic acid ε -transaminase exhibiting high specificity. The reagent is useful for the determn. of L-lysine contained in protein foods, natural substances, living body samples etc.

The transaminase is obtd. by liq. culture of e.g. Achromobacter liquidum IFO 3084. In the enzymatic reactio using the reagent, the reaction temp. 30-40, pref. 37°C, the time is pref. 40 min. and the pH is 7.5-8.5 pref. 8. The determinable range of L-lysine hydrochloride is 0.05 2 µ moles, in which a linear relationship between the amt of L-lysine and the absorbance holds. α-Ketoglutaric aci of 20 µ moles is pref. added to the reaction liq., with pyr idoxal-5-phosphate as coenzyme. In the enzymatic reaction of L-lysine, Δ'-piperidine-6-carboxylic acid is formed, which has an orange colour (absorption max. 465 nm), in the presence of o-aminobenzaldehyde. This substance is colorimetrically determined for the analysis of L-lysin 27.7.77 as 089347 (4pp50)

KIMI- ★ D13 25016B/13 ★J5 4024-778

Prepn. of feedstuff for fish, etc. - by forming a slurry from waste water, drying, mixing with salt of alginic acid or pectin and reacting with divalent metal salt

KIMITSU KAGAKU KENK 23.07.77-JA-088576
C03 (24.02.79) A23k-01/20

Waste water is treated to give an active slurry which is dehydrated and dried, mixed with water-soluble salt of alginic acid or LM-pectin added dropwise to a soln. of divalent metal salt (except Mg) to allow a reaction to take place to give a gell, and dried. The feedstuff contains nutrient components and can be given to fishes, etc. It may be mixed with other components such a fishmeal, soybean powder, wood powder, flour, starch, vitamins, organic acid, antibiotics, fat, etc.

In an example, waste water from alginic acid extn. is treated to give an active slurry. The slurry is subjected to centrifugation to give a wet slurry, 100 g of which is mixed with 300 cc of 2% sodium alginate soln. The soln. is added dropwise to 1% calcium chloride soln. After standing for 7 mins. a pearl-like gel is sepd. to give 375 g gel granules. The resultant granules are used as feedstuff. 23.7.77 as 088576 (2pp22)

HOKU- ★ D13 25017B/13 ★ J5 4024-779

Feedstuff prepn. - by saturating stephen waste soln. with carbon di:oxide, filtering, concentrating, mixing with pressed beet pulp etc.

HOKUREN NOGYO KYODO 26.07.77-JA-088867

C03 (24.02.79) A23k-01

Stephis waste soln. is satd. with CO_2 subjected to filtration and concd. to make solid content 50-70 wt. %, 10 to 30 pts. wt. of the resultant is added to 100 pts. wt. of pressed beet pulp, followed by drying; the resultant is treated with warm water and water vapour and then shaped into pellets.

Prod. can be used as feedstuff for livestock and can be stored safely and without damage of the property for long periods.

Specifically the beet pulp is pressed until the water content is reduced to ∼85 wt. % and then mixed with the waste soln. at 70-75°C. The resultant is then dried until the water content is reduced to 10-12 wt. %. The prod. is shaped into pellets at 82-84°C so that the produced pellets contain 13-16 wt. % water, and the length is 10-30 mm and the width 6-15 mm. The feedstuff has improved digestibility, attractiveness, nitriments, etc. and can be used for growing livestocks, such as sheep, cows, etc. 26.7.77 as 088867 (9pp22)

KAGO- ★ D13 25093B/13 ★ J5 4024-940

Carotenoid-contg. material for foodstuff colouration - prepd. by adding alkali to crushed tomatoes, filtering, acidifying filtrate and processing coagulated deposit

KAGOME KK 26.07.77-JA-088850

E24 (24.02.79) A23l-01/27 C09b-61

The material is prepd. by (1) adding an alkali to crushed tomatoes or the residue formed during the prodn. of processed tomato foodstuffs contg. carotenoid comprising mainly lycopine to a pH of 7.5-9.0, stirring the mixt. at < 65°C in a slight alkaline state for several hrs., and thereby sepg. carotenoid complex from the raw material, (2) filtering and purifying the sepd. liq. using a pulper, shifter or centrifuge to remove unnecessary peel, seeds and fibres, (3) adding an acid to the purified filtrate to such an extent that the filtrate becomes weakly acid and thereby sepg. and depositing carotenoid colour element, and removing the unnecessary upper turbid liq. and (4) controlling the pH of the coagulated deposit, concentrating the deposit, adding an acid to the deposit, and adding appropriate amts. of table salt to the acid deposit.

The carotenoid composite is dispersed smoothly in water-contg. foods in the absence of dispersing agents. The carotenoid composite having a pH of 4-5 and contg. 1% of table salt has water-dispersing property and resists decomposition and can be stored for prolonged periods. 26.7.77 as 088850 (3pp136)

WILL/ D13 31111V/17 =NL-159-564

Potato paste prepn machine - with mixer having separate feeds for pow-der and water

WILLEMSEN W H 05.10.72-NL-013494

*+P28 (15.03.79) *DT2349-240 A21c-01 A23l-01/21*

A process is described whereby dough is continuously prepd. from a mixt. of starch, thickener and binder as dry ingredients and water. The dry ingredients are fed into a pipe which is equipped with a water feed such that a curtain of water is created through which the dry ingredients pass. The mixt. is discharged into a mixing device without coming into contact with the walls of the feed pipes. The dough leaves the mixing device in a fully homogeneous condition and is then allowed to set.

Due to the nature of the water feed arrangement, there is no deposit of moist ingredients on the walls of the feed pipe so that the problems of cleaning hardened dough are eliminated. 5.10.72 as 013494. (6pp1370)

RALS D13 97395X/52 =NL-159-566

Non dairy creamers for coffee - comprising soya protein isolate and a caseinate, which do not curdle or separate in hot liq.

RALSTON PURINA CO 06.06.75-US-584682

*(15.03.79) *NL7604-412 A23c-11*

Substitute for coffee milk is prepd. using an aq. dispersion of sugar, fat, a stabilising salt, an emulsifier and 2-10 wt. % (based on dry wt.) of an albuminous material. The dispersion is dried. The albuminous material consists of a soya-albumin and casein or a caseinate, the wt. ratio soya-albumin to casein or caseinate =10:90 to 80:20.

The product is used in such an amt. that the substitute as dry wt. contains ≥0.9 wt. % casein or caseinate. 26.4.76 as 004412 (5pp549)

UNIL D13 90017Y/51 =NL-159-567

Cheese by membrane filtration of milk then fermenting concentrate - using microorganism strains giving ropey culture

UNILEVER NV 18.06.76-GB-025342

*(D16) (15.03.79) *BE-855-640 A23c-19/02*

Soft cheese is mfd. by passing milk through a membrane filter and . adding cream to the concentrate. The product is mixed with a culture of lactic acid bacteria and opt. with rennet or other microorganisms to ferment the mixt. to a pre-cheese. This is then formed into a soft cheese.

For the fermentation, a culture of slime-forming lactic acid bacteria is used. 15.7.76 as 007821 (4pp549)

DEGS D13 46773U/33 =NL-159-568

N-acylmethionine feed additives - for ruminants to improve eg woo prodn

DEUTSCHE GOLD & SILBER 04.02.72-DT-205210

*C03 (15.03.79) *BE-794-837 A23k-01/18*

Solid feed for ruminants is improved by adding an N-acylmethionine cpd. of formula $CH_3S(CH_2)_2CH(NHCOR)COOH$, where R is 7-21C aliphatic hydrocarbyl. The additive is used in amt. of e.g. 0.01-5 (pref. 0.03-1)wt. %, and is esp suitable for improving wool yield.

In examples, a base feed is made up of 10.8% grass meal, 44.9% cat bran meal, 42.9% tapioca, 0.86% urea and 0.54% mineral mixt. used for cattle. Merino sheep were fed on this (1-1.3 kg./day) for 5 weeks, followed by 5 weeks on feed contg. 5 g. methionine, or 13.9 g. N-stearoylmethone. Compared with sheep on base feed (woo yield standard 100%), sheep on the other two feeds had wool yields of 104 and 128% resp. Using a feed contg. 13.9 g. N oleyl-methionine, the yield was 138%, and with 10.2 g. N-decanoyl methionine was 120%. 14.12.72 as 017005. (4pp913)

ANDO/ D13 70058W/42 =NL-159-56

Ready-to-eat rice product - by soaking, gelatinising, pressing an treating rice grains in hot oil

ANDO M 27.03.74-JA-034917

*(15.03.79) *NL7416-833 A23l-01/18*

Pre-cooked rice is prepd., by mixing with a small quanti of a surface active agent, cooking in water, partially drying with warm air then finally baking in oil.

The rice is first softened, then the moisture content after cooking reduced to 18-70 wt. %. The rise is then pressed with rollers having a gap of 0.1-1mm, and the moisture content further reduced to between 8 and 25 wt.

Finally the rice is baked in oil at between 130-200°C. 24.12.74 as 016833 (5pp549)

HOWA/ D13 75253U/49 #NL-159-57

Potato sugar leaching - by rapid freezing

HOWARD H H (HOW /) 11.02.72-US-225468 (12.11.73-N 015441)

*+Q75 (15.03.79) *US3774-524 A23l-03/36*

A process is described in which foodstuffs undergo a cooing and heating process. The equipment consists of two compartments, one for heating and the other for cooling divided from each other by means of a partitioning wall. The cooling compartment contains a cooling medium into which the treated material is immersed on a conveyor. The vapour from the cooling medium is drawn through a condensor and returned to the cooling compartment.

A second conveyor running through the partition wall and passes from the first conveyor and passes it into the heating compartment. The cooling medium which evaporates from the foodstuff during the heating cycle is drawn off through a second condensor and is then returned to the cooling compartment. 12.11.73 as 015441. (5pp1370)

FERO D13 32400F/00 =NL-159-586
Dispersible vitamin preparations
FERROSAN 01.12.66-DK-006230
*B05 C03 (15.03.79) *NL6716-196 +A61k-09/14 A61k-47 C08l-89*

Cold water-dispersible vitamin prepn. contains fat-soluble vitamin(s) in the form of dry, free-flowing particles, and a gelatin prod. formed by partial decompsn. of gelatin followed by neutralisation to pH 4.5-7. The vitamin prepn. opt. contains a sugar or sugar alcohol, anti-oxidant and other conventional constituents. The vitamin(s) and additives are finely dispersed throughout the gelatin prod.

The gelatin prod. used is produced from a gelatin with a Bloom number 70-130, by treating at 40-95°C with 0.2-20 g. NaOH per 100 g. gelatin for 0.15-1 hr., then neutralising.

The vitamin prod. disperses in 53 secs. in water at 5°C, compared with $\leqslant$ 5 mins. for prior art prods. 28.11.67 as 016196. (3pp913)

UNIL D13 14282R/09 =NL-159-599
Preparation of a nickel on silica catalyst used in the - hydrogenation of glyceride oils
UNILEVER NV 28.08.68-GB-041029
*E31 J04 (15.03.79) *BE-738-125 B01j-23/74 C11c-03/12 +B01j-37/02*

Nickel-on-silica catalyst, used to harden fats, is prepd. by precipitating Ni, in the form of the hydroxide from an aq. soln. of a Ni-salt, using an alkali metal hydroxide. The ppt. is mixed, during or after pptn. with the Si-contg. carrier, and opt. reduced with H_2 to give Ni, after drying.

The pH of the reaction media is 7-10.5 during pptn. The mixt. before or during the drying process is heated to 50-120°C in the presence of an aq. soln. of an alkali metal hydroxide at pH 11-13.5. The compsn. obtd. is reduced for 30 mins. at 450°C using H_2 streaming at 30 l/hr. When the nickel salt is nickel sulphate, the compsn. before or after the heat treatment, is washed. 26.8.69 as 012970 (10pp)

PROV= ★ D13 25192B/13 ★SU-605-580
Liquid desorption installation e.g. for milk - has a vacuum chamber having ejector extraction pipe and by/pass pipe fitted with cooling jacket
PROVISION MACH RES 13.01.76-SU-314256
J01 P13 (06.04.78) A01j-11/04 B01d-19

Installation for liquids desorption, e.g. milk, comprises a vacuum chamber, inside which is a liquid distributor and float valve. An extraction pipe for the desorbed liquid is located in the centre of the bottom of the chamber. A condenser, vacuum pump and centrifugal pump for pumping out the final product, linked to the extraction pipe, are included. Optimum pumping-out conditions, at temp. close to the b.p. of the material being treated are maintained, and productivity is increased by making the extraction pipe as an ejector. The ejector has a by-pass pipe connected to the pressure pipe of the centifugal pump, and the ejector nozzle. One part of the pipeline is fitted with a cooling jacket, and the float valve is connected to the by-pass pipe on the section following the cooling jacket.
Vinogradov, A.A., Mukhin, A.A., Kuzmin, Yu.N. et al. Bul. 17/5.5.78. 13.1.76. as 314256 (3pp29)

MLME= ★ D13 25193B/13 ★SU-605-581
Curd making plant - has double-grid filter and cold air supply system with nozzles
MOLD MEAT DAIRY IND 28.09.76-SU-408773
P13 (06.04.78) A01j-25

A curd making plant consists of a vertical cylindrical container with pipes for feeding in milk and removing the whey and a separating filter. In order to intensify the process the filter is made in the form of two perforated grids with a pneumatic lifting system in the bottom of the container, which is rounded and equipped with a square channel across its dia. to house the unloading auger. The cylinder also has an agitator and a cold air supply system with nozzles.
Zykova, N.A. Bul. 17/5.5.78. 28.9.76. as 408773 (4pp119)

UMEA= ★ D13 25194B/13 ★SU-605-582
Milk protein curd dewatering appts. - with cleaning pins entering vibrating trough orifices from below, to facilitate separation and reduce grain losses
UKR MEAT DAIRY IND 15.09.76-SU-407023
P13 (14.04.78) A01j-25/11

Appts. for use in cheese prodn. comprises an inclined vibrating trough with drainage orifices over a whey collection tray. To intensify dewatering, a device for cleaning the trough comprises cylindrical pins mounted on the tray so that they can enter the trough orifices.

A mixture of cheese grain and whey is fed to the trough top and the trough is vibrated vertically so that the grain slides down the trough and the whey runs through the orifices. The action of the pins in cleaning the orifices facilitates whey removal and reduces losses of fine grains.
Kushchenko, V.S. Bul. 17/5.5.78. 15.9.76. as 407023 (2pp1358)

CONS= ★ D13 25203B/13 ★SU-605-592
Dry soluble cabbage powder mfr. - adding dried powder to homogenised concentrate and simultaneously heating before spray drying
CONSERVE VEG DRYING 23.08.76-SU-399002
(14.04.78) A23b-07/02

Dry, rapidly-soluble powder is obtd. from white cabbage and pumpkins, e.g. for infants and dietectic foods, by washing, cleaning, communiting, sieving, homogenising and spray drying. To retain the vitamin content, to prevent enzymatic darkening and to improve product quality, the concentrate contg. 13-15% solids is mixed with a cyclone fraction of dry powder to give 20-23% solids and is simultaneously heated to 80-85°C over 2-4 min. The material is pref. concentrated by evaporation.
Sukhanova, L.I., Korneva, L.Ya. Bul. 17/5.5.78. 23.8.76. as 399002 (2pp1358)

CONS= ★ D13 25204B/13 ★SU-605-593
Two/stage prodn. of sterilised fruit-filled cottage cheese - includes post-homogenisation sterilisation and sterilisation after packing
CONSERVE VEG DRYING 23.08.76-SU-398839
(14.04.78) A23c-03 A23c-23

Sterilised cottage cheese with fruit filling is made by a 2-stage thermal treatment. The first stage is conducted after blending, followed by packing and tube sterilisation. Both quality and storage life are raised as follows: fatty curds are used with scalded semolina, sugar, creamy butter, fruit puree, water and citric acid. The prod. is heated to 75-80°C and homogenised at 9.81-19.62 MPa pressure. The second stage occurs after homogenisation and before packing; it comprises immediate post-packing sterilisation.
Kuznetsova, L.I., Akinshina, G.G., Ershova, A.A. et al. Bul. 17/5.5.78. 23.8.76. as 398839 (2pp835)

LIBU= ★ D13 25205B/13 ★SU-605-594
Sour cream butter mfr. - involves reducing cream viscosity by passing through inert gas before churning to ensure more uniform cream feed
LITH BUTTER CHEESE 08.06.76-SU-369666
(17.04.78) A23c-15/02

Soured cream butter is made by souring the cream, allowing to stand and then churning. For more uniform feed of cream and to reduce process time, the cream viscosity is reduced before churning by blowing through the cream layer an inert gas under a pressure of 1.3-1.5 atm. absolute for 3-5 min. The gas is e.g. nitrogen, and the treatment increases cream volume by 18-20% and reduces viscosity from 350 to 120 cP.
Lyutkevichyus, A.V., Lazauskas, V.M. Bul. 17/5.5.78. 8.6.76. as 369666 (2pp1358)

LIBU= ★ D13 25206B/13 ★SU -605-595
Cottage cheese having improved storage property - is obtd. by adding calcium chloride to skimmed milk before pasteurisation
LITH BUTTER CHEESE 12.04.76-SU-345360
(15.04.78) A23c-19/02

Cottage cheese is made by cooling pasteurised defatted milk, adding lactic acid cultures, rennet, $CaCl_2$, souring sectioning, treating the clots, dehydration, layering, addition of cream, packing and chilling. Better use is made of milk proteins and improved quality and storage life are secured by adding 15-20g $CaCl_2$ per 100 l. milk before pasteurisation. During the latter process, 0.25-0.35% Na caseinate per 100 l. milk is added. After dehydration, the cheese granules are layered and pressed to 3-5mm thickness. Cream is applied at a thickness of 0.15-0.25 mm, and the multi-layer cheese is cut up and cooled to -8° to -10°C.

Krasheninin, P.F., Bebert, V.K., Zharenov, D.A. et al
Bul. 17/5.5.78. 12.4.76. as 345360(2pp835)

GPOL= ★ D13 25207B/13 ★SU -605-596
Whipped confectionery prepn. - using conc. sugar beet juice as egg-white substitute
GEOR POLY 20.05.76-SU-364572
(14.04.78) A23g-03

Whipped confectioneries are made by blending ingredients with egg white and with egg white substitute. More varied gps. of ingredients can be employed if the egg white substitute comprises diffuse sugar-beet juice, concentrated to 80-82% dried solids content.

Omiadze, R.S., Berezhiani, L.B., Nikabadze, G.U. Bul 17/5.5.78. 20.5.76. as 364572(2pp835)

LECO= ★ D13 25208B/13 ★SU -605-598
Confectionery moulding appts. - with auxiliary drive to operate pouring head pistons during washing in situ, with main drive disconnected
LENGD CONFECTION WK 06.10.75-SU-179832
(14.04.78) A23g-03/16

The appts. includes a chain conveyor carrying troughs, a drive shaft for a pouring head with a coupling clutch and a tray for collecting wash waters. To improve productivity and reduce shutdowns for washing the pouring head there is an auxiliary drive linked via the clutch with the head drive shaft, while under the tray is a pump and piping for removing wash water. The auxiliary drive is pref. connected with the head drive shaft via a nuniversal joint shaft.

Ruzanov, N.M., Repina, N.A. Bul. 17/5.5.78. 6.10.75. as 179832 (3pp1358)

AKGO= ★ D13 25209B/13 ★SU -605-599
Granulated microbial biomass prepn. - includes two/stage drying to improve storability, useful as aminoacid feed supplement for livestock
AS KIRG ORGANIC CHE 20.08.76-SU-398745
C03 (D16) (14.04.78) A23k-01

Microbial biomass, obtd. by culturing aminoacids (pref. threomine) biosynthesising microorganisms is dried and used as feed additive for farm animals and poultry. The hygroscopicity of the feed additive is reduced if the biomass is dried in stages. It is first dried for 10-15 mins. at 100-110°C, then cooled to 40-50°C and then dried again for 30-40 min. at 75-85°C. The dried and granulated prod. can be stored for long period (>12 months) without decomposition.

Struchalina, T.I., Aimukhamedova, M.R., Kanimetov. A.K. et al. Bul. 17/5.5.78. 20.8.76. as 398745 (2pp938)

GPOL= ★ D13 25210B/13 ★SU -605-600
Foaming agent for halva mfr. - obtained by repeatedly extracting crushed tea seed in boiling water for enhanced foaming capacity
GEOR POLY 20.05.76-SU-364569
(06.04.78) A23l-01/06

Foaming agent for halva production with enhanced foaming capacity is obtained by crushing tea seeds, boiling in water, cooling and filtering the extract.

Typically 1 kg crushed tea seed is boiled in 2.0-2.5 litres water in an open vessel for 20-30 min. to a solids content
extract is allowed to stand, cooled for

The residue is extracted twice, giving a total yield of 6-7% solids extract of 300-350% relative to the weight of seeds. Compared to conventional tea extract the seed extract has high foaming efficiency and gives a stable foam.

Berezhiani, L.B., Abzianidze, K.Sh., Tsinauri, T.M.
Bul. 17/5.5.78. 20.5.76. as 364569(2pp1358)

NONA= ★ D13 25211B/13 ★SU -605-601
Highly filterable kvass wort concentrate prepn. - includes blending sufficient rye flour with malt barley to yield concentrate batch
NON ALCHOHOL BEER 12.10.76-SU-412167
(D16) (06.04.78) A23l-01/18

Kvass wort concentrate is made by blending rye flour with a portion of ground malt barley and water (stage (I) maturation, cooking, cooling, adding it to a cold mash of the remaining ground malt barley, together with an enzyme prep. sweetening the mash, filtering, evaporating the wort, sterilising and packing. Wort viscosity is reduced, filtration is accelerated and the yield is increased. At stage I, sufficient granulated fermented malted rye necessary to finalise prodn. of some of the concentrate is added. The enzyme used is xylavamorin P10Kh at a conc. 0.03-0.05% wt.% of initial stock.

Katseva, S.A., Arinkina, A.I., Sycheva, L.F. et al. Bul 17/5.5.78. 12.10.76. as 412167(2pp835)

MOMO/ ★ D13 25290B/13 ★SU -605-789
Automatic regulator for phosphoric acid neutralisation - used in di:calcium phosphate fodder prodn., controls phosphoric acid and calcium carbonate consumption ratio
MOMOT V M 25.12.76-SU-455859
C03 E33 R26 (10.04.78) C01b-25/32 G05d-11/06

Automatic regulator for controlling the neutralization process of phosphoric acid is used in dicalcium phosphate fodder prodn. The process is based on control of the ratio of calcium carbonate and phosphoric acid and by stabilising the consumption of the product.

In order to ensure more complete utilisation of the initial reagents to increase productivity, the ratio of consumption of the calcium carbonate and phosphoric acid is corrected in dependence on the phosphoric acid density.

Molot, V.M., Bobukh, A.A., Bobryshev, V.F. et al.
Bul. 17/5.5.78. 25.12.76. as 455859 (3pp848)

MEAT= ★ D13 25324B/13 ★SU -605-824
Fat extraction from animal bones - by mechanical grinding and low frequency vibration with hot water treatment
MEAT IND RES INST 01.07.76-SU-379272
(05.04.78) C11b-01

Fat is extracted from animal bones by mechanical grinding and low frequency vibration before treatment with hot water. Vibration treatment is pref. carried out at 16-50 Hz and a vibration amplitude of 6-9mm. Mechanical mixing is carried out at the same time as vibration treatment.

EXAMPLE

An emulsion contg. (in %): water 10, fat 10, ash 45 and protein 35 is obtd. from 100 kg. bones ground to 18mm, treated with hot water at 85°C and vibration-treated at 25 Hz and 6mm in a thin layer. Vibration treatment is carried out simultaneously with mechanical mixing.

Bosylev, S.M., Bobylev, V.S., Gaevoi, E.V. Bul.
17/5.5.78. 1.7.76. as 379272(2pp1047)

FATS= ★ D13 25333B/13 ★SU -605-834
Bacterial strain of Streptococcus diacetilactis - used for margarine, butter and cheese prodn.
FATS RES INST 08.10.76-SU-410239
(D16) (04.04.78) A23c-15/02 C12k-03

Bacterial strain Streptococcus disacetilactis 6a/14 is used in ferment for making margarine, butter, cheese etc. The diplococci form short chains of 4-6 cocci of dia. 0.5-0.6μ. The strain is Gram-positive. On an agar with hydrolysed milk, active, growth occurs with either deep or surface seeding. When the agar contains also 1% $CaNO_3$ and 1% yeast autolysate, surface and deep colonies up to 0.5-0.8 cm. occur in the lucid interval zone. In a meat-peptone broth with glucose, uniform turbidity occurs.

Shmeleva, L.I., Falk, E.Yu., Shamraeva, N.D. Bul. 17/25.5.78. 8.10.76. as 410239(2pp314)

MOMD ★ D13 25456B/13 ★SU -606-132
Fat and protein determn. in milk - by passing light through a sample cell and measuring the intensity of scattered light using a concave mirror with a central aperture
MOSCOW MEAT DAIRY INST 21.05.76-SU-362431
J04 R16 (13.04.78) G01n-33/06

Device used to determine simultaneously the fat and protein content in milk and dairy products comprises a light source, lens, cell for the product, and two light-receptors Determination precision is increased, due to separate measurement of the intensities of the directly-transmitted and scattered light beams, by adding an attachment to divide the light. This is made as a concave mirror with a centre hole coaxial to the light source.

One of the light receptors is placed behind the centre hole and coaxial to it, and the other in the plane of the image of the mirror. There is also a means to focus the light beam fed to the cell.

Terentev, V.F., Filyushov, D.I. Bul. 17/5.5.78. 21.5.76. as 362431 (3pp29)

DEGS D13 64180W/39 =SU -606-530
Propylene glycol propionate used as silage additive - to promote lactic acid formation
DEUTSCHE GOLD & SILBER 16.03.74-DT-412834
*C03 E17 +P12 (23.03.78) *DT2412-834 A23k-03*

Silage additive consists entirely or partly of propylene glycol propionates (I), e.g. propylene glycol-1- or -2-mono- or -1,2-di-propionates, opt. as their mixtures. It is used to produce fermented fodder from plant silage, e.g. grass lucerne, vetch, clover, green maize, beet and potatoes.

Formation of butyric acid is prevented whe reas lactic acid formation is promoted. Activity of (I) exceeds that of propionic acid. Concn. of (I) in silage is 0.01-1 (pref. 0.1-0.5) wt.% (I) may be used with further additive preservatives or with highly dispersed SiO_2.

Fanenshtich, R., Shuler, W. Bul. 17/5.5.78. 21.2.75. as 107252 (3pp)

DZNI= ★ D13 25465B/13 ★SU -606-572
Complex phosphate(s) as animal feed additives - are prepd. by mixing crude urea, aq. ammonia, ammonium carbamate and water, and neutralising with phosphoric acid
DZERZ NITROGEN IND (FORE=) 28.11.72-SU-850728
C03 (26.04.78) A23k-01/22

Additives for animal feed stuffs should be readily assimilated, cheap and of low toxicity. The patent proposes the use of complex urea phosphates with ammonia having a N:P ratio 0.75:1-3.5:1, for this purpose. The additive is used at a rate of 114g per head of cattle per 24 hrs.

Sarbaev, A.N., Mikhailov, Yu.I., Moshkevich, V.B. Bul 18/15.5.78. 28.11.72. as 850728 (3pp835)

PANK/ ★ D13 25598B/13 ★US 4111-087
Cutting cheese block while maintaining block profile - by pushing block through harp of vertical wires
PANKRATZ R R 27.05.77-US-801316
A82 P62 (05.09.78) B26d-05/20

A block of cheese is advanced on a conveyor comprising rotating rollers. At a cutting station the cheese block abuts a stop and a ram moves a head transversely to push the cheese block through an array of vertical wires arranged in a cutting harp. The ram head is scalloped to correspond with the profile of the rollers.

The rollers of the conveyor have a non-stick coating and are driven through individual slipping clutches which allow the cheese block to be advanced until it abuts the stop yet does not degrade the surface of the cheese by further rotation of the rollers.

The appts. cuts a cheese block with vertical cut lines. The profile and structural integrity of the block is maintained during the cutting operation. 27.5.77 as 801316 (7pp295)

SAKU/ ★ D13 25599B/13 ★US 4111-1
Wheat flour prod. prodn. - using appts. comprising rollin gelatinising seasoning frying and cooling stations
SAKURAZAWA H 21.08.75-JA-U15729
P28 (05.09.78) A23l-03 A47j-37/12

Appts. comprises a vertical rolling appts. with pairs of rollers with the rolling clearance of any one pair offset i the horizontal direction from the rolling clearance of an adjacent pair. It also includes a gelatinising appts., a seasoning appts., a frying appts., and a cooling appts.

A first endless conveyor has trunnion mounted bucket and conveys the prod. from the rolling appts. to both the gelatinising and seasoning apparatuses. A second endles conveyor with lidded buckets transports the prods. from the seasong appts. to the frying appts. Each lid is opene to receive the prod., is closed during transportation through the frying appts., and is reopened as the buckets approach the cooling appts. A third conveyor is used to transport the prods. through the cooling appts.

The gelatinising and seasoning apparatuses are elevated above the frying appts. and the cooling appts. is positioned beneath it.

The appts. is used to mfr. fried prods. made from a wheat flour dough. The appts. is compact and requires no manual intervention and thus is more hygeinic than previously used equipment. 19.8.76 as 715684 (6pp295)

KUSE- ★ D13 25600B/13 ★US 4111-11
Portable cheese press frame - with stacks of cheese hoops supporte in inclined position
KUSEL EQUIPMENT CO 06.06.77-US-803793
P13 (05.09.78) A01j-25/10

A portable cheese press frame supports stacked hoops for causing draining of the whey from cheese curd. The frame is generally A-shaped, the sides of the A supporting the stacks of hoops in a position inclined from the vertical.

Cylinder and piston units are mounted on top of the frame and include a piston which extends downwardly to press the curds in the hoops. A control device actuates the cylinder and piston units in extending and contracting directions. The frame also includes a pan at the bottom which has a drain for removing drained whey.

The appts. is used to press cheese curd to remove whey. 6.6.77 as 803793 (7pp295)

USDA ★ D13 25718B/13 ★US 4111-80
Removing protein from acid whey and tannery effluent - by heatin their mixt. at alkaline pH, producing high protein chicken fee supplement
US SEC OF AGRICULTURE 03.06.77-US-803191
C03 (05.09.78) C02b-01/20 C02c-05/02

Protein material (I) is recovered from acid whey (A) and tannery unhairing waste (B), while simultaneously reducin the BOD, by first mixing (A) and (B) to form a mixt. cont. 20-25 vol% (B). The pH is adjusted to 8-10 and the mixt. heated to about 70°C, then the ppte. of (I) sepd.

Two highly polluting wastes are cleaned simultaneousl and the (I) prod. is useful as high-protein chicken feed supplement. 3.6.77 as 803191 (3pp1251)

UYNE- ★ D13 25762B/13 ★US 4111-92
Extracting edible protein from Phaseolus spp. beans - using dil. aq sodium chloride soln. followed by acid pptn.
UNIV OF NEBRASKA 12.05.77-US-796182 (07.07.75-US-593460)
(05.09.78) A23j-01/14

Edible plant protein is obtd. from finely divided dried Phaseolus vulgaris, P. aureus or P. lunatus beans by extraction with aq. $\leqslant$0.6% w/v NaCl soln. followed by pptn. of the protein with acid. Pref. the dried beans are used in the form of a flour. The solids are pref. sepd. by centrifugation before acid pptn. of protein from the supernatant. Pptn. is pref. at $>$80°C, esp. ca. 90°C. The protein is pref. then spray-dried.

Process is effecient, economical, and gives commercially viable amts. of protein having the same lysine and methionine content as the whole beans and having a slightl higher biological value than soyabean protein. The protei obtd. is bland without any appreciable bean flavour and may be used in biscuits and other baked goods. 12.5.77 as 796182 (4pp949)

DEEP- ★ D13 25780B/13 ★US 4111-991

One step prepn. of halogen salts - by reacting elemental halogen with metal or ammonium salt or amine in the presence of hydrazine

DEEPWATER CHEM 16.05.77-US-797419

B05 C03 E16 (05.09.78) C07c-87/22

Amine halides are prepd. by reacting (a) elemental Cl, Br or I, (b) a hydrazine, hydrazine hydrate or a cpd. which generates hydrazine and (c) an amine or amino salt in a reaction medium comprising H_2O, alcohols and/or ethers.

Used for the prepn. of ethylenediamino dihydroiodide which is used as a feed additive and in medicine. 16.5.77 as 797419 (7pp1355)

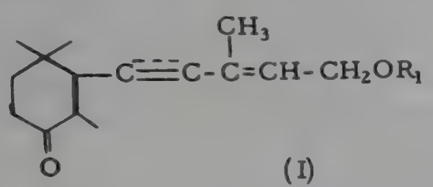
HOFF D13 97408X/52 =US 4111-992

Carotenoid inters. prepn. from 3-alkoxy cycloalk 2-enones - by Grignard reaction with alkenyne derivs.

HOFFMANN-LA ROCHE INC 09.06.75-US-585224 (15.09.76-US-723416)

*B05 E24 (05.09.78) *NL7606-160 C07c-49/48 C07c-49/56*

Cpds. of formula (I) are new. In (I) R_1 is H or forms an ether protecting gp. (with the O) which is removable by hydrolysis and the dotted bond can opt. by hydrogenated. Alternatively, the gp. $-OR_1$ can be a halogen. A typical cpd. is 5(2,6,6-trimethyl-3-oxocyclohexen-1-yl)-3-methyl-2-trans-penten-4-yn-1-ol.



(I)

(I) are intermediates for dinor-canthaxanthin and canthaxanthin, which are food colouring agents. 4.2.77 as 765570 Div. ex. 4025564, 4000198 (+15.9.76-US-723416) (10pp918)

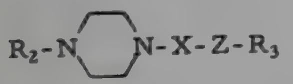
SANO D13 72500Y/41 =US 4112-091

(1,4)-Disubstd. piperazine derivs. - prepd. by alkylation or acylation of a mono substd, piperazine, which increase nutritive value of animal feeds

SANDOZ LTD 09.04.76-CH-004530 (09.04.76-CH-004529)

*B03 C02 (05.09.78) *BE-853-362 C07d-295/18 +A61k-31/49*

Novel polyhalo alk(en)yl alcohol esters of piperazino acids are of formula (I).



(I)

$R_2-N\langle\rangle N-X-Z-R_3$

In (I) R_2 is H, (hydroxy) alkyl, (monoalkyl)phenyl or monohydroxyalkyl phenyl. X is CO or CS. Z is O or S. R_3 is 1-12C (branched) alkyl or 2-6C alkenyl substd. by 2-3 halogen atoms on one C atom. Pref. X is CO and Z is O. Pref. R_2 is H or 1-4C alkyl, esp. CH_3.

(I) are methanogenesis inhibitors. 4.4.77 as 783989 (4pp974)

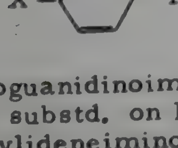
ICIL D13 81223X/44 =US 4112-120

Animal growth-promoting benzo-quinone derivs - substd by guanidino-imino semic-carbazono and hydrazono groups

IMPERIAL CHEM INDS LTD 17.04.75-GB-015854

*B05 C03 (B03 C02) (05.09.78) *BE-840-889 A61k-31/17*

In the husbandry of meat-producing, domestic animals, method for improving growth rate or for improving the efficiency of utilisation of animal foodstuffs, comprises orally administering to the animals a compsn. contg. 0.0001-0.025% w/w of a quinone deriv. of formula (I) (or its dihydro deriv. (salt) or salt), admixed with liq. or solid, edible, non-toxic diluent or carrier.



(I)

In (I), X is opt. mono substd. guanidinoimino or 2-imidazolin-2-ylhydrazono; and Y is opt. monosubstd. guanidinoimino, 3-nitroguanidinoimino, semi carbazono, thiosemicarbazino opt. substd. on N-4, 3-[4-(guanidinoimino)cyclohexa-2,5-dienylideneimino]-guanidinoimino or 3-(4-semicarbazono cyclohexa-2,5-dienylideneimino)guanidinoimino. 16.3.76 as 667140 (8pp936)

BRPE D13 82990Y/47 =US 4112-122

Inhibiting growth of microorganisms on foods - esp. on bread, by incorporating acidic propionate salts

BRITISH PETROLEUM LTD 29.11.76-GB-049608 (19.05.76-GB-020639)

*E17 (D11) (05.09.78) *BE-854-826 A21d-02/14*

The growth of micro-organisms in foodstuffs is inhibited by incorporating an acid salt of propionic acid and ≥1 cation of NH_4, Na, K, Ca or Mg, such that ratio of acid to cation in the salt is 2-4:1 on a chemical equiv. basis, in an amt. of 0.01-1.0 wt.% w.r.t. dry wt. of foodstuff. Pref. rope formation and mould growth in bread is inhibited by incorporating in the brean an acid propionate salt in amt. 0.01-0.4 wt.% w.r.t. dry wt. of flour. Bread is enzyme leavened or chemically aerated.

Softer bread giving rise to marginally higher moisture content, which is esp. susceptible to attack by microorganisms, is protected. 4.5.77 as 793745 (3pp931)

BEAF ★ D13 25828B/13 ★US 4112-123

Nutritionally balanced single food compsn. - suitable for patients with abnormal catabolic states

BEATRICE FOODS CO 21.07.76-US-707247

(05.09.78) A23c-21

Nutritionally balanced single food compsn. for oral ingestion, giving low residues and diminished stooling is claimed.

Compsn. contains (a) 8-27 wt.% water soluble undenatured ultra-filtration whey protein; (b) 5-20 wt.% medium chain triglycerides contg. mainly 6-10C in the fatty acid chain; (c) 50-70 wt.% carbohydrate, which is corn syrup solids, trisaccharides, tetrasaccharides, penta-saccharides, hexasaccharides, dextrose fructose, sucrose, maltose, oligosaccharides and/or higher saccharides; and (d) 0.1-5 wt.% food grade emulsifier, the compsn. contg. 1-3 cals per cc.

The prod. is esp. for patients e.g. with severe burns, having abnormal catabolic states, and requiring high calorie intakes. The compsn. may be low viscosity liquids for drip-feeding, sipping, etc. or higher viscosity for simulated foods e.g. custards, etc. and may be formulated with low osmolarity to avoid 'dumping' 21.7.76 as 707247 (8pp955)

DRIS- ★ D13 25829B/13 ★US 4112-124

Sterile food packaging in flexible envelope - filled with inert gas and irradiated with UV light

DRISAN PACKAGING LT 26.04.71-US-137553

Q31 (05.09.78) B65b-55/16

The food prod. is packaged in a sterile condition by initially placing a substantially sterile product in a flexible envelope. The envelope is then transferred to an appts. in which ambient air is removed from the envelope by a curtain of inert gas which collapses the envelope onto the food. The envelope is filled with a dry, sterile, inert gas and is then sealed. The walls of the envelope are opaque to visible light yet are transparent to UV radiation which is directed onto the package while inside the appts. This UV light kills bacteria on the surface of the prod.

Food is packaged in a sterile condition in the envelope and may be maintained at refrigeration temperatures (36°F) for periods of several months without deterioration. The method overcomes the cell destruction associated with preservation by freezing. 26.4.71 as 137553 (15pp295)

BEAF ★ D13 25830B/13 ★US 4112-125

Food colour and flavour carrying particle - which does not bleed in storage

BEATRICE FOODS CO 15.02.77-US-768725

(05.09.78) A21d-10 A23l-01/22

Semi-moist, semi-soft particles for carrying food flavour and colour comprises 5-30% vegetable or dairy protein, 0-50% dextrose, 0-50% sucrose, 5-70% gelatinised starch and 5-40% vegetable fat of m.pt. 100°F or less, and an effective amt. of colour and flavour. The compsn. contains at least 5% of dextrose or sucrose, and 5-30% water, the water activity being 0.85 or less.

The prod. is esp. intended to imitate fruit etc. in baked goods e.g. blueberries in muffins. 15.2.77 as 768725 (6pp955)

JOHM ★ D13 25834B/13 ★US 4112-129
Compsn. for reducing build-up of free fatty acids in cooking oil - comprises diatomite, and synthetic hydrated calcium and magnesium silicates
JOHNS MANVILLE CORP 14.09.77-US-833215
(05.09.78) A23d-05/02 C09f-05/10

Compsn. for controlling free fatty acids and colour in cooking oils comprises (by wt.) 47-59 pts. diatomite, 28-36 pts. synthetic Ca silicate hydrate (I) and 12-24 pts. synthetic Mg silicate hydrate (II). Flux-calcined diatomite is used of particle size distribution 20-30% $<$ 20 μ and 40-60% $<$ 30 μ and of dry bulk density 10-14 lb/ft^3.

(I) is formed by hydrothermal reaction of CaO and SiO_2 has $CaO:SiO_2$ wt. ratio 1:(1.5-2.5), has dry bulk density 6-10 lb/ft^3, a particle size distribution of $\nless$95% - 35 mesh and 8% + 325 mesh, and a permeability of 0.35-0.70 darcies. (II) is formed by hydrothermal reaction of MgO and SiO_2, has $MgO:SiO_2$ wt. ratio 1(3.5-5.5), has a dry bulk density 12-15 lb/ft^3, particle size distribution of $\nless$ 95% - 325 mesh and a surface area of 150-200 m^2/g.

Components act synergistically and impart no off-taste to the food. Relatively fast flow rates are obtd. permitting rapid filtration of large amts. of oil and oil service life can be extended by $\geqslant$50%. Useful for treating hot cooking oils in conventional filtration units of fast food outlets and restaurants. 14.9.77 as 833215 (6pp949)

NEST D13 05602Y/04 =US 4112-132
Butter substitutes and margerine type food prods. - mixing fats and aq. medium of specified viscosity at 15 to 45 degrees centigrade
SOC PROD NESTLE SA 31.07.75-CH-009984
*(05.09.78) *BE-843-798 A23d-03/02*

Prodn. of an edible prod. of the butter or margarine type comprises thoroughly mixing at 20-35°C, a medium (I) comprising fats, and an aq. medium having a viscosity of 2000-20000 cpds., as measured at 20-30°C. The mixing temp. is such that the fats exist in neither a partially crystallised state nor in the formation of a water-in-oil emulsion having a fat content of 35-90%. Pref. (I) is butter.

No phase invertion of oil-in-water emulsion to a water-in-oil emulsion is required. 30.7.76 as 710223 (4pp982)

COKE ★ D13 25835B/13 ★US 4112-130
Spray drying orange juice slurry - contg. food-grade water-dispersible or soluble drying aid, under specified parameters
COCA-COLA CO 14.10.75-US-621716
(05.09.78) A23l-02/10

Free flowing orange juice powder of improved flavour is obtd. by concurrently spray drying an aq. slurry comprising 51-65% solids, 51-85% of which are orange juice solids, the balance being a food grade water-dispersible or -soluble drying acid. Spray drying is to moisture content $<$ 4% by passing the slurry through high pressure spray nozzle(s), at inlet air temp. 220-300°F, outlet air temp. 145-205°F and nozzle pressure 3000-500 psig.

The interior walls of the drying chamber are held at $<$ sticking pt. of the powder, and spray drying angle and drying chamber size are chosen in conjunction with nozzle pressure to minimise buildup of undried powder on the walls. 14.10.75 as 621716 (7pp949)

KRFT ★ D13 25836B/13 ★US 4112-131
Continuous in/line process cheese prodn. - with direct steam injection in pressurised cooking zone
KRAFT INC 09.02.77-US-766853 (02.09.75-US-609520)
(05.09.78) A23c-19

Process cheese mfr. comprises blending the starting materials at ambient temp. then passing under pressure through heating and mixing zones to give a homogeneous molten cheese of 42-75% moisture. The mixing zone is at 5-60 psig and 165-300°F. The cheese is then transferred to a zone at 150-210°F/3-15 psia ($>$ 4 psia below that in mixing zone).

The heating zone comprises a steam injection conduit, with many steam holes of dia. 0.02-0.07 inches, inside a housing so as to define an annular passage through which the cheese flows. In the reduced pressure zone moisture content is reduced by 2-25 wt.% (on the wt. of moisture in the melt) to give a cooled prod. of 40-70% moisture.

The prod. has good body texture and flavour. 9.2.77 as 766853 (8pp1251)

FARM- ★ D13 25837B/13 ★US 4112-133
Liq. smoke compsn. contg. added food acid and solubiliser - to prevent deposition of solids, used for treating meat, fish cheese etc.
FAR-MAR-CO INC 29.09.76-US-727651
A97 (05.09.78) A23l-01/22

Liq. smoke compsn. is made by mixing (i) a natural smoke soln. contg. acids, phenols, and carbonyls, (ii) a food-grade acidulant; and (iii) a food-grade solubilizer.

Component (ii) is $\geqslant$2 wt.% for a phenol concn. in (i) of 1.5-2 g/l, plus 0.5% for every additional 0.5 g/l phenol, or less 0.5% for every 0.5 g/l phenol below this range. Component (iii) is $\geqslant$4 wt.% for a carbonyl concn. in (i) of 3-3.5 g/l, plus 0.5% for every additional 0.5 g/l, or less 0.5% for every 0.5 g/l carbonyl below this range.

(iii) are (polyoxyethylene) sorbitan fatty cpds., polyoxy-ethylene fatty cpds. or polyoxyethylene glycols of mol. wt. $\geqslant$ 400 or their mixts. 'Fatty cpds.' are opt. unsatd. mono-acids or mono-alcohols, or their mono-esters.

Components (ii) and (iii) inhibit deposition of solids during storage and use, so the solns. give superior flavour and colour. 29.9.76 as 727651 (8pp1251)

COMM ★ D13 25878B/13 ★US 4112-220
Nitrate ester(s) of galactomannan gums - are explosives and are thickeners and gelling agents for organic solvents e.g. for nitroalkane based explosives
IMC CHEMICAL GROUP INC 29.10.74-US-518664
A11 K04 (A95) (05.09.78) C07g-03 C08b-37

Novel nitrate esters of a galactomannan gum have OH hydrogens of the gum replaced by nitro gps. The gum is e.g. guar or locust bean gum, and the relative nitrogen content is pref. 70-100 (85-100)%, 1-3C nitroalkanes are thickened by mixing 98-88 pts. wt. with 2-12 pts. wt. gum. Pref. 2-12 wt.% gum is present in the thickened compsn., and also a curing agent, e.g. Pb oxide, $(Bu)_4Ti$, tetra(2-ethylhexyl)titenate or tetrastearyl titanate.

Esp. for nitroalkane-based explosives. The gum derivs. are cheap and are themselves explosives as well as thickening or gelling agents. 29.10.74 as 518664 (4pp904)

NATT ★ D13 25879B/13 ★US 4112-222
Granular hydroxypropylated starch deriv prepn. - from propylene oxide and starch in presence of alkali(ne earth) metal carboxylate salt as catalyst
NAT STARCH & CHEM CORP 07.01.77-US-757634
A11 (A97) (05.09.78) C08b-31/10 C13l-01/08

Granular, cold water dispersible hydroxypropylated starch ethers are prepd. by reaction of granular starch having a moisture content of 6-20% with 15-50 wt.% propylene oxide for 4.5-24 hrs at 70-100°C and 10-100 psig. The improvement is that the starch is first impregnated with 0.25-5.0 % based on wt. of starch of a water soluble alkali(ne earth) metal salt of a carboxylic acid as catalyst. The acid is unsubstd. or hydroxy-substd., contains $\ngtr$20C and Al if aliphatic, contains 1-6C in the main chain.

The formation of by-products is reduced; the product is free of toxic by-prods and has no off-taste. 7.1.77 as 757634 (7pp955)

MLCW ★ D13 25884B/13 ★US 4112-238
2-Ethyl-hexyl gallate purificn. - by treatment with a solvent mixt. contg. an aliphatic hydrocarbon and 2-ethyl-hexanol
MALLINCKRODT INC 17.02.77-US-769828
B07 E17 (B05) (05.09.78) C07c-67/48 C07c-69/88

Pure 2-ethylhexyl gallate (I) is prepd. by treating crude (I) with a solvent system consisting of a liq. aliphatic hydrocarbon (II) contg. 1-8 (pref. 2-5) vol.% of 2-ethylhexanol (III) and then sepg. pure (I) from the solvent. Pref. (II) have 6-12C, esp. 6C, partic. n-hexane, and amt. used is 2.5-6 ml/g of (I).

Use of the solvent system affords crystalline readily filterable (I) free of coloured impurities. (I) is useful as an antioxidant/stabilizer for a variety of foods, and drugs, etc. 17.2.77 as 769828 (3pp478)

See Also

D15 J7 9004547 D15 US 4111768 D16 J5 4023194
D16 SU 605833 D16 US 4112223 D22 GB 1542904
D23 J5 4024805

D14: FOODSTUFF MACHINERY

SONI- ★ D14 24033B/13 ★CA 1051-112
Acoustic vibrator for flowing liquids - with crevice-free internal surfaces to prevent bacterial contamination
SONIC CORP 12.11.75-US-631045 (20.01.75-US-542640)
A88 P43 (20.03.79) B01f-11 B06b-01

The appts. e.g. for contamination-free treatment of foodstuffs, comprises internally cylindrical inlet, body and outlet sections, the body having end radial flanges and end counterbores receiving axial flanges on the other sections. The inlet counterbore holds an orifice plate flat on one side and spherical on the other with a central eye-shaped orifice.

A plate in the outlet counterbore has a vibrator blade aligned with the orifice, and there are sealing rings on either side of each plate. Clamps hold the body flanges to radial flanges on the other sections, and the plates are held against rotation. The arrangement provides crevice-free internal surfaces to minimise the possibility of bacterial contamination. The rings are pref. of PTFE. 20.1.76 as 243836 (24pp1358)

ADEL/ ★ D14 24066B/13 ★DT 2740-462
Oven door handle - arranged in cool parts for safe handling
ADELBERGER F 08.09.77-DT-740462
Q74 (22.03.79) A21b-03/02 F24c-15

The door handle for the swing-down door of an oven with a double-glazed insert is a strip extending over the width of the door and arranged in a door recess at the top away from hot parts. The handle is fitted with a torsion spring which returns it in the closed position in the recess, when turned less than 90°.

When turned over 90°, the spring urges it into a position where it stands out beyond the door. This prevents injuries to the hand by burning. 8.9.77 as 740462. (5pp39)

PICO- ★ D14 24171B/13 ★DT 2837-434
Safety valve for pressure cookers - comprises counterbalanced relief valve with activating knob on top
PICOUT & CIE SA 16.09.77-FR-028008
Q68 (22.03.79) B01j-03/04 F16p-03

Safety value for pressure cookers consists of a counterbalanced relief valve having a ball held in its seat by a weight. Above this is an actuating knob. The valve can be lodged open by pulling up the knob and rotating it.

The knob has a hollow short shaft which slides around a short shaft extending from the top of the weight. A bar runs through the outer shaft and a slot in the inner one. When the knob is pulled, the bar lifts the weight and opens the valve. If the knob is pressed, it does not exert extra pressure on the valve seat because of the slot, and thus the valve always relieves at the set pressure.

Used on pressure cookers and autoclaves esp. for rapid cooking of food. The problem with conventional values is that if pressure is applied to the knob on top, this increases the pressure inside the vessel and can damage it, also causing accidents and injury to the person using it. The valve described cannot be held down in this way. 28.8.78 as 837434. (14pp1053)

ALFA ★ D14 24283B/13 ★FR 2395-477
Drying plant for pulverulent prods. e.g. for dried milk powder prodn. - in which preheated hot air is circulated and controlled so that its discharge temp. is practically constant
ALFA-LAVAL EVA-DRY 20.06.77-FR-018807
J08 Q76 (23.02.79) A23c-01/04 F26b-03/02 F26b-21/06

Hot air drying plant comprises a drying chamber, a hot air feed circuit with a pre-heater for the outside air, an evacuation circuit for the hot air charged with vapour and an air-to-air heat exchanger.

through nozzles and the heat exchanger; it passes in turn through a battery of filters and a heater to reach the drying chamber via a pipe. The prod. to be dried, mixed with a solvent (generally water), is sprayed into the hot air current. The air gives up its heat and takes up vapour; any solid particles are removed by a cyclone and it is carried by a fan to the hot side of the heat exchanger before discharge to the atmos. The dried prod. is withdrawn from the base of the drying chamber and that of the cyclone for further treatment.

As the outside air is preheated with heat that would otherwise be lost, less heat is required. 20.6.77 as 018807 (10pp519)

SCHO- D14 63028Y/36 #GB 1543-018
Electric cooking oven incorporating fume destruction - by combined action of grill resistance and slotted box above grill
ETABS SCHOLTES E 03.12.75-FR-036944 (11.03.77-GB-010399)
*P43 Q74 +P28 (28.03.79) *BE-851-953 A47j-37/06 F24c-15/20*

An electric oven or grill includes a cooking enclosure having a fume outlet in the roof, a heating element in the upper part of the enclosure, and a flat rust-proof panel secured to the roof and above the element.

The panel has ≥1 elongated slot directly above a correspondingly shaped portion of the element, each slot having flanged portions depending towards the element. Hot air carrying fumes and fatty vapours has to pass over the element to exit, the function of the slots being to slow down the exit to allow the fumes and vapours to be fully consumed. 11.3.77 as 010399 (5pp1379).

CHET D14 63219Z/00 =NL -159-590
Thin film thermal evaporator - for concentrating, distilling, etc. heat sensitive and viscous liquids
CHEMETRON CORP 09.04.68-US-719926
*J01 (15.03.79) *NL6905-381 B01d-01/22*

In the appts., a viscous material is subjected to a heat treatment such as thin film evapn. The appts. consists of a heat treatment chamber contg. a vertical rotating shaft mounted coaxially with the cylindrical walls of the chamber and equipped with vertical blades whose outer edges just clear the inner wall of the chamber. At the upper end of the chamber, there is a discharge opening and a vapour outlet.

The discharge opening corresponds to the inlet of a gear pump which pumps the treated fluid from the chamber. The centrifugal force due to the rotation of the vertical paddles assists the pump suction. 8.4.69 as 005381. (7pp1370)

SSEM D14 09916R/07 =NL -159-627
Device for sorting and transferring elongated sweets - to high speed wrapping machine
GD STA ACCOM SERA 03.04.68-IT-001588
*Q31 (15.03.79) *FR2005-439 B65b-35/54*

Small objects such as sweets are fed into a packing machine by means of an appts. comprising a horizontal disc with two concentric rows of openings sepd. by a vertical partitioning wall. A second horizontal disc has one row of openings and is so placed that, when the two discs are indexed, two neighbouring holes of the lower disc are aligned with one hole from each row in the upper disc. The sweets are fed onto the top of the upper disc from hoppers, fall into the holes and are then transferred into the lower disc. This disc transports them to the packing machine in which they are wrapped.

The vertical partitioning wall ensures that the sweets drop freely into the openings in the upper disc, preventing jamming and damage to the goods and enabling the packing machine to be run at a higher speed than is normally possible. 19.6.68 as 008639. (6pp1370)

FRUI= ★ D14 25212B/13 ★SU -605-602
Fruit grader with endless belts - on pulleys and support rollers adjustable in height, for wide variation in sizing gap
FRUIT ECONOMY RES 05.05.76-SU-359467
(06.04.78) A23n-15

A grader comprises a sorting surface formed by endless belts with alternating working runs of differing length passing around pulleys, and support rollers. To ensure wide adjustment of sizing gaps and free passage of graded fruit between the non- working runs, the pulleys are of different diameters selected so that their difference is not less than twice the distance between the working runs of the same length.

Endless belts with equal length working runs are pref. mounted so that they can be displaced in height to adjust the sizing gap.

Naidis, A.I., Kolchinskii, Yu.L., Zhukov, O.G. et al. Bul. 17/5.5.78. 5.5.76. as 359467(3pp1358)

TEKH= ★ D14 25420B/13 ★SU -606-058
Heat-sensitive materials sublimation dryer - has ported heating plates with perpendicular inserts
TEKHRYBPROM 07.04.75-SU-129481 (07.04.75-SU-158501)
B07 J08 Q76 (12.04.78) F26b-05/06

Intensified sublimation drying of heat-sensitive materials in food or pharmaceutical ind. is ensured by heating plates with through ports and tubular inserts fitted at right angles to the plate plane. Exchangeable inserts are fitted between the plates, and the sublimation chamber has ribs at the top and bottom. The ribs form circulation channels for the heating medium with connection to the cavity of the plates, and contg. heating elements.

Shields are provided between the evaporator-freezer and the set of heating plates to reduce the effect of freezer radiation on the dried material. The heating plates with their perpendicular inserts give rise to heat carrier flow turbulisation, as well as provide a passage for the vapour removed from the dried material.

Anisimov, A.P., Vlasenko, V.G., Subbotin, A.A. et al. Bul. 17/5.5.78. 7.4.75. as 129481(3pp89)

DUNA/ ★ D14 25490B/13 ★SU -606-616
Animal feeds mixer - has additional screw chambers concentric to main chambers, and diametrically opposed, round central mixing chamber
DUNAISKII SH P 01.07.76-SU-378539
P41 (13.04.78) B02c-18/36

The mixer comprises screw chamber with fixed and free cutters and a discharge system. To complete the system it is now supplemented by a mixing chamber and additional screw chambers arranged diametrically opposite round the mixing chamber.

Each screw chamber is additionally fitted with a concentric screw space. The screw chambers each grind an chop to the required size, handling one contituent of the feed only, and thus discharge these into the centrally arranged vertical mixing chamber for further homogenisin prior to the downward removal to pack or sack etc.

Dunaiskii, Sh.P. Bul. 18/15.5.78. 1.7.76. as 378539 (4pp26)

BEMR/ ★ D14 25581B/13 ★US 4110-91
Forced air food dryer - comprising shelved cabinet with air flo following tortuous path to dry food on all sides
BEMROSE H F 30.08.76-US-718910
(05.09.78) A23b-04/04

A forced air drier comprises a cabinet having a door in one wall, and supports for vertically spaced, food suppor ting trays. Each tray includes an upper food support fora minous sheet and a lower reflective sheet.

Alternating opposite sides of the trays include upstand ing air flow passages joining the spaces between adjacent trays and into which the spaces between the upper and lov er sheets of each tray open. The spaces between the upp er and lower sheets of each tray, the spaces between adja cent trays and the passages define a tortuous air passage way through the cabinet and around the trays. Heated air is forced through the tortuous passageway.

The appts. is used to dry e.g. fruit. The drier expos the food to be dried to heated air on all sides simultaneou ly. 30.8.76 as 718910 (6pp295)

ALTM/ ★ D14 25601B/13 ★US 4111-11
Sectioning cored fruit positioned on stationary spindle - b contacting with rotating blades extending radially to spindle
ALTMAN J E 22.04.76-US-679381
(05.09.78) A23n-04

A precored fruit is advanced along a stationary spindle whose dia. is less than that of the core cavity. Circular saws are rotated and lie in planes which are parallel to the spindle. Typically, the blades extend radially from the spindle and the innermost portion of each blade is received in a slot in the spindle. The blades are driven from a single power source which drives a series of axle by a system of bevel gears.

The appts. cuts a cored fruit e.g. an orange, into seg ments. The segmenting procedure does not distort the core region of the fruit. 22.4.76 as 679381 (7pp295)

See Also

D15 US 4111115

D15 : WATER TREATMENT

IZAR/ ★ D15 24029B/13 ★CA 1050-899
Reverse osmosis kit for producing potable water from sea water - comprises semipermeable membrane defining collection chamber which is connected to storage vessel
IZARD J A 13.08.75-CA-233376
A88 J01 (20.03.79) B01d-13

Appts. for prodn. of potable water from sea water comprises a support which mounts a semipermeable membrane and permit potable water to permeate through at depths of at least 130 fathoms in the sea into a collecting chamber. A water storage chamber is connected to the collecting chamber via a pressure relief and check valve. The valve defines a one way path for the potable water and prevents any backpressure, created during raising of the appts. from reaching and damaging the semi-permeable membrane. Pref. the membrane is of cellulose diacetate-cellulose triacetal.

For emergency use in lifeboats, the appts. eliminates the use of manual pumps to provide the pressure necessary to carry out a reverse osmosis process of sea water. 13.8.75 as 233376 (12pp1044)

CRAN D15 22397R/14 =DS 1906-52
Mxed bed ion exchange demineralisation of water
CRANE CO 25.09.68-US-762509
*J04 (22.03.79) *NL6900-960 C02b-01/76*

Water is purified by passage through a desalter contg. anion exchange granules and cation exchange granules of differing density. For regeneration the granules are sepd. into two beds, one consisting of the anion exchanger with a small amt. of cation exchanger and the other consisting of the major proportion of the cation exchange The first bed is treated with alkali, the alkali is rinsed away then both beds are treated with ammonia in series and finally the second bed is treated with acid and the excess acid removed.

The water obtd. is practically free from solids and may be used for boilers. 10.2.69. as 906529 (4pp068)

NIRA D15 80539T/51 =DS 2225-216
Effluent treatment plant - using gas flotation
UNITIKA KK 24.05.71-JA-035688
*+P41 (22.03.79) *DT2225-216 C02c-01*

A clarification system for effluents by flotation consists of a vertical cylindrical tank which is divided by radial partitions into a smaller mixing chamber where the effluents are introduced at the bottom together with a co-axial supply of compressed air. One partition acts as an overflow into the flotation chamber which, in plant view, has the appearance of a circular arc. At its end opposite to the overflow, an inclined plate covers part of the mixing chamber and a gutter removes the floating sludge.

This makes the retention time long enough to produce an excellent clarification efficiency. 24.5.72. as 225216 (6pp39)

SCHU/ D15 49598W/30 =DS 2401-872
Sewage treatment tanks with movable partitions - allowing changes in the volume and area of the tanks without interrupting the process
SCHUSSLER K H (EGEN/) 16.01.74-DT-401872
*(22.03.79) *DT2401-872 C02c-01 C02c-01/18*

A sewage treatment system requiring several basins, e.g. for aeration and for reclarification consists of a circular or rectangular common basin which is divided by partitions of foldable material into concentric compartments. This material is kept vertical between uprights and the surplus material is wrapped in a coil around a post so that the partition length can be varied as required. The first partition includes openings to admit the fluid to a second similar partition, designed as a semi-immersed wall.

This is a simple way of adapting the chamber size to the influent flow rate. 16.1.74. as 401872 (6pp39)

SCHN/ D15 87186X/47 =DS 2520-397
High throughput activated sludge treatment - introducing sewage and recycled sludge through distributors before aerators in recirculated emulsion
SCHNITZLER E F 07.05.75-DT-520397
*(22.03.79) *DT2520-397 C02c-01/10*

A sewage treatment systemby the activated sludge process includes an elongated aeration basin in which horizontal drum rotors extend across the channel to effect the aeration and circulation of the sewage/sludge mixture. Each rotor is preceded by a fine distributor for the influent sewage and by a return sludge distributor with serrated edges across the overflow weir. Both distributors are an integral unit with the drum rotors.

This allows a functionally and biologically stable operation without any production of excess sludge. 7.5.75. as 520397 (5pp39)

BOEF D15 36618A/21 =DS 2652-229
High vol. loading activated sludge plant for waste water purificn. - which uses a centrifuge to clear aerated sludge from purified water
BOEHRINGER MANNHEIM GMBH 16.11.76-DT-652229
*(22.03.79) *BE-860-849 C02c-01/06*

Process for the biological purification of waste water comprises vigorous aeration of agitated waste water contg. suspended matter; the upper levels of the suspension are tapped off to a second aeration chamber, where more air is blown through the agitated water; part of the water is then pumped to a two stage centrifuge unit and the clear water is recovered.

The residual water at each stage is recycled. The air pressure, processing time and centrifuging rate are adjusted to avoid the formation of filament microorganisms such as Sphaerotilus natans or fungi. 16.11.76. as 652229 (8pp047)

HORI- D15 52606Y/30 =DS 2701-075
Continuous oil concentration monitor for water supplies - uses IR absorption analyser and permanently recycled solvent for oil
HORIBA LTD 12.01.76-JA-002642
*J04 R16 (22.03.79) *DT2701-075 G01n-21/26 G01n-33/18*

In a system for the continuous measurement of the oil concn. in oil-contg. water, a first separator includes a continuous measurement with a

sample and the oil soln. which was not covered by the first. The analyser consists of two infrared absorption cells. The first is passed continuously by the oil soln. discharged by the first separator. The second is a reference cell and is passed by the solvent which has been recovered and is recycled.

The arrangement combines the good features of the infrared method with reliable readings over long periods. 12.1.77. as 701075 (8pp39)

WOLF- D15 80318A/45 =DS 2718-420
Bar screen rake mechanism - using low power motors for balanced rocker, swivel arm and pusher motions
WOLFF E MASCH U EIS 26.04.77-DT-718420
*Q42 (22.03.79) *DT2718-420 C02c-01/22 E02b-05/08 E03f-05/14*

A bar screen installation for a sewage channel consists of vertical parallel bars and a raking device, mounted between two pedestals and straddling the channel. A rocker beam carries at one end a counterweight and at the other end a hinge for another beam. The latter has at one end a counterweight and at the other tines of a rake which pass through the gaps between the screen bars.

All drives are pref. electrically driven positioners. This saves the much more expensive hydraulic positioners. 26.4.77. as 718420 (6pp39)

BELL- ★ D15 24078B/13 ★DT 2740-645
Sewage basin raking system - has revolving bridge carrying raking arms for sinks and collector pipe for floats
GEBR BELLMER KG 09.09.77-DT-740645
(22.03.79) C02c-01/26

A raking arm system for circular sewage clarification basins for the discharge of sinks and floats is attached to a revolving bridge structure. A radial collector pipe on the bridge has a longitudinal slot which dips halfway in the water level and skims off the floats on it.

This is a simple system of combining the removal of sinks by the raking arms with the removal of the floats by the collector pipe. 9.9.77 as 740645. (9pp39)

SHUM ★ D15 24091B/13 ★DT 2740-855
Processing waste waters from vat esp. indigo dyeing - comprises flocculation with magnesium and/or calcium salts, decantation, reducing dye in sediment and recycling
SCHUMACHERSCHE FAB 10.09.77-DT-740855
E24 F06 (22.03.79) D06p-05/02

Waste waters from vat- esp. indigo-dyeing processes are worked up by: (a) flocculating the vat dye quantitatively by adding Ca- and/or Mg-salts, esp. $CaCl_2$ and/or $MgCl_2$, to waste waters and setting pH 12-13; (b) allowing flakes to settle; (c) sepg. sediment sludge from decantate; (d) oxidising dithionite, sulphite and further oxidisable S cpds. in decantate to sulphate, by adding H_2O_2. Method further comprises (e) neutralising the sulphate-contg. decantate and discharging the neutralised decantate; (f) reducing the dye obtd. in sepd. sediment sludge back to the original vat dye, by adding reducing agents, esp. $Na_2S_2O_4$ + NaOH soln.; (g) adding filtering auxiliaries to the suspension obtd. and filtering, and (h) recycling the vat-dye, obtd. as filtrate, to vat-dyeing process.

The process is economical and non-polluting. Added chemicals can be regenerated. 100% vat dye is sepd. as a re-usable material. 10.9.77 as 740855. (15pp200)

FARB ★ D15 24128B/13 ★DT 2741-669
Semipermeable membranes for reverse osmosis and ultrafiltration - consisting of acrylonitrile copolymer contg. di:sulphimide gp., with low sepn. limit
BAYER AG 16.09.77-DT-741669
A88 J01 (A14) (22.03.79) B01d-13/04 C08j-05/22

The membranes comprise 99-50(wt.)% acrylonitrile units, 1-50% units of ethylenically unsatd. comonomer (I) contg. 1 or 2 disulphimide gps. and opt. units of other comonomer(s).

The membranes are specified for use in reverse osmosis and ultrafiltration. They are free from the drawbacks associated with the usual membranes based on cellulose acetate, have a low sepn. limit of ca. 500 and a much greater water permeability than membranes produced from pure polyacrylonitrile. 16.9.77 as 741669. (19pp016)

INSE ★ D15 24263B/13 ★FR 2395-227
Treating effluent by the activated sludge method - with pretreatment in a sealed bacterial bed
INST NAT RECH CHIMIQUE 24.06.77-FR-019479
(23.02.79) C02c-01/02 C02c-05/10

The biological treatment comprises circulating the liq. through a bacterial bed in contact with an oxidising gas fed at a min. partial oxygen pressure. The liq. resulting is then given an activated sludge treatment under the action of a gas richer in oxygen. The gaseous atmos. from the second treatment is then returned to the first stage to serve wholly or partly as the gas for this stage.

The process is esp. applied to waste water and is simpler than known processes with less energy consumption. 24.6.77 as 019479 (7pp597)

HITA D15 78455X/42 =GB 1542-951
Treating waste water contg. fluorine - by adding calcium to ppt and then aluminium to form both apatite and fluorine complex
HITACHI KK 28.02.75-JA-023950
*E36 (28.03.79) *J51099-853 +C02c-05/02*

Water contg. fluorine (as fluoride) and/or related species is treated to remove fluorine by addition of aluminium ions to the water to cause pptn. by hydroxy-fluoride complex(es).

After complex formation, ≥1 calcium cpd(s) and phosphoric acid or sulphate is added so as to provide concns. of calcium and phosphate species in water sufficient to cause pptn. of fluoride apatite. Hydroxy-fluoride complexes and apatite are removed from water. Pref. pH of hydroxy-fluoride pptn. is at 5-8, and apatite pptn. at 6-8.

Used esp. in waste waters to reduce fluoride concn. to < 4 ppm, esp. < 1 ppm. 27.2.76 as 007843 (6pp931).

DEGM D15 85054X/46 =GB 1543-083
Sludge recovery device fixed to rotating bridge - for use with circular settlement tank
DEGREMONT SA 12.08.75-FR-025059
*(28.03.79) *BE-843-567 B01d-21/24*

In a circular decantation tank of the kind in which water to be treated is fed through a hollow column to the tank, and sludge is transferred from the bottom of the tank to a receptacle rotatably mounted on the column, the sludge is discharged from the receptacle by a siphon.

The siphon has an upstream branch extending into the receptacle and a downstream branch extending into a discharge conduit within the column. The receptacle is rotated by an electric motor, the power supply passing through the downstream branch. The advantage lies in the direct flow of sludge from the receptacle. 5.7.76 as 027833 (4pp1379).

DUPO D15 32458A/18 =GB 1543-138
Selectively permeable membrane prepn. - by extracting an aromatic nitrogen contg. polymer with a solvent contg. a nonionic, anionic or amphoteric surfactant (NL 25.4.78)
DU PONT DE NEMOURS CO (INET) 21.10.76-US-734632
*A88 J01 (28.03.79) *DT2747-390 B01d-13/04*

A permselective membrane is prepd. by extracting a membrane of a linear, aromatic, synthetic, organic, N linked condensation polymer contg. a water-miscible organic polar aprotic solvent (20-75 wt.%, based on the membrane) and at least one salt which is soluble in the solvent (10-100 wt, %, based on the polymer) with a rinse medium which is miscible with the solvent, is a solvent for the salt, is chemically inert towards the polymer and is a non-solvent for it, and contains 50-10,000 ppm (wt.) a surfactant.

The surfactant has mol.wt. 200-7,000 and contains at least one hydrophobic moiety of mol.wt. 100-400, which is hydrocarbyl opt. substd. by halogen, NO_2 or OH, and at least one hydrophilic moiety. It is nonionic, anionic or an ampholytic cpd. of formula $YCH(COO^-)N^+(CH_3)_3$, where Y is 6-20C hydrocarbyl opt. substd. by halogen, NO_2 or OH.

The membrane is useful for the selective separation of components of aq. compsns. by reverse osmosis or ultrafiltration. It has a higher flux rate for one or more components than a similar membrane prepd. without using the surfactant. 20.10.77 as 043801 (16pp558).

ESMI- ★ D15 24314B/13 ★GB 2004-192
Appts. for distilling water esp. sea water - has vertical series of evapn. and condenser chambers with fluidised particulates in the condenser chambers
ESMIL BV 13.09.77-NL-010010
(28.03.79) B01d-03 C02b-01/06

Appts. for distilling water from aqs. soln. comprises a vertical series of evapn. chambers, through which the soln. being distilled flows downwardly, and an adjacent vertical series of condenser chambers. Each evapn. chamber has a narrow passage consisting of upward section(s) alternating with downward section(s) and communicating via a vapour aperture with an adjacent condenser chamber. The condenser chambers have vertical tubes for the upward flow of cooling fluid contg. particulate material which is fluidised by the cooling fluid during operation.

Used in distn. of sea water. A column of evapn. chambers arranged in series can be set up in combination with two or more columns of condenser chambers. Thus a column of condenser chambers can be rectangular in horizontal cross-section and columns of evapn. chambers can be placed against three sides of this rectangle. 12.9.78 as 036421 (5pp67).

KUBI ★ D15 24394B/13 ★J5 4021-963
Device for active carbon regeneration - has connecting pipe between adsorbing and regenerating chambers to send back active carbon to adsorbing column
KUBOTA KK 19.07.77-JA-088594
E36 J01 (19.02.79) B01d-15/06 B01d-53/02 B01j-08/28

The device regenerates a degraded active carbon after use for treating a waste water or deodorising a malodorous gas The device comprises an adsorbing chamber and regenerating chamber integrated with it, forming a unit column. The absorbing chamber has a feed port at the top and support plate and drain pipe at the bottom. The object is to simplify the structure of the device.

A communicating pipe is connected between both chambers to flow down the degraded active carbon into generating chamber. A convey pipe is connected between both chambers to send back a regenerated active carbon to the adsorbing chamber. A gas feed pipe for aeration is connected to a lower section of the adsorbing chamber. 19.7.77 as 088594 (3pp26)

ASAH ★ D15 24398B/13 ★J5 4021-971
Electrodialysis of inorganic electrolyte contg. organic anion - preventing contamination of anion exchange membrane by addn. of oxidant
ASAHI CHEMICAL IND KK 20.07.77-JA-085993
A88 J01 (19.02.79) B01d-13/02 C02b-01/82

Method comprises prevention of contamination of anion exchange membrane by addn. of oxidant into the electrolyte soln. feed to dilution cell in electrodialysis bath and dialysing.

When the electrolyte contains high molecular organic anion, such as alkyl benzene sulphonic acid or humic acid, anion exchange membrane adsorbs these anions during electrodialysis and bi-valent ion-permeability of the membrane decreases resulting in elevation of electric voltage, formation of scale and other troubles. By this method, these troubles can be prevented.

As the oxidant, halogen-soln., hypochlorite, hypobromite, chlorite, bromite etc. are used and the conc. of oxidant should be 0.5-2.0 ppm. The method is effective for anion exchange membrane having quat. imidazole and/or benzyl trialkyl ammonium gps. 20.7.77 as 085993 (5pp42)

MITQ ★ D15 24410B/13 ★J5 4021-985
System for continuously regenerating active carbon - has drying unit followed by regeneration unit in which the carbon is electrically heated and reacted with steam
MITSUBISHI ELECTRIC CORP 19.07.77-JA-086827
E36 J01 (19.02.79) B01d-15/06 C01b-31/08

The system continuously regenerates a degraded active carbon used for treating a waste water and waste gas. The carbon is effectively dried without increasing the oxygen artial pressure during regeneration of the carbon.

A dryer for continuously drying the degraded active car-on is followed by a regenerator through a conveyor. In he regenerator, the carbon is electrically heated, while team is reacted with the carbon to regenerate it. A deod-orising unit is connected to both dryer and regenerator to urn and deodorise drying and regenerating waste gases lischarged from them, and followed by heat exchangers or heating air for drying the carbon, reheating the waste gas after regeneration, and generating the steam. 19. 7. 77 as 086827 (4pp26)

MITQ ★ D15 24411B/13 ★J5 4021-986

Regenerating active carbon used in waste water treatment - providing an electrode arrangement to heat the carbon by passing electric current through it

MITSUBISHI ELECTRIC CORP 19.07.77-JA-086828

E36 J01 (19.02.79) B01d-15/06 C01b-31/08

Upper and lower graphite electrodes are disposed at an upper and lower section of the inner wall of a core pipe, and an intermediate electrode made of a metal is disposed between both electrodes. A steam feeder is disposed below the lower electrode. The carbon under treatment (granular) goes down through the core pipe, while a voltage is applied to the electrodes to directly flow a current through the carbon until heated in red and a steam is sprayed over it.

The temp. distribution in the device is stabilised. 19. 7. 77 as 086828 (4pp26)

TOKE ★ D15 24623B/13 ★J5 4022-950

Waste water treatment - by flowing through growing fibre vascular bundle type plants, e.g. of Nasturtium officinale type

TOKYO SHIBAURA ELEC LTD 20.07.77-JA-086122

(21.02.79) C02c-01/02

A waste water, e.g. sewage, its secondary treated water, effluent from night soil treatment, activated sludge treated water, and turpid and nitrients-enriched waters (of lakes, swamps, rivers or underground) is effectively purified by growing-up a fibro-vascular bundle-type plant, e. g. Nasturtium officinale R. Br etc. at the upper part of a mount having cavity through which the water to be treated is passed, provided almost in parallel in a waterway, forming a spurious underwater soil with the underwater roots of the fibro-vascular bundle-type plant and matters to be removed, collected from the water to be treated, and adjusting the flow rate of the water at the underwater roots part and the water level of the waterway in accordance with the growth of the plant so as to maintain the spurious underwater soil under effective state.

It is necessary to elevate the flow rate and the water level to suppress shortage of dissolved oxygen and lowering in the nutrients supply to the plant. The bottom of the waterway is uneven to cause to occur moderate turbulence. Detached pieces of the spurious waterway bed are effectively readhered to the soil, etc. 20. 7. 77 as 086122 (6pp34)

NAKA/ ★ D15 24624B/13 ★J5 4022-951

Purifying domestic or industrial waste water - by saturating with oxygen and contacting with aerobic and anaerobic bacteria

NAKAO K 20.07.77-JA-086884

(21.02.79) C02c-01/02

Method comprises (1) supplying the water continuously into one chamber (I) of a tank partitioned into two chambers while continuously blowing air into the other chamber (II) so an O_2-satd. polluted water continuously flows into the upper part of chamber (I) from chamber (II) under circulation and (2) contacting the water under aerobic conditions with aerobic and anaerobic bacteria adhered to the surfaces of corrugated plates installed (almost) vertically in the inner part of chamber (I) so that organic materials contained in the polluted water are continuously decomposed by simultaneous aerobic multiplication of the aerobic bacteria, digestion and degradation.

Process is characterised in that the purification is carried-out while suppressing generation of a large amt. of precipitates by carrying-out the multiplication, the self-digestion and the decompsn. of the bacterial under aerobic 086884 (8pp34)

TAKE ★ D15 24625B/13 ★J5 4022-953

Metal ion-contg. waste water treatment - includes adding partially oxidised ferrous salt soln., alkali and polymer coagulant

TAKEDA CHEMICAL IND KK 20.07.77-JA-087676

A97 (A14 A25) (21.02.79) C02c-05/02

Metal ions are completely removed from a metal ions-contg. waste water even when its metal ions content is very low, by adding a partially oxidised ferrous salt soln. (the wt. ratio $Fe^{3+}/Fe^{2+} + Fe^{3+}$ is 30-70%) in amt. of about 100-10,000 ppm against the waste water, followed by agitation for 5-15 mins.; adding NaOH, KOH or Na_2CO_3 under agitation to make its PH at 8-11; and adding a polymer coagulant, e.g. Na polyacrylate, partial hydrolysate of polyacrylamide, polyacrylamide, polyethyleneoxide and PVA, etc. in amt. of esp. 10-50 ppm.

Process further comprises passing through a concd. sludge layer, e.g. obtd. by adding the partially oxidised ferrous salt soln. to the metal ions-contg. waste water in concn. of 400-10,000 ppm as Fe ion, making it alkaline, adding under agitation a polymer coagulant and allowing to stand for 5-10 mins. etc., or adding the polymer coagulant together with the sepd. concd. sludge obtd. 20. 7. 77 as 087676 (4pp34)

SEIS- ★ D15 24626B/13 ★J5 4022-954

Purificn. of aq. alkaline waste contg. nitrogen oxide - by addn. of oxidising agent to waste, dilution with water and addn. of pickling effluent contg. nitric acid

SEISUI KOGYO KK 20.07.77-JA-088203

E36 J01 M12 (21.02.79) C02c-05/04

A conc. NO_x-contg. aq. alkali waste, e.g. produced by washing a waste gas contg. harmful oxidising gas, e.g. NO_x and COD components, etc. with a conc. alkali soln., e.g. NaOH soln. and Na_2S soln. etc., is purified. The process is carried out economically and accurately without releasing harmful oxidising gas into the atmosphere by previously adding under agitation a portion of an oxidising agent necessary for the oxidn. reactionof the aq. waste, e.g $KMnO_4$ soln. and H_2O_2 soln. etc., to the aq. alkali waste to be treated. This is followed by dilution with H_2O.

The remaining portion of the oxidising agent is added to a pH-adjusting acidic liquor to be added to the waste water, e.g. an acidic HNO_3-contg. pickling effluent etc. Subsequently, the oxidising agent-added alkali and acid aq. waste are mixed.

The harmful oxidising components-contg. gas is, e.g., produced by pickling the surfaces of a metal article with an HNO_3 soln. 20. 7. 77 as 088203 (-pp34)

YAWH ★ D15 24668B/13 ★J5 4023-070

Hydrogen sulphide removal from acidic liquor contg. ammonium sulphate - by treatment with ammonium persulphate and forming reaction prods. in form of colloid

NIPPON STEEL CHEM KK 22.07.77-JA-087307

C04 E36 J01 (E35) (21.02.79) C01c-02/24 C02c-05/04

Removal of hydrogen sulphide from mother liquor of ammonium sulphate acidified with sulphuric acid comprises adding ammonium persulphate to the mother liquor. Ammonia is removed from the gas-stripped aq. waste contg. ammonia and hydrogen sulphide.

Persulphate does not self-decompose in aq. soln. acidified with sulphuric acid at relatively high temp. therefore it acts effectively as oxidising agent. Since reaction prods. are ammonium sulphate, sulphuric acid and sulphur dispersed in the form of colloid, and these are components contained in mother liquor of ammonium sulphate the treatment is simple.

In an example, 0.5% ammonium persulphate is added to aq. soln. consisting of 30% ammonium sulphate satd. with hydrogen sulphide of 3% free sulphuric acid at 50°C. This soln. was allowed to stand at 50°C for 5 hrs. with occasional stirring. The smell of hydrogen sulphide almost vanished and a slight white cloud appeared in the soln. 22. 7. 77 as 087307 (2pp86)

EBAI ★ D15 24669B/13 ★J5 4023-071
Treatment of waste soln. contg. hydrazine - by adding active carbon and opt. an iron salt to slightly alkaline waste soln. and aerating the soln.
EBARA INFILCO KK 21.07.77-JA-087967
E36 J01 (21.02.79) C02c-05/04

Waste soln. contg. hydrazine is treated by adding active carbon and opt. iron salt to the waste soln. at pH 8 and aerating. The amt. of active carbon used is 0.05-0.5 wt. % and the iron salt added gives a Fe ion concn. of 100-1000 ppm.

The operation is simple, and hydrazine in soln. may be economically oxidised using simple appts. and may be removed. The treated soln. has pH value corresp. to discharging standard. Sludge contg. active carbon and iron hydroxide formed after treated, may be repeatedly used.

In an example, $FeSO_4$ is added to 50 l of aq. soln. contg. 500 ppm of hydrazine so that the concn. of Fe ion becomes 100 ppm and after stirring for about 5 min., the soln. is adjusted to pH 10 with NaOH, and 0.2 wt. % of powdered active carbon is added. The soln. is aerated at flow rate of 1.5 l/min. for 8 hrs. The resulting supernatant is sepd. after being allowed to stand for about 2 hrs. 21.7.77 as 087967 (4pp96)

MEIS- ★ D15 24674B/13 ★J5 4023-078
Electrolytic cell for appts. for mfg. medical material - includes ion exchange membrane between two gaskets with anode and cathode outside the gaskets
MEISEI KK 25.07.77-JA-088347
E36 J03 (21.02.79) A23l-01 C25b-09

Ion-exchange membrane is placed between gaskets. A cathode chamber and anode chamber are formed by arranging cathode on one position and anode on other position outside said gasket and spreading net within the cathode and anode chamber. The flow rate of drinking water in the cathode chamber and anode chamber is so kept constant at > 10 cm/s and electrolysis is carried out with controlling current to a constant value most suitable for forming alkali ion water.

The structure of electrolytic cell is extremely simple and inexpensive: Homogeneous alkali ion water may be continuously obtd. 25.7.77 as 088347 (4pp96)

MITR ★ D15 24676B/13 ★J5 4023-080
Washing process for ultra-filtration or reverse osmosis membrane - includes treatment with ethylene-di:amine tetra:acetic acid and sodium borate in combination with physical treatment
MITSUBISHI RAYON KK (MITS-) 25.07.77-JA-088927
A88 J01 (A14) (21.02.79) B01d-13 B01d-31

Semi-peremeable membrane, esp. made of an acrylonitrile copolymer, is suitable for use as ultra-filtration membrane or reverse osmosis membrane in the treatment of waters. The membrane is washed with an aq. soln. contg. 0.05-0.5 wt. % ethylenediaminetetraacetic acid and 0.1-1 wt. % of sodium perborate to remove dirt covering the surface or the inner part of the membrane. In this way its water permeability is easily recovered.

This chemical washing treatment produces the best results when it is carried-out in combination with a physical washing treatment. The physical washing treatment is e.g. carried-out by charging sponge balls into a tubular semi-permeable membrane (the dia. of the sponge balls being larger than the inner dia. of the tube). The sponge balls are transferred by hydropressure from one end to he opposite end so as to remove dirt adhering to the inner urface of the tube, without any damage to it. 25.7.77 as 088927 (4pp34)

BEI ★ D15 24960B/13 ★J5 4024-272
rying organic sludge - by pressurising, heating, expanding to a liq. nd heating to dewater and dry
UBE INDUSTRIES KK 27.07.77-JA-089248
Q76 (23.02.79) B01j-01 C02c-03 F26b-03/06

he organic sludge contg. much water is contained in a losed vessel, pressurised, heated and expanded into a liq. he liq. is then heated until it has dewatered and dried. eam and condensed water produced in the process are sed for preheating the organic sludge. Pref. the sludge xpanding tank comprises a stirrer, on the top of which blades are mounted. The tank is followed by a sluge sepa ator through a pipe. 27.7.77 as 089248 (7pp26)

SHIE ★ D15 24968B/13 ★J5 4024-28
Regenerator for iron cpds. removal from ion exchange resin comprises mainly poly:carboxylic acid (salt)
SHINETSU CHEM IND KK 26.07.77-JA-088849
E19 (23.02.79) B01j-01/09 C09k-03

Regenerator for ion exchange resin capable of removing Fe cpds. present in water, esp. for water-softening ion exchange resins, contains mainly aminopolycarboxylic acid or its water-soluble salt (excepting EDTA), e.g. ammonium salt or alkali metal salts, or their combinations.

Pref. the water-soluble salts of aminopolycarboxylic acid includes nitrilotriacetic acid, hydroxyethylethylenediaminetriacetic acid, cyclohexanediaminetetraacetic acid diethylenetriaminepentaacetic acid, triethylenetetraaminehexaacetic acid, iminodiacetic acid, ethylenediamineorthohydroxyphenyl acetic acid and in ammonium and alkali metal salts.

The regenerator is capable of effectively removing iron cpds., e.g., iron hydroxide, including ionised iron cpds. adhered to ion exchange resins. 26.7.77 as 088849 (3pp)

HITB ★ D15 24971B/13 ★J5 4024-286
Removal of heavy metals from water - using vinyl copolymer material contg. phosphoric acid salt e.g. calcium phosphate
HITACHI CHEMICAL KK 26.07.77-JA-089944
A91 E33 J01 (23.02.79) B01d-15 C22b-03

Heavy metals arrester, capable of capturing harmful heav metals present in water, or waste water, e.g. those discharged from various factories, mining, etc. comprises small pieces of a monovinyl monomer-polyvinyl monomer copolymer contg. a phosphoric acid salt which is hard to dissolve in water, e.g., Ca phosphate, Mg phosphate etc.

The monovinyl monomer used includes methylacrylate, ethylacrylate, propylacrylate, isopropylacrylate, etc. and the esters of these, styrene, vinyltoluene, vinylnaphthalene, etc., and the polyvinyl monomer used includes divinylbenzene, divinylpyridine, divinyltoluene, etc. glycols, glycerol, divinylketone, etc.

The arrester is capable of efficiently arresting heavy metals, e.g., Cd, Pb, Zn, Fe, Cu, etc. and the organic and inorganic salts of these at pH near neutral, and thus the heavy metals content in water can be reduced to less than the effluent standard. 26.7.77 as 089944 (4pp117)

DORI- ★ D15 24990B/13 ★J5 4024-455
Biological treatment of waste water by fluid contacting method - comprises treating waste water with microorganisms adhered to surfaces and cavities of contacting substances
DORIKO KK 27.07.77-JA-090013
(23.02.79) C02c-01/02

Waste water is treated by microorganisms adhered to the cavities and surfaces of contacting substances moving in the waste water. Pref. the contacting substance used is an anticorrosive, water resistant synthetic resin cylinders with a specific density of 0.8-1.5 but any other shaped substance, e.g., approx. cubic form having three crossing perforated holes or recessed portions on each side may be used.

Waste water can be efficiently treated by the joint action of an activated sludge type purification because an aerobic biological action acts on waste water inside the cavity of the contacting substance and an anaerobic biological action acts on waste water outside the cavity. The microorganisms are securely adhered to the contacting substance in a fixed amt. during the course of treatment operation, thus ensuring a constant waste water treatment capability. In addn., the amt. of sludge generated is small, and the amt. of the contacting substances used in the treatment tank can be easily controlled, thus reducing costs. 27.7.77 as 090013 (5pp117)

TORA ★ D15 24991B/13 ★J5 4024-456
Treating polluted water rich in BOD content - by passing into biological membrane oxidn. tank, sepg. sludge and partly recycling sepd. water
TORAY INDS INC 25.07.77-JA-088295
(23.02.79) C02c-01/02

Method comprises (1) introducing polluted water into a biological membrane-oxidn. tank; (2) subjecting treated water to a sludge sepn. means, e.g., inclined screen, rotary perforated drum, etc. to separate a part or the large part of sludge; and (3) partly recycling sepd. water to the biological membrane-oxidn. tank, the polluted water feed line, or the polluted water storage tank, where the amt. of the sepd. water to be recycled is pref. approx. ten times as much as the polluted water to be treated at the start of operation and then reduced to 2 to 3 times after the biological membrane is stabilised.

Method is capable of constantly treating BOD-rich polluted water in a very short time to an extent that the sludge content of the treated water can be ignored. 25.7.77 as 088295 (4pp117)

UBEI ★ D15 24992B/13 ★J5 4024-457

Organic sludge liquefaction process - comprising pressurising heated sludge then suddenly releasing the pressure

UBE INDUSTRIES KK 27.07.77-JA-089249

(23.02.79) C02c-03

In a swelling treatment method for organic sludge, e.g. excess sludge generated in the treatment of organics-rich waste water, e.g. factory effluent, sewage, etc., the sludge is liquefied by driving out moisture contained in the cell membranes of the sludge by heating, pressurising, and sudden releasing it in a closed system. The sludge is pumped to a heat exchanger to heat it to 95°C. The heated sludge is introduced into a sludge swelling treatment tank where it is heated at 160°C by steam for 30 min. to 1 hr. and at the same time pressurised at 5 kg/cm^{2}G, and then the treated sludge is instantaneously released towards a sludge separator through a sludge feed pipe.

Method, which is capable of completely liquefying the organic sludge, can serve as pretreatment of sludge for dehydration and drying. 27.7.77 as 089249 (6pp117)

NISO- ★ D15 24993B/13 ★J5 4024-458

Treatment of waste water contg. cellulose or starch - with inorganic high polymer coagulant, e.g. aluminium poly:sulphate

NIHON SOLID KK 26.07.77-JA-089607

F09 (D17) (23.02.79) C02c-05/02

Treatment of waste water contg. cellulose or starch, e.g., kraft pulp mill waste water, sulphite pulp waste water, bleaching waste water, ground wood pulp waste water, semichemical pulp waste water, paper mill waste water, starch-mfg. factory waste water, etc., is described. The waste water is first regulated to pH 3.0 to 5.0 using inorganic acid or organic acid, pref. a metal-contg. acid soln., e.g., the waste acid soln. discharged from metal surface-treatment factory including alumite edging waste water, and then treated with an inorganic high polymer coagulant. Pref. the inorganic high polymer coagulant used includes aluminium polysulphate, aluminium polychloride, aluminium polyoxide, iron polychloride, iron polysulphate, etc.

Method is highly effective for removing BOD and COD contaminants, i.e., 600 to 1000 ppm cellulose or starch can be reduced to 20 ppm, thus obviating the need for biological treatment. 26.7.77 as 089607 (2pp117)

OKAK/ ★ D15 24994B/13 ★J5 4024-459

Inhibitor for preventing sludge bulking due to Hyphomycetes - contains an inorganic polysulphide e.g. calcium polysulphide as major component

OKA K 26.07.77-JA-089952

E33 (23.02.79) C02c-01/06 C02c-05/10

The inhibitor for preventing sludge bulking due to Hyphomycetes, in the biological treatment of waste water, contains an inorganic polysulphide, e.g., Ca polysulphide.

The inorganic polysulphides used include all polysulphide cpds. which generate activated S when contacted with water, and the pref. amt. of the inorganic polysulphide is of the order of 10-10^3 ppm per day on the basis of the vol. of aeration tank in the form of aq. soln. or powder. 26.7.77 as 089952 (3pp117)

NIIG- ★ D15 25015B/13 ★J5 4024-771

Odourless fertiliser mfr. - from human and domestic animal excrement, deodorant, saw dust, rice bran and fermentation accelerator

NI-IGATA OHRES KK 23.07.77-JA-088577

C04 (24.02.79) C05f-03 C05f-09/04

Prepn. comprises (a) mixing 0.25 kg of known deodorant, 200 kg of mixt. of sawdust, rice bran, fermentation-accelerating agent and water-content-adjusting agent and 1000 kg of excrements of domestic animals and humans; (b) stirring the mixt. and placing it in a fermentor; conducting fermentation at 60-80°C while blowing war or hot air into the fermentor; (c) allowing the mixt. to stand for about 10 days; (d) after addition of the deodorant, further allowing the mixt. to stand for about 10 days in order toconduct a second fermentation; (e) further stirring the mixt. for about 10 days to mature the mixt. (f) withdrawing the fermented mixt. from the fermentor; and (g) drying the fermented mixt. to a water content of about 18%.

Pref. the deodorant contains 11% of SNKD bacteria, 46% ferrous sulphate and a trace amt. of other component The obtd. product before drying, contains 0.40% N, 0.58% K, 0.20% phosphoric acid, 7.40% silicic acid, 62.7% water and 28.6% of other organic material.

Ammonia, fatty acid, indole and hydrogen sulphide which causes bad smells can be completely decomposed by the fermentation-propagation of the deodorising bacteria in the deodorant. The fertiliser can be formulated into granules, powder and aq. soln., and is hygienic. 23.7.77 as 088577 (2pp108)

AJIN D15 04310X/03 =J7 9004-547

Waste-water treatment - by culturing Prototheca sphericus

AJINOMOTO KK 03.04.73-JA-038003

*C03 H04 (C04 D13 D16) (07.03.79) *J49124-854 +C02c-01/02 C02c-05/10*

The alga P. sphericus is cultured in waste waters contg. hydrocarbons, carbohydrates, org. acids. alcs., amino acids, lipids, etc., such as from brewery plants, process-ed food factories, and petrochem. plants. The algal cells can be used as feeds, foods, and fertilisers.

In an example, P. sphericus was cultured aerobically at 30° for 6 days in a medium contg. 2% waste molasses. The culture yielded 0.6 g dry cells/dl. The cell yield of the alga grown in a conventional medium contg. yeast ext. 0.67 and glucose 1% was 0.66 g/dl. 3.4.73 as 038003 C02c 5/10, 1/02 (7.3.79) AJINOMOTO KK (5pp) (J4912485

TEXC D15 27829R/17 =J7 9004-548

Process for treating biological sewage sludge to yield - a liqui having low chemical oxygen demand

TEXACO DEV CORP 29.11.68-US-780080

*H01 (07.03.79) *US3507-788*

SNLE D15 62680X/33 =J7 9004-54

Treatment of waste liquor contg high concn of ferro-cyan complex by multistage electrolytic oxidn

STANLEY ELEC KK 26.00.75-JA-000698

*E31 J03 (07.03.79) *J51076-851 C02c-05/12*

The electrolysis is carried out in a vessel equipped with insoluble anode (e.g. Pt. PbO$_2$, Fe oxide, graphite, etc.) using voltage ≥ the decompsn. voltage of cyan. The ferro cyan cpd. is converted into harmless substances. The electrolysis is temporarily stopped when the cyan content of the waste water becomes 1/3, 1/2 or 2/3.... of the initial cyan content, adjusting concn. of electrolyte as required. 26.00.75 as 000698 C02c 5/12 (7.3.79) STANLEY ELEC CO LTD (2pp) (J51076851)

NIKN D15 71241X/38 =J7 9004-55

Sepn. of heavy metals from polluted water - by alkali treatmen followed by sulphide and addn. of pulp

SHIN NIPPON KOKAN 31.01.75-JA-012410

*J01 (07.03.79) *J51088-858 C02c-05/02 +B01d-15 B01d-37/02*

Polluted water contg. Fe(III) Sn (II), Cu, Zn or Cr (as we as oils and suspended matter) is purified by (1) adding NaOH and/or Ca $(OH)_2$ at pH 7-9, and (2) further adding fine pulp from pulp factory in an amt. of 2-20 times that of harmful components contained in the polluted water solid-liquid sepn. (filtration etc.) under agitation. In a modification, polluted water contg. Cd, Hg, Fe (II) or Mn (as well as oils and suspended matter) is purified by, after step (I) above adding Na_2S in such an amt. that remaining heavy metals (dissolved in the polluted water) are converted into a water-insoluble sulphide, then adding the fine pulp and then proceedsing as above.

Process requires simple appts. and is applicable on industrial scale. 31. 1. 75 as 012410 C02c 5/02, B01d 15/00, 37/02 (7. 3. 79) SHIN NIPPON KOKAN (4pp) (J51088858)

OKMR D15 02602Y/02 = J7 9004-551
Purificn. of water using an iron salt - obtd. from prodn. of long chained aliphatic diketones or dicarboxylic acid
OKAMARA SEIYU KK 19.05.75-JA-060050
*E17 (E12 E31) (07.03.79) *J51135-176 B01d-21/* C02c-05/02*

Impurities in polluted water are removed by using as a cohesive agents an iron salt-contg. prod. The results from the prodn. of long-chained aliphatic diketone or dicarboxylic acids e.g. dodecane-diacid., by ring-cleaving the peroxide of a cycloketone e.g . cyclohexanone in the presence of ferrous sulphate.

The iron salt-contg. prodn. may be used in situ or a 40% iron salt- contg. soln. as anhydrous ferric sulphate. The prod. exhibits strong emulsion destructing ability against an oil and fat-type or protein-type emulsion. It is also effective for decolourisation of plant-type dyestuffs contd. in polluted water. 19. 5. 75 as 060050 C02c 5/02, B01d 21/01 (7. 3. 79) OKAMURA SEIYU KK (4pp) (J51135176)

BERT- D15 45019R/25 = NL -159-744
Reocvery of oil floating on water
BERTIN & CIE (BER - ERAP) 28.11.69-FR-041273 (23.12.68-NL-180117)
*H03 J01 + Q42 (15.03.79) *BE-743-504 E02b-15/04*

Material floating on the surface of a liq. is removed by means of a device for creating a vortex in the carrying fluid, such that the surface material collecting in the vortex can be pumped away into a collecting vessel. The device consists of a cylindrical chamber which may be placed into the fluid, the chamber pref. being equipped with a means of flotation. A vertical shaft drives an agitator which creates a stable vortex with a closed floor. The suction to a pump is placed in the centre of the vortex such that it only draws the suffface material which has collected and pumps this to a collection vessel.

The device is partic. useful for removing oil films from the surface of water, e.g. oil slicks from the sea. 23.12.69 as 019311. (15pp1370)

NINA- ★ D15 25184B/13 ★ NL 7809-229
Reducing COD of effluent water - contg. large amts. of food material by treatment with polysaccharide-assimilating yeast before active sludge treatment
JAPAN NAT TAX AGEN (TOZI- HOKU-) 01.08.78-JA-093117 (12.09.77-JA-108758)
(14.03.79) C02c-01/02 C12b-03/06

In a process for treating effluent water contg. large amts. of foodstuff material, a polysaccharide-assimilating yeast is first added to assimilate the food material in the water. The water is then passed to a tank and treated with activated sludge.

Pref. polysaccharide-assimilating yeasts include Debaryomyces hansenii D-N, FERM-P No. 3592; Pichia acaciae AM-37W, FERM-P No. 3593; Hansenula anomale Y-1, FERM-P No. 3594; Pichia nakazawae LKB-335, FERM-P No. 3595; Pichia dispora Pd-671, FERM-P No. 3596 and Candida sp. AS-50, FERM-P No. 3597.

The process is useful for treating effluent waters obtd. e.g., during the prodn. of potato starch etc. The yeast treatment gives prods. with a reduced C.O.D. 11.9.78 as 009229. (20pp513)

KHAB/ ★ D15 25225B/13 ★ SU -605-632
Ion exchange column for hydrometallurgy and water desalination - has specified dimensions chamber with perforated drainage plate o reduce resin contamination
KHABIROV V V 09.10.75-SU-180343
J01 M25 (14.04.78) B01d-15/04 B01j-01/06 C02b-01/40

The column comprises a casing with soln. and resin inlet pipes, a resin-charging bin with a neck, top and bottom drains, and a cutoff above the neck.

To simplify the cutoff, and prevent communition of the resin, it is made as a hollow chamber with a perforated bottom facing the neck and exceeding this in diameter, with side outlets for the soln. and the wash residue.

The unit is used for extn. of non-ferrous metals from bleaching solns. and in industrial water softening and desalination.

Khabirov, V.V., Petrov, M.P., Gorban, V.N. Bul. 17/5.5.78. 9.10.75. as 180343 (3pp132)

AUCO= ★ D15 25480B/13 ★ SU -606-603
Modified keramzite filter material for purificn. of mine water - has increased life and raised affinity for impurities by treatment with solns. of calcium chloride and sodium bi:carbonate
AS UKR COLLOID CHEM 14.09.76-SU-403765
J01 (14.04.78) B01d-39/20 C02c-05/06

The adhesive activity of the filter material for suspended impurities in water can be increased if it is comprised of keramzite as the base material which is treated with calcium chloride in presence of sodium bicarbonate, at a pH of 9.5-10. The calcium chloride and sodium bicarbonate are both used in the concn. of 0.2-0.5N.

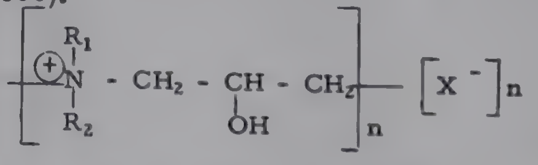
Yaroshevskaya, N.V., and Kulskii, L.A. Bul. 18/15.5.78. 14.9. 76. as 403765 (2pp815)

BEPE- D15 88131A/49 = US 4111-115
Continuous disc type filter press for dewatering slurries - has twin rotating discs with hydraulic compression, the axes of the discs forming an angle between them
BEPEX CORP 23.05.77-US-799453
*F09 J01 + P71 (D14 D16) (05.09.78) *DT2822-140 + B30b-03/04 B30b-09/06*

In a continuous press for extracting liq. two wheels have conical filtering surfaces which are urged together and rotate around different axes so that the screens on the two wheels as they rotate form a pinch zone and inlet zone. The vol. between the wheels is closed by a casing having inlet and outlet ports and a plough to direct material towards theoutlet port. The wheels are journalled in annular sleeves and have central openings and the plough is pref. located between the openings. 23. 5. 77 as 799453 (7pp1398)

CHEM- ★ D15 25663B/13 ★ US 4111-679
Controlling microorganisms in aq. systems - using polyquaternary amine obtd. by reacting epichlorohydrin with di:(m)ethylamine
CHEMED CORP 17.08.77-US-825272
A97 E16 (05.09.78) A01n-09/20

Control of microorganisms in industrial cooling water systems is effected by addn. of pref. 0.05-1000 ppm of a poly-quaternary amine of formula (I) (where R_{1-2} are each (m)ethyl; X is Br, I or pref. Cl; n is 3-10000, pref. ca. 500).



$$\left[\overset{\oplus}{N}(R_1)(R_2) - CH_2 - \underset{\displaystyle OH}{CH} - CH_2 \right]_n \left[X^- \right]_n$$

(I)

Used for control of e.g. Aerobacter aerogenes, Bacillus subtilis var. mycoides, Chlorella vulgaris, Oscillatoria sp., E. coli., Ps. aeruginosa etc. Control of bacteria, fungi and algae is effective over a wide pH range at low concn. useful in air conditioning units, cooling towers, etc. 17.8.77 as 825272 (4pp949)

USST D15 06691A/04 = US 4111-759
Acid gas and ammonia separation from aq. solns. - by dilution and distn. with addn. of lime and scale inhibitor
US STEEL CORP 08.07.76-US-703408
*E35 H09 J01 (E36) (05.09.78) *DT2730-561 B01d-03/38*

Sepn. of acid gases and NH_3 from a dil. aq. soln. is claimed. The soln. is obtd. from a coal conversion process and also contains free and fixed NH_3 salts, but contains $<$ 1500 ppm sulphate ions.

Method comprises (1) subjecting the soln. to a first countercurrent multistage continuous distn. and withdrawing (a) an overhead vapour contg. stripping vapour contg. tripping vapour, acid gases and ammonia from the free lts and (b) an aq. bottoms stream contg. water and fixed ammonia salts and (2) adding lime to the bottoms stream in an amt. to form an insoluble ppte. and evolve NH_3 from the fixed NH_3 salts during a second distn.

Method further comprises (3) adding ≥1 specified organic phosphonate scale inhibitor to the dil. aq. soln. to inhibit scale deposition on the trays of the distn. tower and (4) subjecting the bottoms stream to a second countercurrent multistage continuous distn. and withdrawing (a) an overhead vapour stream contg. stripping vapour and NH_3 from the fixed NH_3 salts and (b) an aq. bottoms stream having a reduced content of acid gases and NH_3 cf. the dil. aq. soln. 8. 7. 76 as 703408 (10pp992)

AMET ★ D15 25700B/13 ★US 4111-768
Sepg. colloidally suspended solids from fluid system - by passing fluid and suspension through filter sheet, separator and filter sheet whilst maintaining electric potential between filter sheets
AMETEK INC 16.02.77-US-769031 (18.10.74-US-515915)
C03 J03 M25 P41 (D13 D16 D17) (05.09.78) B03c-05

Concentrating and sepg. from an electrolytic aq. soln. a colloidally suspended, finely divided, difficultly separable material, comprises passing the soln. with the colloidal suspension through a first porous sheet electrically conductive filter member, through a gas bubble-impervious, electrically non-conductive separator material and then through a second porous sheet electrically conductive member while imposing an electrical potential between the members and establishing an electrolytic current. The first member was a negative charge and acts as a cathode and the second member has a positive charge and acts as an anode.

Pref. the filter member is a metallic screen of -400 mesh. Pref. the soln. to be treated is a sewage soln., waste sugar soln., winery 'still slop', food processing industry effluent, waste stream has a colloidally suspended alkyl disulphide, a waste stream contg. ethyl mercaptan or a waste stream contg. colloidally suspended carbamate residue. 16. 2. 77 as 769031 C. i. p. 4014767, 4053386 (+4. 8. 75-US-601253) (-pp)

HARE/ ★ D15 25716B/13 ★US 4111-800
Simultaneous carbonisation of refuse and sewage sludge - in presence of aluminate salt catalyst
HARENDZA-HARINXMA A 06.10.76-US-729890
E33 (05.09.78) C01b-31 C02c-03

Cellulose contg. material, esp. municipal waste, and raw sewage sludge are carbonised by (a) mixing sewage sludge contg. 4-7% solids with 1-20% based on wt. of sludge of an alkali metal aluminate; (b) combining this with the cellulose contg. material, and (c) heating the mixt. in a closed system to 175-700°C.

The aluminate catalyses low temp. carbonisation. The process handles both sewage and refuse in one plant. Possible prods. include flammable gases, carbon and carbon monoxide. 6. 10. 76 as 729890 (8pp955)

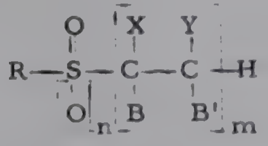
DEGM D15 52272Y/30 =US 4111-802
Reaction and decantation treatment plant for waste water - has three times the capacity of similar size plants
DEGREMONT SA 24.03.76-FR-008442
*(05.09.78) *BE-852-754 C02b-01/22 +B01d-21/16*

Appts. for treating water comprises a single tank divided into reaction and decantation zones; the input water enters the reaction zone. A pump turbulently mixes the liquid, sludge and precipitation reagents in the reaction zone and draws the mixture upwards through a central passage at a rage which is several times that of the entry flow. Portion of the mixture is recycled to increase turbulence in the chamber and the remainder passes to the decantation zone at uniform flow rate to give even distribution. The purified water rises and is collected; the sludge settles and is returned by scrapers to the reaction chamber and thus maintains the necessary concn.; excess sludge is discharged from the base of the reaction chamber.

Flocculation and/or crystalline precipitation type water treatments are facilitated. 2. 3. 77 as 773555 (12pp1364)

CIBA D15 11502Y/07 =US 4111-804
Inhibiting boiler scale formation - using sulphones or sulphoxides obtd. by oxidising telomers contg. thiol end gps. (NL250177)
CIBA GEIGY CORP 23.07.75-GB-030718
*A97 E19 (05.09.78) *DT2632-773 C02b-05/06*

Method of inhibiting scale formation by salts of Ca, Mg, Ba and Sr from aq. soln, comprises adding to the aq. soln. a minor amt. of a product comprising a telomer of formula I:



$$\mathrm{R}-\underset{(\mathrm{O})_n}{\overset{\mathrm{O}}{\mathrm{S}}}-\left[\underset{\mathrm{B}}{\overset{\mathrm{X}}{\mathrm{C}}}-\underset{\mathrm{B'}}{\overset{\mathrm{Y}}{\mathrm{C}}}\right]_m-\mathrm{H} \quad (\mathrm{I})$$

or its salt, where X is CO_2H when Y is H and vice versa, B and B' a are each hydrogen or B is CH_3 when B' is H or vice versa, m is 2-100 and n is 0 or 1, R is OH 1-22C alkyl substd. by ≥1 carboxyl gps. 20. 7. 76 as 707126 (7pp)

FAIR/ ★ D15 25720B/13 ★US 4111-808
Sludge digester with updraught tube - into which primary sludge is driven by gas introduced into sludge flow
FAIR J H 17.03.77-US-778793 (11.12.75-US-639756)
(05.09.78) C02c-03

Sludge is digested in a tank which includes an open ended updraught tube. Partially digested sludge flows upwardly through the tube. Prim. sludge is brought to the tank through a first conduit which is connected to a second conduit just externally of the tank. The second conduit extends through the tank wall. A third conduit is connected to the second conduit just externally of the tank. A compressed gas is introduced through the third conduit and this forces the prim. sludge through the second conduit and into and upwardly inclined conduit connected to the second conduit within the tank. The upper end of the inclined conduit is connected to the updraught tube near its upper end. The flow of gas and sludge effects a circulation of the materials within the digester tank.

The digester tank may be used for either aerobic or an-aerobic digestion of sewage. The primary sludge is mixed in a confined area with some of the digested sludge prior to release in the tank. This ensures seeding. 17. 3. 77 as 778793 (6pp295)

SHIE D15 46666W/28 =US 4111-810
Reverse osmosis membrane for desalting brine - prepd by pouring chitosan soln onto plates, evaporating the solvent, and modifying the amino gps
SHINETSU CHEM IND KK 08.03.73-JA-027267
*A11 J01 (A88) (05.09.78) *J49115-084 +B01d-13*

A reverse osmotic membrane for use in water desalination is prepd. by (i) forming a film with an aq. acid soln. of chitosan salt; (ii) neutralizing the acid gps. present; and (iii) acetylating the free amino gps. present to achieve a degree of acetylation of 0. 3-0. 8, the acetylation reaction being carried out at 10-50°C for 40-150 hrs. Pref. the acetylation is carried out by reaction with (a) acetic or propionic acid (anhydride) or (b) thioglycolic or thiosalicylic acid.

The membranes have excellent thermal and chemical stability and exhibit mechanical strength sufficient for the pressure difference in the operating conditions. 16. 3. 77 as 778269 (+5. 3. 74, 12. 5. 76-US-448212, 685632) (4pp990)

PREV/ ★ D15 25722B/13 ★US 4111-813
Hydrocarbon containment and control systems - utilising a porous woven container contg. an oleophilic-hydrophobic-lighter than water hydrocarbon absorbent material
PREUS P 18.10.77-US-843460 (05.10.76-US-729713)
H03 (05.09.78) B01d-27/02 C02b-09/02

A hydrocarbon containment and control system has a porous woven container having a hard grip. There is an opening through a pair of opposed side walls but which is closed to the interior of the container and an open seam that is closable. The container is filled through the seam with an oleophilic-hydrophobic-lighter than water hydrocarbon absorbent consisting of expanded pearlite mixed with clays and fibrous filler. The filled container is placed in the path of hydrocarbons to be selectively absorbed.

The system supplies cheap porous woven fabric containers which are easy to handle and enable easy disposal of the absorbent material after it has served its function. 18.10.77 as 843460 C.i.p. 4065923 (9pp1345)

HOUD ★ D15 25792B/13 ★US 4112-025
Method of oxygenating liquid - by producing pressurised liquid stream in which air is entrained
HOUDAILLE INDS INC 26.07.73-US-382650 (17.04.70-US-029565)
F09 J02 (05.09.78) B01f-03/04

A body of liquid is oxygenated by producing a pressurized liquid stream which is directed into a first enclosed axial flow path having a converging section in the direction of flow to inrease the velocity of the liquid. The high velocity stream is discharged through an outlet horizontally into an enclosed mixing chamber. A stream of pressurized air is introduced into the mixing chamber so that air becomes entrained in the liquid.

The liquid and entrained air are directed into a second enclosed frusto conical axial flow path of constantly decreasing cross-section axially aligned with the first flow path. The liquid and air mixture are discharged horizontally through an outlet which is located in the body of water below its surface. The outlet is aligned with and has a greater area than the outlet of the first flow path.

The apparatus is used to add gas to a liquid e.g. air to sewage, chlorine to water in a water treatment plant, or chlorine to pulp-stock in paper making. 26.7.73 as 382650 (+30.10.72-US-302355) (9pp295)

MITS D15 34726Y/20 =US 4112-026
Bubble generator without revolving parts - has liquid nozzle producing low pressure zone into which gas is injected
MITSUBISHI PRECISIO 27.05.76-JA-060559 (04.11.75-JA-131405)
*J02 +P14 P42 (D16) (05.09.78) *DT2646-742 +C02d-01/04*

Appts. for generating bubbles in liquid comprises a spouting nozzle to supply a pressurised liquid stream to impinge upon an impact disperser mounted above the nozzle outlet. A dispersion stream of liquid is directed into the liquid zone surrounding the disperser; above the disperser a port supplies gas which is dragged into the liquid dispersion tream and thus converted into fine bubbles.

Good gas-liquid contact or agitation mixing is provided. 27.9.76 as 727275 (15pp1364)

LING- D15 27638W/17 =US 4112-033
Utilisation of sewage sludge - by automatic mixing with clay and conversion into bricks
LINGL CORP (LING/) 17.07.73-DT-336267
*L02 (05.09.78) *DT2336-267 C04b-33/32 +C04b-35/64*

Bricks are made from sewage sludge containing environmentally harmful and/or toxic substances by automaticall mixing with clay, extruding and forming bricks, drying i dryer, and firing in a kiln to give products free from odo rs or harmful materials.

Dryer exhaust air is cented into the kiln as combustio air so that all aromatic compounds in the exhaust air are destroyed. The sludge pref. has a moisture content of 50% or less and comprises 30-50% of the mixture. The mixture may be stored before extrusion, and used oil ma be added during mixing to reduce odour and assist in firin the kiln. 10.6.74 as 478038 (5pp1358)

FINL/ ★ D15 25900B/13 ★WP 7900-15
Elevating nutrient-rich ocean water from aphotic to photic zone following partial desalination in aphotic zone and dispersing les dense desalinated water
FINLEY W T 07.08.78-US-931675 (16.09.77-US-833939)
(22.03.79) B01d-13 B01d-31 C02b-01/82
D/S: N(BR, GB) + E(FR).

The concn. of nutrients in the water of the photic zone of the ocean is increased by dispersing partially desalinated nutrient-rich water in the zone which originated from the aphotic zone. Nutrient-rich seawater is introduced into a desalination appts., e.g. an electro-dialyser, in the aphoti zone. The partially desalinated water becomes less dens than that in the aphotic zone and is conducted to the photi zone by differential density effects.

Method is provided for enrichment of photic zone of th ocean to increase the fertility and thus increase the supply of harvestable food fish.

Water from the aphotic zone can be desalinated in situ at 100 to 200 metres beneath the ocean surface. It is not necessary to provide a power source from the surface. The partially desalinated water rises naturally upwards into the photic zone with fresh nutrients from the deep aphotic zone.

21.8.78 as US0067 (10pp1044).
ISR: US3283813; US3456802; US3171808; 4 Journal References.

See Also

D16 DT 2807674 D22 GB 1542831 D22 GB 1542832
D22 SU 605812

D16 : FERMENTATION INDUSTRY

BATT ★ D16 23954B/13 ★BE -870-651
Viral and bacterial microbial insecticide micro-granule - contains nucleic acid and protein-contg. material to protect against sunlight
BATTELLE DEV CORP 22.09.77-US-835817
C03 (21.03.79) A01n

Insecticide compsn. contains a viral or bacterial microbial agent incorporated in a microgranule and is characterised in that the microgranule consists of a nucleic acid and a protein-containing material so that the microgranule effectively protects the agent against inactivation by sunlight.

Microbial insecticides of viral and bacterial origin. Microbes pathogenic to insects are usually inoffensive to other life forms and have a relatively high specificity, allowing destruction of harmful species without endangering beneficial insects e.g. Bacillus thurigiensis (B.t) is a spore forming bacteria active against the larval stage of leaf eating insects esp. lepidopetra. 21.9.78 as 870651 (20pp395)

SODB D16 19054F/00 #DS 1642-654
Lipase neth 6 505 658 provided
SOC ETUD APPL BIOCHIM 06.05.64-GB-018825 (16.01.68-DT-642654)
*B04 (22.03.79) *BE-662-862 +C12d-13/10*

Microbiological prodn. of lipase prepns. comprises propagation of Rhizopus arrhizus Fischer, (Laboratoire de Cryptogamie, Paris; no. 1916), under aerobic conditions until the lipase activity of the medium becomes constant; the medium is then filtered.

The prods. are stable and highly active pure lipase prepns., useful for the treatment of gastrointestinal disorders, dyspepsia or digestive allergies. 16.1.68. as 642654 (10pp047)

RICT D16 66325S/42 #DS 2041-965
Corticosteroids microbiological 1,2-dehydrogenation
RICHTER GEDEON VEGY 04.09.70-DL-149928 (24.08.70-DT-041965)
*B01 (22.03.79) *DL--84-005 +C07j-05*

Process for microbiological 1,2-dehydrogenation of corticosteroids comprises enzymic dehydrogenation with

Arthrobacter or Corynebacterium species in a suitable nutrient medium. The formation of steroid-1,2-dehydrogenase is stimulated by the addn. of an androstane or pregnane deriv., (0.02-0.2 mg/cm^3), after the stationary growth phase, and when an adequate level of dehydrogenase activity is reached, the 1,2-satd. corticosteroid is introduced.

The prods. are valuable pharmaceuticals and intermediates. 24.8.70. as 041965 (6pp047)

JUNG- D16 10817U/08 =DS 2240-052

Citric acid prepn - by fermentation using aspergillus niger

JUNGBUNZLAUER SPIRI (JUN -) 18.08.71-OE-007219

*E17 (22.03.79) *BE-787-594 C12d-01/04*

Citric acid is obtd. by submerged fermentation of Aspergillus niger in a nutrient medium contg. at least partially purified carbohydrate, esp. sugar purified by ion exchange. The growth of the mould is further regulated by addn. of NaOH soln, pref. in portions, the first addn. being made 24-36 hours after inoculation of the medium.

The alkali is pref. added after 30 hours to maintain a pH of 1.8-2.0. Yield of citric acid is increased. 16.8.72 as 240052 (3pp068)

ELED D16 85867V/50 =DS 2413-694

Water-insolluble immobilized enzyme prepns - enzymes or microorganisms are bound to carriers contg. quaternized pyridine rings

DENKI KAGAKU KOGYO (DENK) 30.05.73-JA-060679 (30.05.73-JA-060678)

*A96 B04 (A14) (22.03.79) *DT2413-694 C07g-07/02*

Water-insoluble immobilised enyzme systems comprise active enzymes or bacterial cells contg. enzymes bonded with an inert insoluble carrier, esp. anion exchange resins based on quat. pyridinium polymers, partic. copolymers of vinylpyridines (20-99 mole %) with compatible divinyl monomers (0.5-30 mole %) and vinyl monomers (0-70 mole %) by block or graft polymerisation. Pref. 2- or 4-vinylpyridine, or 2-methyl-5-vinylpyridine; and divinylbenzene and (poly)-ethyleneglycol dimethacrylate are used. The copolymers are quaternised with a methyl halide or Me_2SO_4.

Pref. enzymes are aminoacylase, glucoamylase, succinylglucoamylase, glucoseisomerase, glucoseoxidase, alkaline protease, and invertase; or bacterial cells contg. these enzymes can be used. The prods. are stable active sources for continuous enzyme reactions. 21.3.74. as 413694 (12pp047)

ANAL- D16 75231V/43 =DS 2417-184

Identification of unknown bacteria - by numerical correlation of biochemical test results

ANALYTAB PROD INC 21.03.74-US-453434 (10.04.73-US-349698)

*R16 +R28 (22.03.79) *NL7404-828 C12k-01*

Microorganisms are identified by subjecting a sample to a series of chemical tests for predetermined times and recording whether or not reaction occurs in a predetermined format. Part of the sample is subjected to further tests during additional time after the first testing and recording and the sets of data are recorded in a predetermined format to aid identification of the microorganism.

The process is simple and useful for identifying microorganisms including bacteria. 9.4.74. as 417184 (21pp068)

BEHW D16 74341W/45 =DS 2420-706

Schistosome antigens prodn. - by incubating schistosomes from infected animals in physiological saline and extracting with aq. medium

BEHRINGWERKE AG 29.04.74-DT-420706

*B04 +R16 (22.03.79) *DT2420-706 C07g-07 G01n-33/16*

Prepn. of specific antigen from schistosomes comprises isolation of schistosomes from infected animals; storage of the schistosomes in sterile aq. salt solns., (10-100 vol., free from protein and N), at 10-40° for 12-96 hr; followed by extn. with an aq. medium.

The pref. salt solns. comprise NaCl, KCl, $MgSO_4$, glucose, $NaHCO_3$, Na_2HPO_4 and $CaCl_2$, (total 0.2-0.45 osmol, at least half of which is NaCl with 0.002-0.010 moles of each other component). The prods. are used for the diagnosis of schistosomatic conditions. 29.4.74. as 420706 (4pp047)

SEGK D16 94063X/50 #DS 2555-587

Aq. extn. of kallidinogenase from pancreas - in presence of magnesium salt and acid such as mineral or lower fatty acid

SEIKAGAKU KOGYO KK 05.12.75-US-638042 (10.12.75-DT-555587)

*B04 (22.03.79) *US3994-782 C07g-07/02*

Extn. and isolation of callidinogenase, (EC 3.4.4.21), comprises extn. of mammal pancreas with aq. Mg salt solns. contg. acid at pH 5-8 and temps. about 45-60°. Pref. Mg salts used are the mineral acid salts and 1-5C alkanoates or alkanedioates, at concns. of about 0.02-1 $mole/dm^3$.

The prod. is isolated from the aq. salt extract by adsorption on a weakly basic anion exchange resin (gel type), followed by elution with an aq. soln.of an ammonium salt of a weak acid. 10.12.75. as 555587 (7pp047)

BEHW D16 10610A/06 =DS 2634-584

Non-toxic immunogen used in tetanus vaccine - obtd. by treating tetanus toxin with a proteinase esp. papain (BE 1.2.78)

BEHRINGWERKE AG 31.07.76-DT-634584

*B04 (22.03.79) *DT2634-584 A61k-39/08 C07g-07*

New non-toxic immunogenic prod. from tetanus toxin has a sedimentation constant 5.66 + 0.34 at 20° in aq. soln.; and M_r= 95,000-5000 (by gel electrophoresis Na dodecyl sulphate). It is not immunologically identical to tetanus antitoxin, and is different from fraction C. Prepn. of this material comprises treatment of tetanus toxin with a proteinase, pref. papain, followed by molecular sieve fractionation and purification using adsorption, electrophoresis and/or ion-exchange chromatography; the prod. is opt. stabilised by treatment with a 1-6C aliphatic aldehyde or dialdehyde, (0.015-0.3 M) at pH 6.0-8.5 at 20-37° for 14-28 days.

The prod. is used in injections for tetanus immunisation. 31.7.76. as 634584 (4pp047)

LANG- ★ D16 24117B/13 ★DT 2741-361

Determn. of variables in photometric measurement of enzyme reactions - involves forming sum function and finding the minimum of the sum of squared errors

LANGE B GMBH 12.09.77-DT-741361

B04 J04 R12 R16 (22.03.79) G01d-01 G01n-31/14

The independent variable is e.g. time, position etc. The measured variable collected from any detector, affected by some error, is applied in the form of an electric variable to a voltage into pulse train convertor, whose output is connected to an input of a logic gate. The gate's other input is connected to a time base control, so that the gate output signal, possibly after division, is applied to a counting and display device.

The measured variable is determined after forming the sum function and taking into consideration the method of the minimum of the sum of squared errors, by linking of partial integrals, and after using all measured variables present in the measurement interval. Depending on the requirement, small deviations from the minimum of the squared error method are permissible. 12.9.77 as 741361. (26pp14)

DIES- ★ D16 24152B/13 ★DT 2807-674

Liq. sepn. after passing through filter - using conductivity meters to control discharge values

DIESSEL GMBH 23.02.78-DT-807674

J01 (D15) (22.03.79) B01d-17 C12c-11

In a system of sepg. two liqs. of different conductivities after a pass-through filter, e.g. beer and water in filling plant from storage tanks, the conductivities of both liqs. are measured upstream of the filter and stored. Their difference is fed into a setting unit with a fixed set value which is compared with the conductivity downstream of the filter. On reaching the set value a valve or a counter can be actuated.

The two liq. flows are sepd. more objectively than by the reading of an instrument by a person. The sepn. is independent of conductivity fluctuations of both liqs. 23.2.78 as 807674. (25pp39)

DIES- ★ D16 24153B/13 ★DT 2809-910
Alcohol, wort and carbon di:oxide determination in beer - by irradiation with IR light and measuring absorption of radiation at specific wavelengths for each component
DIESSEL GMBH 08.03.78-DT-809910
R16 (22.03.79) G01n-21/34 G01n-33/14

Beer and/or beer wort components are determined quantitatively by transmitting IR light through the beer. The IR absorption is measured and evaluated at specific wavelengths of 2.9-3.1 (3.0) μ for the alcohol component; wavelength 9.6-9.8 μ for the extract or wort and wavelength 4.2-4.4 (4.27) μ for CO_2.

The proportions of alcohol, extract or wort and dissolved CO_2 can be determined individually and accurately. IR absorption is independent of external conditions. Direct readings can be obtd. without specific monitoring instruments. 8.3.78 as 809910. (14pp200)

STEI- ★ D16 24160B/13 ★DT 2833-588
Hop treatment and humulone stabilisation for brewing - comprises isomerisation using metal oxide, isomer reduction using metal hydride and opt. pelletising
STEINER S S INC 08.09.77-US-831479
(22.03.79) C12c-03

Hop or hop extracts are (a) treated to convert α-acids, or humulones, to the isomerised α-acids, pref. by intimately mixing with ≥1 divalent metal-derived metal oxide, suitable for food use, and kept under suitable conditions for converting at least part of α-acids to the isomerised α-acids. The prods. are then (b) contacted with a mono- or di-valent metal-derived metal hydride, suitable for food use and capable of chemically reducing the isomerised α-acids; (c) kept under reaction conditions allowing hop- and α-acid stabilisation, and (d) opt. pelletised, simultaneously or subsequently.

The humulones are stabilised against degradation by light and converted to desirable brewing ingredients. Conversion of α-acids to iso-α-acids is ≥80%. 85% of iso-α-acids can be converted to the reduced iso-α-acids. 31.7.78 as 833588. (25pp200)

RATI- ★ D16 24168B/13 ★DT 2836-676
Plant extn. esp. for spirits industry - by treating extractant and excess extracting liq. with ultrasonic vibration at room temp. (NL 21.3.79)
VEB RATIONAL HALLE 19.09.77-DL-201087
(22.03.79) A23l-01/22 B01d-11/02 C07g-17 C12g-03/04

The materials to be extd. and extn. liq., esp. alcohol and-/or water, in liq.:solids ratio 4:1 to 10:1, are exposed 10-100 mins. at room temp., to ultrasonic energy at frequency 20-40 kHz and having acoustic power 10-100 watt. The vessel used may contain fixed or moving vibrators. The extn. liq. also acts as ultrasonic energy transfer medium.

Plant- and drug-extracts, esp. for spirits industry, e.g. liqueur- and vermouth-prodn., are obtd. more quickly, in higher yields, approaching quantitative yields, and without lowering prod. quality, than by standard processes, e.g. maceration, digestion, percolation, or solvent extn. Yield increases can be further increased by raising liq.: solids ratio. 22.8.78 as 836676. (11pp200)

EAST ★ D16 24191B/13 ★DT 2839-170
Chromatographic material for purificn. of biologically active material - having polysaccharide covalently bound to inorganic carrier
EASTMAN KODAK CO 09.09.77-US-832035
A97 B04 J01 (22.03.79) B01d-15/08

The material consists of an inorganic carrier having a high surface concn. of OH gps. to which insoluble polysaccharide particles are bound covalently to form a matrix of carrier/polysaccharide particles.

The material is useful in affinity chromatography for the purificn. of various biologically active materials, e.g. enzymes, proteins, antibodies, nucleotides, small ligands etc. A high degree of purificn. is attained at high throughputs. 8.9.78 as 839170. (27pp016)

SEAR D16 91749Y/51 =GB 1542-84
Antifungal compsns. contg. fungal cell-lytic enzymes - extracte from Coprinus or Lycoperdon spp., for treatment of fungal infection
SEARLE G D & CO 11.06.75-GB-025000
*B04 C03 (28.03.79) *US4062-941 A61k-37/54 + C07g-07/02*

A pharmaceutical compsn. comprises one or more cell-lytic enzymes from Coprinus or Lycoperdon genera fungi and an acceptable solvent carrier, and/or an anti-mycotic agent. Pref. the enzymes are extracted from C. comatus or L.pyriforme, and the anti-mycotic agent is amphotericin-B, nystatin or griseofulvin.

The compsn. is used to treat fungal infections in non-human animals, the enzymes degrading and weakening fungal cell walls so that conventional anti-mycotic agents are far more effective. The compsn. is partic. useful in treating infections by opportunistic fungi such as Aspergillus fumigatus and Candida albicans, and is also useful for treating Trichophyton mentagrophytes infections. 10.6.76 (9pp990).

KITA D16 44336A/25 =GB 1542-99
Antibiotic AM-2282 obtd. by culturing Streptomyces - has antifungal hypertensive, anti-oedema and antiulcer activity
KITASATO RES INST 11.12.76-JA-148299
*B04 C03 (28.03.79) *DT2754-326 C12d-09/16*

Novel antibiotics (AM-2282) have a molecular formula $C_{28}H_{26}N_4O_3$, specific rotation $[\alpha]_D^{25}$ = 35.0 (c = 1.0 in MeOH), given UV and IR spectra, positive reaction to Dragendorff, Molisch, Rydon-Smith and ninhydrin tests and negative reaction to Beilstein, $FeCl_3$ and aniline phthalate tests. They are soluble in DMSO and DMF, sparingly soluble in $CHCl_3$, EtOAc, n-BuOAc and MeOH, and insol. in petroleum ether, n-hexane and water.

They are active against yeasts and fungi. They are prepd. by culturing Streptomyces microorganisms, esp. S. staurosporeus. 30.11.77 as 049874 (11pp974).

AJIN D16 46789A/26 =GB 1543-09
Amino acid bio:assay microbe preservative - comprising sodium arginate soln., allows ready utilisation of microbe
AJINOMOTO KK 28.10.76-JA-129843
*+R16 (28.03.79) *J53056-380 C12k-01/08 + G01n-21/22*

A dried lactic acid bacteria compsn. is prepd. contg. lactic acid bacteria and an alginate in the absence of amino-acid and vitamin. Pref. alginate is sodium alginate. Prepn. is by freeze-drying method.

Microbioassays of bacteria are made by inoculating oneloopful of bacteria maintained by passage at 2 weeks' intervals into a preincubation medium and then incubated at 37°C for 16-20 hrs. Bacteria are then washed and absorbance measured. Definite vols. of culture are dispersed in ampoules, lyophilised, sealed and then stored at set temps.. The assay is repeated on freeze-dried cultures after storage for relative activity.

Microbioassay means used are neither sophisticated nor time-consuming. 24.10.77 as 044212 (2pp931).

ABBO D16 10637A/06 =GB 1543-130
Alpha-amylase enzymatic determination - in e.g. serum or urine using modified starch substrate and phosphorylase, phosphoglucomutase and glucose-(6)-phosphate dehydrogenase
ABBOTT LABORATORIES 01.07.76-US-701778
*B04 R16 + P31 (28.03.79) *DT2729-636 G01n-31/14*

Alpha-amylase is assayed in a sample by (a) reacting the sample with a modified starch substrate having blocked non-reducing ends, (b) reacting the resulting unblocked starch with phosphorylase in the presence of inorganic phosphate, (c) reacting the resulting glucose-1-phosphate with phosphoglucomutase, (d) reacting the glucose-6-phosphate with glucose-6-phosphate dehydrogenase in the presence of NAD or NADP to produce 6-phosphogluconate and NADH or NADPH and (e) measuring the NADH and NADPH

The samples are esp. biological fluids e.g. serum or urine. 30.6.77 as 027515 (4pp974).

CORG ★ D16 24332B/13 ★GB 2004-300
Composites of microbes bound to porous support - with defined pore size characteristics
CORNING GLASS WORKS 26.06.78-US-918928 (14.09.77-US-833275)
(28.03.79) C12k-01/08

mmobilised microbe composites comprise a controlled population of microbes bound to the internal surfaces of pores in a water-insoluble nontoxic support having a high surface area. The microbes are (i) fission-reproducing microbes or bacteria, in which case $\geqslant 70\%$ of the pores have a dia. (d) such that $x_1 \leqslant d < 5x_2$ (where x_1 is the smallest and x_2 the largest dimension of the microbes or bacteria); (ii) yeast cells, in which case $\geqslant 70\%$ of the pores have $x_3 \leqslant d < 4x_4$ (where x_3 is the smallest and x_4 the largest dimension of the cells); or (iii) fungus-like organisms which reproduce via spores and exhibit mycelial growth, in which case $\geqslant 70\%$ of the pores have $x_5 \leqslant d < 16x_6$ (where x_5 is the smallest and x_6 the largest dimension of the spores).

The composites can be used for the prodn. of single-cell protein biomasses, for the prodn. of metabolites, and as standards for analytical microbiology. Supports with the above pore size characteristics give composites with the max. no. of bound microbes per unit wt.. 8.9.78 as 036168 (23pp367).

KITA ★ D16 24695B/13 ★J5 4023-118
Vaccine for treating diseases caused by Vibrio microorganisms in fish - obtd. by inactivating mixed liq. culture of three antigen types of Vibrio anguillarum using formalin or heat
KITASATO RES INST 25.07.77-JA-089070
B04 C03 (21.02.79) A61k-39

In an example, brain heart infusion broth (pH 7.2) 25 g, fish meat extract 12 g and sodium chloride 26 g, were dissolved in distilled water and the resultant soln. sterilised by heating under high pressure. Fungi (mixt. of three kinds of aberrant form of Vibrio anguillarum) was innoculated into the above soln. and the mixt. was cultured at 27°C for 18 hrs. Glucose was added to a concn. of 2%, the pH of the mixt. adjusted to 8.2 and culture continued for 18 hrs. Formation was added to a concn. of 0.4% to produce an inactivated vaccine liquor, which was diluted 10 times for administration. 25.7.77 as 089070 (4pp69)

EIKE- ★ D16 24723B/13 ★J5 4023-188
Culture medium for detecting bacterial acyl:amidase - is prepd. by mixing acetamide with potassium hydrogen phosphate, sodium chloride, growth promoter, phenol red indicator and agar
EIKEN KAGAKU KK 22.07.77-JA-087965
B04 R16 (21.02.79) C12k-01/06 G01n-31/14 G01n-33/16

The culture medium is prepd. by combining proper amt. of acetamide in a basic medium contg. K hydrogen phosphate, NaCl growth promotor, indicator and agar. Acetamide is combined in an amt. of 1.0-5.0 (3.0)g in 1000 ml of the culture medium. An example of the compsn. is KH_2PO_4 1.0 g, NaCl 5.0 g, yeast extract 0.5 g, glucose 0.2 g acetamide 3.0 g, phenolred 0.03 g, agar 15.0 g and refined water 1000 ml and obtd. culture medium is regulated to have pH 6.8. The culture medium is poured in test tubes and after pasteurising them, the medium is solidified to slant form. A platinum loopful of the bacteria to be tested, is spread on the slant and the slant is cultured at 37°C for 18-24 hrs. When acylamidase is formed, the culture medium is turned to red and the colour change can be easily recognised.

The culture medium detects the bacterial acylamidase through the change in colour of the indicator by ammonia formed by the decompsn. of acetamide through acylamidase and the judgement can be practiced easily through the distinct colour change. The characteristics of the culture medium are to intensify the growth promoting effect by combining yeast extract and glucose and to use phenol red as the indicator for easy judgement of colour change. 22.7.77 as 087965 (4pp5)

AJIN ★ D16 24724B/13 ★J5 4023-192
Citric acid prodn. in high yield - by culturing a variety of Candida in a crude sugar, e.g. molasses
AJINOMOTO KK 19.07.77-JA-086276
E17 (21.02.79) C12d-01/04

The method comprises culturing a variety of Candida, which shows degenerated use for citric acid, sensitivity to Cu or Ni and producibility forccitric acid, in a nutritive culture medium; and collecting the citric acid accumulated. Large amts. of citric acid can be prepd.

Examples of the varieties are Candida citroformans AJ 14527 (FERM-P 4124) and C. citroformans AJ 14528 (FERM_P 4125), derived from the parent strain C. citroformans AJ 14500 (FERM-P 3397) through treatment with N-methyl-N'-nitro-N-nitrosoguanidine. The culture is practiced at 20-40℃ and pH 3-7 under aerobic condition for 2-5 days with regulation of the culture medium pH with calcium carbonate, sodium hydroxide, aq. ammonia, etc. and accumulated citric acid can be easily isolated by removing the yeast body from the culture medium, concentrating the clear culture medium, adding slaked lime to the concentrate and sepg. formed calcium citrate. 19.7.77 as 086276 (3pp5)

AJIN ★ D16 24725B/13 ★J5 4023-193
Citric acid and D-fructose prepn. - by culturing Candida microorganism in culture medium contg. sucrose or invert sugar
AJINOMOTO KK 23.07.77-JA-088625
E17 (D17 E13) (21.02.79) C12d-01/04 C12d-13

The method comprises culturing the variety of Candida which produces citric acid and does not use D-fructose, in the culture medium contg. sucrose or invert sugar as the major carbon source and collecting citric acid and D-fructose from the cultured liq.

An example of applicable variety is Candida citroformans AJ 14530 (FERM-P 4127) and the variety is derived from the parent strain of C. citroformans AJ 14473 (FERM-P 3072). As the carbon source, refined or crude sucrose, beet molasses, cane molasses, fruit juice, invert sugar, etc. can be used. The culture is practiced at 20-40°C at pH 3-7 aerobically and during the culture pH control is practiced with $CaCO_3$, NaOH, aq. ammonia, etc. After the culture yeast body is removed from the culture medium and the culture medium is concentrated. Slaked lime is added to the concentrate and citric acid can be firstly recovered as Ca citrate. The mother liquor is concentrated again and $CaCl_2$ or slaked lime is added to the concentrate. Fructose is recovered as its double salt with $Ca(OH)_2$ or $CaCl_2$. 23.7.77 as 088625 (3pp5)

AJIN ★ D16 24726B/13 ★J5 4023-194
Inosine-5'-mono:phosphoric acid prepn. - by culturing Bacillus bacteria, useful as seasoning etc.
AJINOMOTO KK 20.07.77-JA-086961
B02 E11 (D13) (21.02.79) C12d-13

The method comprises culturing Bacillus bacteria which has requirement for adenosine and xanthine and is resistant to methioninesulphoxide, cichoflanin, decoinin or sulphaguanidine in culture medium and collecting inosine-5'-monophosphoric acid (I) accumulated in the culture medium.

(I) is useful as seasoning, etc. can be prepd. efficiently. Examples of strains are Bacillus subtilis AJ 11154 (FERM-P 4116), B. subtilis AJ 11155 (FERM-P 4117), B. subtilis AJ 11156 (FERM-P 4118), B. subtilis AJ 11157 (FERM-P 4119) and B. subtilis AJ 11158 (FERM-P 4120). The culture is practiced at 34°C at pH 4-8 aerobically for 1-5 days. 20.7.77 as 086961 (3pp5)

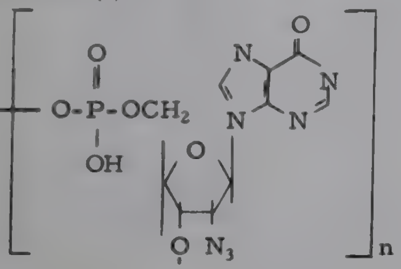
MURA/ ★ D16 24727B/13 ★J5 4023-196
Microbial alkaline protease inhibitor prodn. - by culturing ray fungus of Streptomyces genus, used for treating shock, pancreatitis and haemorrhaging
MURAO S 22.07.77-JA-088053
B04 (21.02.79) A61k-35/74 C12d-13

In an example, a culture medium contg. 1 l of water, 10g of glucose, 30 g peptone, 0 g meat extract, 1 g sodium chloride, 1 g dipotassium phosphate and 1 mg manganese sulphate hexahydrate was adjusted to pH 7.0 and respectively 100 ml of the culture medium wasput into ten Sakaguchi's flasks (500 ml volume) and sterilised at 120°C for 10 mins.

Respectively one platinum loop of Streptomyces nigrescens WT 27 FERM-P 4131 streak culture medium was inoculated and cultured under shaking at 30°C for 30 hrs. (120 r/min.). After completion of culture, culture liquor was subjected to centrifugal sepn. to remove fungi body and yield 800 ml of supernatant liquor. Sublicin BPM'-inhibition ratio of 50 µL of the culture filtrate was 80%. 22.7.77 as 088053 (6pp69)

MITU ★ D16 25063B/13 ★J5 4024-899
Poly-2'-azido-2'-deoxy:inosinic acid - used as inhibitor of reverse deoxyribonuclease and in prodn. of interferon derivs.
MITSUBISHI CHEM IND KK 26.07.77-JA-089478
B04 (24.02.79) A61k-31/70 C07g-17 C12d-13/06

Poly 2'-azido-2'-deoxyinosinic acid (polynucleotide) of formula (I) is new.



(I) is prepd. by, e.g. polycondensating 2'-azido-2'-deoxyinosine 5'-diphosphate (II) in the presence of polynucleotide phosphorylase (PNPase). (II) is prepd. by e.g. reacting 2'-azido-2'-deoxyadenosine 5'-phosphate with nitrous acid to obtain 2'-azido-2'-deoxyinoxine 5'-inosine 5'-phosphate, reacting this prod. with morpholine in the presence of a dehydrating agent (e.g. dicyclohexylcarbodiimide) and substituting the prod. with phosphoric acid. PNPase can be recovered from microorganisms, e.g. E. coli Axotobacter vinelandii, etc. or various animal tissues.

The polynucleotide acts as an inhibitor against reverse DNAase. The polynucleotide associated with polycytidylic acid exhibits about 4 times the activity that of the polynucleotide of polyinosinic acid associated with polycytidylic and is useful as intermediate of interferon derivs. 26.7.77 as 089478 (6pp140)

MITU ★ D16 25064B/13 ★J5 4024-900
Double chain polynucleotide - obtd. by association of poly 2'-azido-2'-de-oxy inosinic acid with poly:cytidylic acid, used to derive interferon
MITSUBISHI CHEM IND KK 26.07.77-JA-089479
B04 (24.02.79) A61k-31/70 C07g-17 C12d-13/06

Polynucleotide of double chain is obtd. by association of poly 2'-azido-2'-deoxyinosinic acid with polycytidylic acid. The polynucleotide is useful as interferon deriving agent exhibiting ∼ 4 times the activity that of the known polynucleotide of double chain obtd. by association of polyinosinic acid with polycytidylic acid.

Poly 2'-azido-2'-deoxyinosinic acid is obtd. by polycondensation of 2'-azido-2'-deoxyinosine 5'-diphosphate in the presence of a polynucleotide phosphorylase. The 2'-azido-2'-deoxyinosine 5'-diphosphate is obtd. by e.g. reacting 2'-azido-2'-dcoxyadanosine 5'-phosphate with nitrous acid to obtain 2'-azido:2'-deoxyinosine 5'-inosine 5'-phosphate, reacting this prod. with morpholine in the presence of a dehydrating agent (e.g. dicyclohexylcarbodiimide) and substituting the prod. using phosphoric acid. Associationof poly 2'-azido-2'-deoxyinosinic acid and polycytidylic acid is effected by mixing an aq. soln. each of them at a molar ratio of 1:1. 26.7.77 as 089479 (6pp140)

BOEF D16 15069S/08 =J7 9004-280
Enzymatic conversion of glucose
BOEHRINGER MANNHEIM GMBH 11.08.69-DT-940816
*B04 R16 (05.03.79) *NL7011-769*

KITA D16 11403V/07 =NL -159-584
Killed mycoplasma vaccine for protection of domestic animals - against mycoplasmosis diseases
KITASATO RES INST 05.10.72-JA-100028
*B04 C03 (15.03.79) *BE-805-570 A61k-39/02*

Spray or injector filled with killed Mycoplasma vaccine is claimed, used for immunising cattle and poultry against respiratory diseases caused by Mycoplasma. The vacc is administered by spraying or injection into the trache

The vaccine is prepd. by cultivating e.g. M.gallisepticum, M.synoviae, M.suipneumoniae, M.mycoides va capri, in a suitable medium, killing the cells (e.g. hea ing, chemicals, ultrasonics) and suspending them in a physiologically acceptable aq. medium at pH 6.0-7.8. The suspension is stabilised, homogenised, centrifuged and the supernatant liq. filtered under sterile condition 21.9.73 as 013052. (11pp913)

MERI D16 25254F/00 =NL -159-
Mumps virus vaccine
MERCK & CO INC 13.08.65-US-479653
*B04 (15.03.79) *NL6611-260 +A61k-39/12*

Mumps vaccine is produced by successively passing vir ent mumps-virus a number of times through embryo-co chicken eggs. The virus is further cultured at 30-38°C a chicken embryo tissue culture, contg. tissue from 9- day old embryos.

Specifically the virulent virus is passed 10-20 times succession through the eggs, and at least twice through the tissue culture. The vaccine is stored in phials or ampoules. 10.8.66 as 011260. (4pp913)

LESA D16 17600R/11 =NL -159-6
Removal of potassium from sugar industry by - products
LESAFFRE CIE 29.03.66-FR-055416
*C03 (15.03.79) *GB1185-104 A23k-01/06 C01d-05/02 +C0 05/02*

Effluent liq. from fermentation, which contains dissolve potassium and organic N-cpds., is first conc. to a dry solids content $>$70%. Ammonium sulphate, or H_2SO_4 ar (aq.)ammonia in stoichiometric amts. to form ammoniu sulphate, is/are added to the hot liq. The mass is stir and slowly cooled to ca. 30°C before the formed crystal of K_2SO_4 are sepd. at this temp.

The wet mass is air-dried or filtered, and then used fertiliser prodn. 28.3.67 as 004425. (3pp913)

NEST D16 49354W/30 =NL -159-6
Sepg. leucine and isoleucine from aq. soln. - by fraction crystallisation of copper or nickel salts at pH acid and alkaline
MAGGI AG 21.01.74-CH-000745
*B05 E16 +P73 R33 R58 (15.03.79) *BE-824-243 C07c-99/ C07c-101/04*

Leucine and isoleucine mixt. of wt. ratio $\ngtr$ 7:1 in water, at pH $\ngtr$ 2.2, is sepd. by fractional crystallisation of the Cu salts by increasing the pH to 2-3.8.

Specifically an aq. soln. is formed of the mixt. and C SO_4 at pH 1.0-1.8 with a clear blue colour. The pH is i creased at 2-3 and a first crystallised fraction of copper leucinate sepd. by filtration. The filtrate is neutralised and a second crystallised fraction of copper leucinate an isoleucinate sepd. The second fraction is dispersed in water and pH maintained at 1.3-2.2, to form a clear blu soln.

The pH of the soln. is increased to 2.7-3.8 and a thir crystallised fraction of mainly copper leucinate is sepd. by filtration. The filtrate is neutralised and the fourth crystallised fraction mainly of copper isoleucinate sepd. by filtration. 21.1.75 as 000684. (4pp913)

MEIJ D16 55390R/31 =NL -159-7
Antibiotics from streptomyces mycarofac - iens
MEIJI SEIKA KK 25.09.69-JA-075845 (06.02.69-JA-008588)
*B04 (15.03.79) *BE-745-430 C12d-09/14 +A61k-35/74*

Novel antibiotics SF-837, SF-837-A_2, SF-837-A_3 and SF 827-A_4 are produced by culturing Streptomyces mycarfac ens nov. sp. and recovering the antibiotic obtd. as the fr base or as the acid addn. salt.

These antibiotics have increased growth-inhibiting activity against gram positive pathogenic bacteria, e.g. S. aureus, and against (other) antibiotic-resistant bacteria. 5.2.70 as 001658. (23pp922)

INRG D16 14370W/09 =SU -605-524
Prevention of take-all of cereals - by treating fields with hypovirulent strains of Ophiobolus graminis grown on a particulate medium
INST NAT RECH AGRON 27.09.73-FR-034619
*C03 (03.04.78) *BE-820-309 A01n-15*

Product for treating take-all of cereals comprises a culture of ahomogeneous abnormal strain of Ophiobolus graminis on a particulate medium, the strain not forming concentric growth circles in light when grown on a non-particulate medium. Take-all, caused by Ophiobolus graminis in wheat, barley and rye, causes root necrosis and damages the base of the stems causing reduced quality and yield of crop. The abnormal strains of organism used, have lost their pathogenicity and can endow cereals with resistance to pathogenic strains.
Juan, B., Lamer, J-M. Bul. 16/30.4.78. 25.9.74. as 062779 (2pp)

VOTE= ★ D16 25325B/13 ★SU -605-825
Malt drying kiln - has housing with radial shafts around central air duct
VORON TECHNOL INST 25.02.75-SU-111554
Q76 (05.04.78) C12c-01/04 F26b-17/12

Reduced heat intake and improved quality of the dried malt are due to the kiln design with radial shafts in the housing. The space between the shafts is connected to the central air duct via additional tubes with dampers. Each drying zone of the shafts has louvres on the side facing the inlet of the drying agent.

The malt reaches the drying zone of the shaft through the funnel and tube, where it moves by gravity. When one shaft is loaded, another shaft is unloaded, and the drying agent is fed between the first and last shaft through the central duct, when the louvres of the last shaft are closed After passing the malt in the remaining shafts, the drying agent is exhausted by the ventilator.
Gavrilenkov, A.M., and Kulakov, V.I. Bul. 17/5.5.78. 25.2.75. as 111554 (3pp89)

MOSU ★ D16 25326B/13 ★SU -605-826
Protease prodn. by double fermentation process - with Aspergillus kanagaewaensis as active component for protease prodn. and Aspergillus wentii as the non-active component
MOSCOW LOMONOSOV UNIV 19.07.76-SU-384155
B04 (04.04.78) C12d-13/10

Protease is obtd. by fermenting fungal strain Asp. kanagaewaensis as the protease prodn. active component and fungal strain Asp. wentii as the non-active component in a nutrient medium. Both strains are present in the nutrient medium in equal amts. The method produces an improved protease yield. Culturing is pref. carried out at 28°-30°C for 48-72 hrs.
Egorov, N.S., Al-Nuri, M.A., Landau, N.S. et al. Bul. 17/5.5.78. 19.7.76. as 384155 (2pp314)

MOSU ★ D16 25327B/13 ★SU -605-827
Protease inhibitor prodn. by double fermentation - using Aspergillus oryzae strain as protease active component and Fusarium oxysporum strain as non active component
MOSCOW LOMONOSOV UNIV 30.09.76-SU-408874
(05.04.78) C12d-13/10

Protease inhibitor is obtd. by culturing in a nutrient medium the strain Aspergillus oryzae 168 as active protease producting component and the strain Fusarium oxysporum KM as the non-active component. The cells are sepd. from the culture liquid and the protease inhibitor then recovered from the liq. Use of the above two strains as active and non-active components produces a high yield of inhibitor which suppresses caseinolytic, fibrinolytic and thrombolytic activity in microbic protease. Culturing may be carried out in a standard synthetic medium at pH 6.5-7.0 for 48-72 hrs. at 28°-30°C.
Egorov, N.S., Al-Nuri, M.A., Landau, N.S. et al. Bul 17/5.5.78. 30.9.76. as 408874 (2pp314)

ULIQ= ★ D16 25328B/13 ★SU -605-828
Rectified alcohol prodn. plant - feeds overhead contg. fraction from fractionating column into stripping column
UKR LIQ SPIRITS IND 12.07.76-SU-382266
(05.04.78) C12f-01/06

Decreased heat losses and improved rectified alcohol are achieved by treating the fraction with impurities in the stripping column at a pressure of $0.2.10^5$-$0.6.10^5$ Pa. The derived prod. is divided into one part which returned to the fractionating column, while the other part is combined with the purified product of the fractionating column. The combined product is subject to rectificationat the same pressure as above.

The purification in the stripping column is carried out with the heat of alcohol vapours from the fractionating column, while the rectification is made with the heat of alcohol vapours from the mash column. The preheated mash is fed to the distillation column operating at a pressure of $1.2.10^5$ - $1.3.10^5$ Pa and heated by live steam.
Artyukhov, V.G., Drogovoz, G.K., Ternovskii, N.S. et al. Bul. 17/5.5.78. 12.7.76. as 382266 (3pp89)

FOOD= ★ D16 25329B/13 ★SU -605-829
Table wine prodn. - includes addn. of soluble polyvinyl-pyrrolidone to the juice as clarifying agent and also addn. of polyoxyethylene prior to fermenting
FOOD IND CORRESP 28.06.76-SU-378272
A97 (A14 A25) (05.04.78) C12g-01/02

Table wines are made by adding 20-100 mg/l. of sol. polyvinylpyrrolidone (I) as clarifying agent to the grape juice, adding 10-30 mg/l. of polyoxyethylene (II) allowing the juice to clarify, fermenting, clarifying the ferment and bottling. A good quality wine is obtd. and oxidn. of the must is prevented. In a typical method, the juice is left for 0.5-3 hrs. after the addn. of (I) and a further 1-3hrs. after the addn. of (II). It is then fermented etc. and conventionally processed.
Kamenskaya, E.V., Lozovik, G.Ya., Gelashvili, N.T. et al. Bul. 17/5.5.78. 28.6.76. as 378272 (2pp314)

AKMI= ★ D16 25330B/13 ★SU -605-830
Strong wines heat treatment unit - combines two streams subjected to different regimes, by feeding them into mixer-aerator
AS KAZA MICOBIOL 17.08.76-SU-399981
(04.04.78) C12g-01/02

Intensified treatment of strong wines and their saturation with oxygen are due to combining two flows which were subject to different regimes. The circulation loops are parallel-connected via a mixing aerator.

After filling the two tanks with wine, all valves are opened for a free flow with air exhausted through the non-return valve. The centrifugal pump forces the wine in the first loop heated to 50-60°C while the surplus overflows to the next tank.
Margakov, A.A., Bul. 17/5.5.78. 17.8.76. as 399981 (2pp 89)

PIKO/ ★ D16 25331B/13 ★SU -605-832
Bacterial strain Proactinomyces phosphaticus - is used to produce antimicrobial material active against Gram-positive and Gram-negative bacteria
PIKOVSKAYA R I 01.07.76-SU-378549
(05.04.78) C12k-01

The optimum incubation temp. of the strain is 28°-29°C. On the second day of incubation the culture on all media forms milky coloured colonies having a mucous-like consistency. After 3-4 days the biomass becomes coloured, the colour depending on the medium.

The mycelia on a culture are atmospheric, the colonies being slightly fluffy and the conidia being oval or circular with straight stems. An optimum medium for the development of antimicrobial props. comprises (per l. of water): 6g. peptone, 3 mls. yeast extract, 5g glucose and 20g. agar-agar at pH 6.6-6.8, with sterilisation at 0.5 atmos. The strain ferments gelatin and milk and converts glucose, saccharose, mannitol and inositol to acid and arabinose, rhamnose, sorbitol lactose and dulcite to alkali, no gas is evolved. Starch is not hydrolysed but nitrate is reduced to NO_2. Phosphatase is developed in the medium and the medium shows a neutral reaction. Growth is positive in nor

-glucose media.

The antimicrobial materials obtd. from the culture are active against Gram-positive and Gram-negative microflora: Staph. aureus 8357, Bac. mycoides 537, Bac subtilis (spores) Z_2, B act. Escherichia coli. The materials are obtd. from a sterile filtrate of the culture liq. on filtering through a Chamberlain Z_5 bacterial filter.

Pikovskaya, R.I., Bakhtadze, L.R. Bul. 17/5.5.78. 1.7.76. as 378549 (3pp314)

BUTT= ★ D16 25332B/13 ★SU -605-833

Bacterial strain of streptococcus lactis - is used to expose bacteriophages of lactic streptococci

BUTTER CHEESE PROD (BELU) 03.05.76-SU-357582

(D13) (05.04.78) A23c-09/12 C12k-01/02

The cells of a 24 hr. of a Streptococcus lactis N3938-S culture on agar and hydrolysed milk are 1-1.1μ in dia. they are ellipsoidal and form short chains. In a broth of hydrolysed milk the intensive growth stage produces a heavy, uniform suspen. and a 24-hr. growth produces uniform turbidity with a grainy ppte., which forms a thin layer at the bottom.

On inoculation of fresh broth with 1 vol.% of an 18-hr; culture in a hydrolysed milk the 'lag' phase is observed in 60 mins. The max. cell concn. is 8-10 x 10^8 cells/ml. formed after 7hrs. incubation at 30°C; viability is maintained with streptomycin concns. in the broth of up to 1000 units/ml. On inoculating milk with 1% of an 18 - hr. culture, a curd forms in 11-12 hrs. having a dense, uniform consistency. On injecting a meat - peptone gelatin, weak growth occurs along the line of the injection; the gelatin does not liquefy. On inoculating a hydrolysed milk agar, colonies are formed in 2 days having a round, smooth, white, lustrous, convexed appearance and size 0.8-1mm. Their viability is maintained at streptomycin concns. in the medium of up to 1000 units/ml.

The strain converts glucose, galactose, lactose, and maltose to acid; saccharose and mannitol are not assimilated. It is sensitive to 24 naturally occurring lactic streptococci virulent bacteriophages.

Gudkov, A.V., Fomichev, Yu.K., Selskov, A.N. et al. Bul. 17/5.5.78. 3.5.76. as 357582 (3pp314)

LIVA= ★ D16 25423B/13 ★SU -606-062

Granules fluidised bed dryer - uses plates with perforations spacing increasing in feed direction

LIVANY BIOCHEM WKS 17.02.76-SU-325466

J08 Q76 (12.04.78) F26b-17/10

Intensified drying in a fluidised bed of hygroscopic products of microbiological synthesis is ensured by using a housing divided by perforated plates. The off gases are evacuated by a cyclone, and a feeder loads the material for drying over the top perforated plate where an additional nozzle injects a heat carrier.

Screens are mounted above the perforated plates, and the spacing of holes in the plates increases in the feed direction of the treated material. The perforations in the plates have guide baffles, and the dia. of holes in the screens amounts to 0.02-0.04 of the size of plate perforations, and is 0.8-1.6 mm. The spacing between the plates is 1.5 m, and their length is 3.5 m.

Boyars, I.A., and Alpaev, V.N. Bul. 17/5.5.78. 17.2.76. as 325466 (3pp89)

LEFI= ★ D16 25458B/13 ★SU -606-159

Simulating human Escherichia coli infection in dogs - by introducing bacterial suspension of enterobacteria into parotid salivary gland

LENGD FIRST MED INS 04.07.75-SU-154082

B04 J04 R32 (18.04.78) G09b-23/28

Conventionally, live enterobacteria are introduced into an epithelial organ. To make escherichiosis more like the disease in man, 0.1-0.3 ml. of a bacterial suspension contg. 10^{11}-10^{12} enterobacteria (E. coli 0124) per 1 ml. are introduced into the parotid salivary gland, after which the duct is hermetically closed.

The invention relates to medical microbiology and infectious diseases. It is useful in studying invasive and aggressive properties of enterobacteria, and also pathogenesis, in preventative treatment and therapy of intestinal infections. The development of the infection corresp. more to the illness in natural conditions so that more complete information is obtd. about virulent properties and pathogenesis of the infections.

Voskresenskii, A.M., Moskvina, B.N., Borisov, L.B. et al. Bul. 17/5.5.78. 4.7.75. as 154082 (2pp840)

ODME= ★ D16 25459B/13 ★SU -606-160

Obtaining stomatitis model by antigen immunisation of animals - involves first autoclaving homologous tissue of mucous membrane

ODESS MED INST (ODST=) 22.07.76-SU-387944

B04 R32 (18.04.78) G09b-23/28

Stomatitis model may be obtained by immunising animals by a double parentheral introduction of antigen contg. homogenised homological tissue of the mucous membrane of the mouth, and a stimulator. To obtain an isolated effect with pathomorphological symptoms like those of alterations to the mucous membrane of the human mouth, the homological tissue of the mucous membrane of the moth cavity is first autoclaved. The amout used equals 1% of the volume of the stimulator.

Marchenko, A.I., Sklyar, V.E., Sukmanskii, O.I. et al. Bul. 17/5.5.78. 22.7.76. as 387944 (2pp18)

LEFR/ D16 52377T/33 =SU -606-553

Fermenting vats - esp for yeast prodn or for alcohol mnfr with high output

LEFRANCOIS L A A (LEF /) 20.01.71-FR-001774

*(20.04.78) *DT2202-445 C12b-01/08*

Fermentation plant, esp. for yeast prodn. has two hollow vessels one within the other. The inner vessel is used for the rising phase of the closed recycline loop process and has a lower section of relatively small cross sectional area diverging progressively to a larger area upper section The outer vessel is correspondingly divided into sections so that the circulation of the culture medium is unhindered. Accelerated circulation within the vessels increases yeast output i.e. overall productivity.

Lefrancois, L.A.A. Bul. 17/5.5.78. 20.1.72. as 740901 (3pp)

HOKA D16 41760X/22 =SU -606-554

Alpha galactosidase prodn. - by culturing moulds of genus absidia in inducer contg. medium

HOKKAIDO SUGAR KK (HOKK-) 03.01.75-US-538468

*(20.04.78) *US3957-578 C12d-13/10*

α-Galactosidase (I) is produced by culturing Absidia griseola (ATCC No. 20430) or Absidia griseola var. iguchii (ATCC No. 20431) in a culture medium contg. substances (II) inductive of (I) under conditions permitting the formation of (I). Process produces high α-galactosidase activity and absolutely no invertase activity is produced in the mycelium. By treating beet molasses or beet juice with the mycelium (or an extract) (claimed process) the yield of sucrose can be enhanced since raffinose (which hinders crystallisation of the sucrose) is effectively decomposed and sucrose is allowed to remain intact. The Absidia spp. ATCC 20430 and 20431 are stated to be new.

(II) is e.g. lactose, melibiose, raffinose or galactose. The culture medium may also contain 0.2-1.0% of an organic acid e.g., citric lactic, glycolic, fumaric, glutaric malic tartaric, succinic, malonic, maleic, pyruvic or galacturonic acid. The medium may contain carbon sources e.g. starch glucose glycerine, maltose, dextrin etc. nitrogen sources e.g. soybean flour, peanut powder, meat extract, peptone, yeast extract, etc., and inorg. salts e.g. NaCl, KCl, $MgSO_4$ $MnSO_4$, iron sulphate, phosphates and $CaCO_3$. Culture is carried out at ca 30°C for 40-70 hours at pH 5-8. The mycelium can be obtd. e.g., in the form of pellets in the known way, e.g. by filtration, washing with water, centrifuging and drying, etc.

Narita, S., Naganisi, H., Hiokutsi, A. et al. Bul. 17/5.5.78. 30.12.75. as 304401 (10pp)

PROT= ★ D16 25474B/13 ★SU -606-597

Yeast biomass extractor used in microbiological industry - has vertical column in which mass and extractant move in opposite directions, and filter section above mixing section

PROTEIN BIOSYNTH 24.06.75-SU-148580

(20.04.78) B01d-11/02 C12c-11/24

Extractor used for drawing off the pure biomass from yeast and other micro-organisms, comprises a vertical body with conical base, filter screen placed around part of the periphery of the body, and devices to supply the extractable substance and the extractant, and to withdraw the main product. The extn. process is intensified, due to additional dispersion of the mass, by placing the filter screen in the centre section of the body, the upper part having a circulation loop. The latter consists of pipelines to a heat exchanger. The body has a shaft down the centre with spiral mixer blades in stages down its length inside the zone limited by the position of the filter screen. The extracting agent supply is under the conical bottom and the thickener is a chamber of variable cross-section at the lowest part of the body.
Skvortsov, S.O., Osipov, V.A., Neshchadim, A.G. et al. Bul. 18/15.5.78. 24.6.75. as 148580 (3pp29)

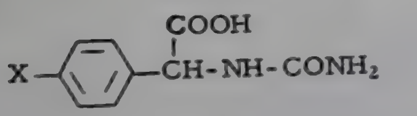
ATCH= ★ D16 25493B/13 ★SU -606-625
Collector for non-sulphide ore flotations - comprises lipids from fungal strain of blakeslea tri:spore
AS TADZ CHEM INST 22.03.76-SU-338403
J01 P41 (21.04.78) B03d-01/02

Collector for use in the flotation of non-sulphite ores comprises lipids of the fungus Blakeslea trispore 490. The collector has high efficiency. The lipids contain up to 70% fatty acids with 12-18c in the chain.
Solozhenkin, P.M., Lyubavina, L.L., Bekhtereva, M.N. et al. Bul. 18/15.5.78. 22.3.76. as 338403 (1pp314)

SNAM D16 04318Y/03 =US 4111-749
Converting racemic hydantoins to optically active aminoacids - with enzyme complexes obtd. from Pseudomonas strains consuming hydantoins (BE100177)
SNAMPROGETTI SPA 10.07.75-IT-025252
*B05 E19 (05.09.78) *DT2631-048 C12d-13/06*

Prepn. of the D form of an optically active aminoacid deriv. comprises hydrolysing a raceimic hydantoin in the presence of an enzymatic complex derived from Pseudomonas sp. 842 (CBS 145.75) or sp. (CBS 146.75). The hydrolysis is effected at 10-60°C at pH 7-10.

Specifically the aminoacid is of formula (I) (where X is H or M). (I) are used in prepn. of pharmaceuticals and the single stereo-isomeric form is obtd. easily. 9.7.76 as 703966 (5pp982)


(I)

STBR ★ D16 25689B/13 ★US 4111-750
Conversion of liquefied starch to glucose and fructose - using immobilised glucose isomerase and glucoamylase with pullulanase or isoamylase
STANDARD BRANDS INC 14.09.76-US-723121
E13 (D17) (05.09.78) C12d-13/02

A soln. contg. glucose and fructose is obtd. by treating liquefied starch of DE $>$25 with immobilised glucoamylase and immobilised glucose isomerase, together with immobilised pullulanase or isoamylase as debranching enzyme. Process is at suitable temp. and pH until all starch is converted. Pref. liquefied starch is obtd. by an enzymatic treatment. Pref. debranching enzyme is pullulanase.

Pref. ratio glucose isomerase:glucoamylase is $\nless$ 2 ($\nless$ 5) IGIU per GU and ratio pullulanase:glucoamylase is $\ngtr$ 0.1 ($\nless$ 2) IU per GU. Process may use a mixed bed of enzymes or may comprise sequential treatments. Treatment is pref. at pH 4.5-8, esp. 6-7, and at 5-60, esp. 35-55°C.

Almost complete conversion of starch to glucose and fructose occurs; reaction rates are increased. 14.9.76 as 723121 (6pp949)

HARV- D16 03996B/02 =US 4111-751
Affinity resin for purifying alcohol dehydrogenase - contains insoluble support bonded to pyrazole through fixed length chain
HARVARD COLLEGE 02.11.77-US-847706 (15.12.75-US-640629)
*A97 B04 E17 (05.09.78) *US4131-727 +C07g-07/02*

Crude alcohol dehydrogenase extract is worked up by (1) mixing with an aq. soln. contg. NAD at $>10^{-4.5}$ molar to form a binary complex of the dehydrogenase and NAD; (2) contacting the mixt. with an affinity resin comprising pyrazole immobilised on an insol. solid support so that a pyrazole-binding fraction of the complex is bound to the support; and (3) sepg. the mixt. contg. the remaining pyrazole insensitive fraction of the dehydrogenase from the resin. The pyrazole is covalently bonded at the 4-position to the support having a connecting arm $\geqslant$ 12Å long.

Pure prods. useful e.g. in the treatment of alcoholism are obtd., US4131727 claimed the affinity resin. 2.11.77 as 847706 (7pp945)

NAAP- ★ D16 25691B/13 ★US 4111-753
Controlled atmos. appts., e.g. anaerobic incubator - has a docking mechanism to receive a transport unit and transfer specimens to chamber without admitting air
NATIONAL APPL 07.06.76-US-693624
(05.09.78) C12k-01/10

The system comprises an apparatus having a base, a flexible hood joined to it so that the hood and base define an airtight chamber and a sealable chamber door means communicating with the atmos. surrounding the chamber.

System further comprises a transport unit adapted to dock with the appts, such that specimens may be transferred between the interior of the unit and chamber without admitting gas from the surrounding atmos. into the chamber, the transport unit including a sealable transport door means communicating with the atmos. surrounding the transport unit, both door means comprising swinging doors which are in opposition when the doors are closed and the transport unit is docked with the apparatus; and support means to maintain the transport unit at the level of the chamber door means when the transport unit is docked. 7.6.76 as 693624 (9pp)

PARK/ ★ D16 25692B/13 ★US 4111-754
Immunological testing device with vertical passages - retaining liquid by capillary action but permitting washing
PARK H 29.11.76-US-745541
B04 R16 (05.09.78) C12k-01/10 G01n-31/14

An immunological testing device includes an array of vertical passages within a cylindrical housing. The passages connect with a common manifold at the upper end of the housing which allows liquid to be loaded into the passages where it is then retained by capillary action. Typically the passages are defined by a finned insert which is located within the tubular housing to give a surface area larger than the cross sectional area of the housing.

A washing structure may be placed over the upper end of the device and washing liquid added to overcome the capillary action thus releasing liquid from the lower ends of the passages where it enters a common funnel shaped discharge manifold.

The device is used in immunological testing e.g. enzyme-linked immunosorbent assay, non-competitive, for the determination of antigens. Liquid is retained in the passages by capillary action but can be washed out by adding a greater quantity of liquid. 29.11.76 as 745541 (8pp295)

EAST D16 24191B/13 =US 4111-838
Chromatographic material for purificn. of biologically active material - having polysaccharide covalently bound to inorganic carrier
EASTMAN KODAK CO 09.09.77-US-832035
*A97 B04 J01 (05.09.78) *DT2839-170 B01d-15/08*

A compsn. for use as a chromatographic material comprises an inorganic support having a high surface density of OH gps., and covalently bound to the support, particles of polysaccharide to form an inorganic support-polysaccharide particle matrix.

Pref. the support is porous silica, controlled porosity glass, controlled porosity ceramic or alumina. Pref. the particles of polysaccharide are of agarose gel or polyacrylamide-agarose gel. The free OH gps. of the matrix may be activated, e.g. by treatment with cyanogen bormide to form active sites where ligands can be attached for affinity chromatography.

The compsn. are useful in the purificn. of enzymes, antibodies and other biological materials. 9.9.77 as 832035 (7pp992)

CUTT ★ D16 25811B/13 ★US 4112-068

Cultivation of viruses in canine lung cell strain culture system - derived from fetal canine lung tissue

CUTTER LABS 29.08.77-US-828369 (12.05.75-US-576527)
B04 (05.09.78) A61k-39/12 C12k-09

A vaccine is prepd. by (a) maintaining a culture of diploid fibroblast-like cells of a finite cell strain derived from a fetal canine lung tissue in a nutrient culture medium, the cells being free of reverse transcriptase and C-type particles, being free of adventitious viruses, being non-oncogenic, and remaining diploid throughout their passage range; (b) inoculating the medium with a virus selected from rabies, infectious bovine rhinotracheitis, canine distemper, type 3 parainfluenza and blue tongue viruses; (c) cultivating the viruses in the medium, and (d) recovering a harvest of the virus therefrom.

The cell strain is designated CLDLa, and it is stated that the invention includes a cell culture system comprising cells of this strain in a suitable nutrient medium so as to provide for the cultivation of a number of viruses. 29.8.77 as 828369 (+11.8.76-US-713547) (5pp476)

RESE D16 88324A/49 =US 4112-069

Administration of peptococcus asaccharolyticus to ruminants - for preventing lactic acidosis or rumenitis

RESEARCH CORP 04.09.75-US-610337
*C03 +P14 (05.09.78) *GB1535-111 +A01k-45 A01k-67 A61k-37 C12b-01*

Ruminant animal which has previously subsisted on a hay dient or by range foraging is treated to avoid or overcome lactic acidosis when fed for fattening a high energy ration or diet, by administering a culture of microorganism Peptococcus asaccharolyticus (I) to establish a growth of (I) in the animal rumen.

Process is partic. suitable for treating sheep, cattle or calves. 4.9.75 as 610337 (6pp936)

BRIM ★ D16 25812B/13 ★US 4112-071

Figaroic acid antibiotic complex obtd. from ATCC 31129 - useful as antimicrobial, antitumour and phage inducing agent

BRISTOL MYERS CO 09.09.77-US-832034 (27.06.75-US-590994)
B04 (05.09.78) A61k-35

Antibiotic designated figaroic acid complex (I) and its salts with bases are new. (I) is an orange-red amorphous solid and a deep purple amorphous solid when recovered under alkaline conditions. It is soluble in DMF and DMA, lower alcohols, acetone, THF and dioxan, and it is insoluble in ether, benzene and aliphatic hydrocarbons. It gives a positive Tollens test. With alcoholic Mg acetate, it gives a deep red soln. having red fluorescence. (I) has characteristic i.r. and u.v. spectra, it analyses C 53.82, H 5.85, N 1-63 and O 38.70%, and it has characteristic Rf values by silica gel t.l.c.

(I) is active against Gram-positive bacteria, fungi, protozoa and yeasts; is used as antitumour agent effective in inhibiting growth of sarcoma-180, L-1210 lymphatic leukemia and B-16 melanoma, tumour systems in rodents, and phage-inducing agent. (I) is useful as sanitising agent for disinfecting skin, laboratory equipment, etc. (I) on mild acid hydrolysis gives the antitumour agent carminomycin I. 9.9.77 as 832034 (+10.1.77-US-758248) (11pp1248)

FESS/ ★ D16 25833B/13 ★US 4112-1

Rapid chemical cold stabilisation of wine - by addn. of see microcrystals of calcium tartrate and holding at room temp.

FESSLER J H 22.02.77-US-770852
E12 (05.09.78) C12g-01 C12h-01/02

Ambient temp. process for chemical cold stabilisation of wine having < 1% total acidity of tartaric acid malic aci comprises pptn. of calcium tartrate (I). Method compri es adding a slurry contg. seed microcrystals of (I) obtd. mixing 70-95 wt. pts. $CaCO_3$ (or equiv. amt. of $Ca(OH)_2$) with 5-30 pts. wt. of tartaric acid in aq. liq.

The slurry is added with sufficient agitation to cause rolling of the wine. The wine is then held at ambient tem with further rolling until amt. of (I) pptd. is equiv. to tha pptd. as potassium acid tartrate in conventional low tem processes. The ppte., comprising mainly (I), is then sepd. from the wine.

Process takes < 1 day c.f. several weeks for conven ional processes and palatability is not modified. 22.2.77 as 770852 (4pp949)

RHON D16 20710X/12 =US 4112-18

Inorganic support coated with epoxy and polyamine reactn. prod. for supporting catalysts, fixing enzymes and ion exchangers

RHONE-POULENC INDUSTRIES 30.08.74-FR-029702
*A91 B04 J04 +P73 (05.09.78) *BE-832-872 B32b-05/16 B32b-*

Porous mineral support materials comprise modified mi eral carriers of grain size range 5 µm to 5 mm, specific surface area 2-1000 sq. m/g, pore diam. 50-10000 Å an pore volume 0.5-1.3 ml/g. The carrier is in the form o particles coated with a cross-linked polymer formed by t reaction of ≥ 1 polyamine and ≥ 1 epoxide cpd. and pre ent at 1-60 wt.% (w.r.t. carrier). Pref. the carrier is brick, kieselguhr, mineral silicate or metal oxide.

The supports are for e.g. enzymes or catalysts. 25.8.75 as 607094 (5pp974)

STAU ★ D16 25880B/13 ★US 4112-2

Removing trace heavy metals from algae contg. lamb carrageenan - by treating with aq. soln. of food grade potassiu salt

STAUFFER CHEMICAL CO 26.10.76-US-735461 (06.01.75-U 538624)
(D13) (05.09.78) C08b-37/04

Removal of trace heavy metal contaminants from algae contg. λ-carragheenin comprises treating the algae with an aq. soln. of a sol. food grade K salt effective for the removal. Amt. K^+ is < 1.0 mole/l and temp. is ≤ 10° such that no appreciable extn. of the λ-carragheenin from the algae occurs.

Pref. algae are Gigartina and Iridaea spp., esp. G. acicubris and G. pistillata. Pref. K salts are K_3PO_4, K_2HPO_4, $K_4P_2O_7$ and esp. KCl. Wt. ratio K soln.:algae is > 7:1. Washing is pref. for 10 min - 2 hrs.

Used for removal of Cu, Zn, Hg, Cd, Pb and esp. As. The λ-carragheenin obtd. is useful in food prods. as an emulsifier, stabiliser and thickener. 26.10.76 as 735461 (4pp949)

See Also

D13 J5 4023170
D13 J5 4023171
D13 J5 4024085
D13 NL 159567
D13 SU 605599
D13 SU 605601
D13 SU 605834
D15 J7 9004547
D15 US 4111115
D15 US 4111768
D15 US 4112026
D17 GB 1543094
D21 GB 1542980
D25 US 4111855

D17: SUGAR; STARCH

MACH- ★ D17 24007B/13 ★BE -872-161

Infrared preheat of sugar lumps between moulding and drying - to prevent surface condensation and thermal shock

MACHINES CHAMBON SA 08.12.77-FR-037075
(16.03.79) C13f

The process is of the type in which lumps are conveyed from a moulding machine into an infra-red radiation, drying oven. Before entering the oven the lumps are now preheated for a very brief period by infra-red radiation so that each lump becomes enveloped in a cloud of water vapour. The cloud provides an insulating barrier to the infra-red radiation to prevent lumps heating up too quickly, bu ensuring that the surface temp. of each lump is above dev point as it enters the drying oven.

The preheating period pref. extends over 2-3 secs. and raises the surface temp. of each block to 65-80°C. The infra-red radiation for preheating is pref. employed at a wavelength of 3-6 μ.

The costs of controlled atmos. drying are not incured. 21.11.78 as 872161 (7pp448)

MACH- ★ D17 24008B/13 ★BE -872-162
Drying tunnel esp. for moulded moist sugar lumps - uses air at controlled temp. and humidity in cross flow pattern.
MACHINES CHAMBON SA 12.12.77-FR-037328
Q76 (16.03.79) C13f F26b

The process is of the type in which a prod. of moulded powder, esp. a sugar lump moulded from agglomerated moist powder, is conveyed through successive sections of an oven in which the temp. and relative humidity of the air is controlled. A main air flow is cocurrent to prod. travel in the first oven section and countercurrent in the second section. Simultaneously in both sections, an auxiliary air flow is directed at right angles to direction of prod. travel to homogenise the atmos. in each section.

In the first section, drying is pref. comparatively slow with humidified, auxiliary air while, in the second section drying is comparatively rapid with a much higher throughput of unhumidified air.

Drying is carried out with precise control of temp. and humidity to avoid thermal shock damage to prod. this is achieved without resorting to an oven with expensive arrangement of sealing the atmos. 21.11.78 as 872162 (13pp)

SELW- ★ D17 24145B/13 ★DT 2742-422
Continuously operating centrifuge - with endless flight conveyors for feed application to and solids removal from screen drum
SELWIG & LANGE 21.09.77-DT-742422
J01 P41 (22.03.79) B04b-11/02

A continuously operating centrifuge to separate a mixt. of solids and liq. consists of a revolving vertical drum screen. The application device for the feed and the discharge device for the solids consists of endless belts with flights which are driven by a common chain.

A safe discharge is ensured under all working conditions and a gentle handling of the solids, which are esp. sugar crystals. 21.9.77 as 742422. (15pp39)

GUIL/ ★ D17 24249B/13 ★FR 2395-057
Decanter for purifying water contg. particulate materials - incorporates scraper which can be lifted clear of deposited mud, facilitating starting after prolonged stoppage
GUILLAUME J P 22.06.77-FR-019552
J01 (23.02.79) B01d-21/06

A decanter, consisting of a decantation tank and a scraper driven axially to circulate decanted mud from the periphery of the tank to the centre where it is discharged, incorporates means of raising or lowering the scraper, pref. independent of its means of rotation, and such that the rate of lifting is considerably greater than that of lowering.

Used partic. for the pruificn. of water which has been used to wash material extracted from quarries and sand-pits or coal or mineral mines. Process facilitates starting of the scraper after a prolonged stoppage resulting in a thick layer of mud. The scraper can be raised out of the layer, then started up and lowered so that it enters the mud in a very progressive manner until it comes back to its normal operating regime. Decanter may be used when decantation gives rise to the formation of dense muds, e.g. in sugar refining, in the cases when a flocculating agent is made heavy by a flocculant and in the case where a ppte. is formed by crystallisation in a liq. medium other than water. 22.6.77 as 019552 (9pp1192)

CORP D17 34997A/20 =GB 1543-094
Maltose prepn. by enzymatic saccharification of starch - carried out on a porous support in presence of a thiol cpd.
CPC INT INC 04.01.77-GB-000087
*E13 (D16) (28.03.79) *BE-862-614 +C13k-07*

Maltose is prepd. from starch by enzymatically saccharifying liquefied starch with beta-amylase enzyme. Enzyme is immobilised by being physically adsorbed onto a porous carrier material, wherein the saccharification is conducted in the presence of an organic material having a thiol function.

polypeptide, water-insoluble synthetic polymers or their mixts. Pref. enzyme is immobilised in a column through which the liq. starch is passed in saccharification. A debranching enzyme, pullulamase, is also employed in saccharification.

Working life of beta amylase is improved and extended, enzyme being sensitive esp. in dilute soln.. 3.1.78 (6pp).

MANI- D17 23673A/13 =GB 1543-134
Measuring water content of crystalline sugar - from electrode potential between two metals in an electrolyte contg. sugar
INST MANIPULACNICH 21.09.76-CS-006112
*R16 (28.03.79) *DT2742-479 G01n-27/46*

A device for indicating the free water content of hydrous crystalline material includes a cathode and anode of different materials coupled to an evaluation unit consisting of an amplifier, a pulse counter and a comparator.

The amplifier output is connected to a meter checking the existence of potential and to a trigger circuit. The comparator compares data from the counter output with a preset value to provide an output signal indicating water content.

The device is very sensitive, and may be used to detect low concns. of water in sugar. 15.9.77 as 038524 (4pp).

NIHA- ★ D17 24709B/13 ★J5 4023-136
Refined sugar liquor prepn. - without using crystallisation and using the equipment used to prepare muscovado
NIHON HAISUI SEKKEI 21.07.77-JA-087545
(21.02.79) C13j-01/02

The method comprises (1) adding an aq. soln. of raw egg white, dry egg white, casein or konjak to raw sugar juice, (2) heating the mixt. to promote coagulation of the additive (3) including impurities in sugar juice, such as soluble starch, protein, etc., in the aggregate, (4) screening it to remove the formed floating sum, (5) decolourising it with active carbon, (6) filtering and (7) concentrating it.

Raw sugar juice obtd. by pressing cane can be processed directly to refined sugar liquor without crystallisation. The process is cheap.

Raw sugar juice obtd. by pressing cane has a concn. of 8 Be, but its filtrability is poor. The aq. soln. of egg white, etc. is added to improve filterability and the mixt. is heated to 90-99°C. Floating scum is removed using a 40-80 mesh screen and the clear sugar juice is decolourised with active carbon in two steps. The first step uses waste active carbon recovered from the second step and the second step uses new active carbon. Finally, the treated decolourised sugar juice is concd. under reduced pressure to a refined sugar liquor of > 26 Be. 21.7.77 as 087545 (3pp5)

NISS- ★ D17 24710B/13 ★J5 4023-137
Edible liq. sugar prepn. from molasses - by diluting molasses, adding acid, desalting by electrodialysis using ion exchange membrane and neutralising
NISSHIN SEITO KK 25.07.77-JA-088934
(21.02.79) C13j-01/02

Method comprises (a) diluting molasses to Bx 25-35, (b) adjusting pH of the diluted molasses to 0.5-3.5, (c) desalting it by the electrodialysis using ion exchange membrane and (d) neutralising the desalted molasses to pH 5.5 -7.5.

The desalting of molasses can be excellently with high efficiency by electrodialysis without partic. pretreatment under acidic condition of pH 0.5-3.5. Desalted edible molasses free of bitterness and astringency can be obtd. The ion exchange membrane is regenerated every three cycles and can be used for long time with keeping high desalting efficiency. 25.7.77 as 088934 (4pp5)

NIRT ★ D17 25090B/13 ★J5 4024-937
Rust resistant compsn. for use in concrete - comprises calcium nitrite, beet sugar, waste liq., benzotriazole and tri:alkanolamine
NISSO MASTER BUILDERS 27.07.77-JA-089943
E16 L02 M14 (E13 E33) (24.02.79) C04b-13/20

Compsn. contains (1) 100 pts. wt. calcium nitrite, (2) 3-20 pts. wt. (as solids) of beet sugar Stephen waste liq., (3) 0.5-5 pts. wt. benzotriazole and (4) 1-10 pts. wt. trialkanolamine.

Pref. (2) is the liq. by-produced in the Stephen process during the prodn. of beet sugar. (4) includes, e.g. tri ethanolamine, trimethanolamine, triisopropanolamine. (3) contributes to maintenance of the rust resistance of the compsn. for prolonged periods of time. The compsn. is used in amt. 0.5-2 kg/1 m^2 concrete.

The compsn. shows better rust resistance than calcium nitrite alone. 27.7.77 as 089943 (4pp136)

RAFT D17 39910V/22 =SU -606-533

Flotation separator to clean sugar-beet - with internally vaned rotating drum to convey stones and sand to overhead collector

RAFFINERIE TIRLEMONTOISE 12.11.73-BE-807191

*P41 (24.03.78) *BE-807-191 A23n-13*

A flotation separator, to remove stones and sand from sugar beet, conveyed in a stream of water along a trough comprises a rotating drum through which water is recycled to suspend the beet, while the heavy contaminants fall into pocketed vanes and are lifted and discharged into a overhead collector. The drain is pref. attached to a perforated cylinder, through which water recycles. Separator is compact, not subject to excessive wear, and not liable to jamming by stones. Separation of water (which is recycled) is economical.

Boser, A.A. Bul. 17/5.5.78. 22.10.74. as 068885 (4pp)

PFEI D17 65050X/35 =US 4111-714

Amino acids extn. from sugar beet - by treatment with strong acid and weak base ion exchangers

PFEIFFER & LANGEN 10.04.75-DT-515621 (10.04.75-DT-515591)

*B05 E16 (05.09.78) *BE-840-396 C07c-59/12 C07c-99/12 C13d-03/14*

Sepn. of aminoacids from raw sugar juice contg. impurities and aminoacids, comprises coagulating the impurities, sepg. the juice from the coagulated impurities, passing the juice through an acidic cation exchanger and then a basic anionic exchanger to absorb the dissolved aminoacids, eluting the ion exchangers with an ionic soln. to release the adsorbed aminoacids. and collecting an aminoacid-rich eluate.

Pref. the eluate is collected as a number of fractions each having a different aminoacid content. Specifically one fraction is rich in glutamine or glutamic acid hydrochloride The prods. are obtd. in comparatively high purity. 8.4.76 as 675014 (8pp982)

See Also

D15 J5 4024458 D15 US 4111768 D16 J5 4023193
D16 US 4111750

D18: SKINS; HIDES; LEATHER; TOBACCO

BROO- D18 18856X/11 =DS 2548-200

Leather conveyor belt for fibres - is formed by removing surface and after smoothing impregnating with polymer

BROOKSBANK 29.10.74-GB-046689

*A88 F07 Q35 +Q64 (22.03.79) *BE-834-927 C14b-09*

Mfr. of a leather belt for textile machines, for the conveyance of fibres, comprises removing the grain layer from a natural leather skin and then impregnating a surface of the flesh side layer with a polymeric material.

The superficial fibres of the flesh side layer are mechanically made firm, from the direction of the bared surface, before impregnation. Impregnation is effected from the direction of this surface. Suitable impregnants include polyurethanes, polyvinyl cpds. and alginates. 28.10.75. as 548200 (2pp267)

BLAN/ ★ D18 24244B/13 ★FR 2394-989

Treating tobacco smoke to remove harmful elements - by combination of filtration, condensate fixation and flavour modifying

BLANIE J M M P 21.06.77-FR-018911

E17 P15 (E33 E34) (23.02.79) A24b-15/02

The process comprises ≥1 filtration stage, ≥1 condensate fixation stage and ≥1 flavour modifying stage.

The process may be applied to cigarette, cigar and pipe smoking. The combination with the last stage enables more effective removal of harmful constituents including CO and it may also be used to discourage smoking. 21.6.77 as 018911 (7pp597)

HAUN D18 77780X/42 =GB 1542-883

Hollow cigarette tip ptrodn - with vacuum and pressure application to hollow mandrels in cells of revolving troughed drum

HAUNI-WERKE KORBER KG 27.03.75-DT-513663

*P15 +P72 (28.03.79) *DT2513-663 +B31c-01*

Mouthpiece tubes for cigarettes, cigars etc. are formed by winding a glued strip-like blank onto a rotating mandrel to form a tube, transferring the tube/mandrel combination to a chamber in which the tube is expanded radially to bear against the chamber wall, which defines the final dia. of the tube.

Pref. the strip has a width corresp. to a multiple of the length of a mouthpiece tube. The mandrels are hollow with surface openings whereby the opening may be subjected to suction or pressure.

Tubes are produced rapidly and accurately by this process. 17.3.76 as 010610 (7pp1379).

MATU ★ D18 24447B/13 ★J5 4022-276

Non-toxic tobacco filter with high activity at low temp. - comprises palladium or platinum, activated carbon, alkali, cement material and a permanganate

MATSUSHITA ELEC IND KK 18.07.77-JA-086382

A97 J01 P15 (20.02.79) A24f-13/06

The filter comprises a layer of Pd and/or Pt supported on a kneaded carrier of powdered activated carbon, alkali (e.g. potassium carbonate) and cement material (e.g. alumina cement); a second layer of kneaded alkali (e.g. potassium carbonate or calcium hydroxide), cement material (e.g. calcium sulphate) and powdered activated carbon; and a third layer formed by supporting alkali permanganate (e.g. potassium permanganate) on alkali (e.g. calcium hydroxide) and opt. cement material. The filter can efficiently remove harmful gases, such as CO, NO_x, etc. from tobacco smoke. 18.7.77 as 086382 (4pp50)

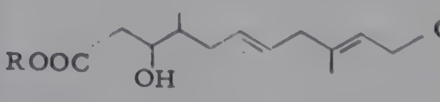
NISB ★ D18 25026B/13 ★J5 4024-820

Dodeca-diene:di:oic acid derivs. - useful as tobacco flavour improvers

JAPAN TOBACCO & SALT PUB 28.07.77-JA-089759

E17 P15 (24.02.79) A24b-03/12 C07c-69/73

3-Hydroxy-4, 9-dimethyl-6, 9-dodecadiene dioic acids and their esters of formula (I) are new: where R is H, CH_3, C_2H_5 or C_3H_7.



The cpds. are used as improvers of tobacco flavour. The esters are yellow oily materials and have refreshing citric aroma. The acid has strong sweet aroma. The compds. can be added 0.0001-0.01 wt.%, pref. 0.0005-0.001 wt.% based on the tobacco leaves. 28.7.77 as 089759 (4pp119)

GECI D18 06509Q/00 =NL -159-571

Tobacco prods contg acetylated methyl hydroxyethyl

GENERAL CIGAR INC 01.12.66-US-598215

*A97 +P15 (15.03.79) *NL6716-408 +A24b-03/14*

Tobacco sheet is prepd. by making a sheet of a suspension of fine tobacco in a viscouse dispersion of a cellulose deriv The water insoluble cellulose deriv. is dissolved in a mixt of water and an organic acid having at most 2C. The mixt. contains 15-80 wt.% organic acid and 85-20 wt.% water.

The cellulose deriv. used is pref. an acetylated ellulose and the organic acid is pref. acetic acid. 1.12.67 s 016408 (8pp549)

ELA D18 49533U/35 =SU -605-525

moking mixtures - contg protein (hydrolysate) with high amino cid content for milder smoke

CELANESE CORP 09.02.72-US-224996

*A97 P15 (03.04.78) *NL7301-771 A24b-15*

Smoking compositions are made by adding to dry-processed tobacco or tobacco substitutes, 0.1-5.0 wt.% of protein or protein hydrolysate of which at least 80% is composed of aliphatic or heterocyclic aminoacids. The base material may be tobacco or a tobacco substitute. The tobacco substitute comprises a burning modifier dispersed in a combustible substrate in a ratio of 15:85 to 85:15. Claimed combustible substrates are carboxy (m) ethylcellulose, (carboxymethyl) hydroxyethylcellulose, carboxy ethyl starch (m)ethyl cellulose, hydroxypropylcellulose. The burning modifier is chosen from carbonates oxides, hydroxides, sulphates, phosphates, aluminates, silicates or aluminosilicates of zinc, titanium, magnesium calcium, aluminium or iron. The protein materials pref. contain less than 10wt.% sulphur-contg. aminoacids and are egg albumen, gelatine, collagen, soya bean protein, casein, zein or gliadin.

Kite, C.H., Karstedt, B.D. Bul. 16/30.4.78. 8.2.73. as 882609 (3pp)

MEAT- ★ D18 25553B/13 ★SW 7706-308

Roller for carcass-skinning machine - can be adjusted vertically while skinning, and increases in dia. from ends towards middle

MEAT IND TECH AB 31.05.77-SW-006308

(D12) (27.12.78) A22b-05/16

NCON- ★ D18 25591B/13 ★US 4111-013

Removing oil from hides - by passing hides between small rigid and larger resilient rolls

NTHN CONVEYOR MFG 05.07.77-US-812521

(05.09.78) C14b-01/08

The hide is passed with its hair side down beneath the underside of a large dia. power driven horizontally oriented cylinder. The cylinder surface is resiliently deformable but is non-absorbent and does not have a bibulous surface.

Facing the cylinder are two smaller dia. solid surfaced rolls which are parallel to each other and to the cylinder. Sufficient pressure is maintained between the cylinder and rolls to cause the cylinder surface to conform to the curvature of the rolls to flex narrow zones of the hide alternately upwards and downwards. This successively expands and contracts the pores of the hide and expressed the oil from them.

The method is partic. used to express oil from cured pig skins prior to tanning. 5.7.77 as 812521 (8pp295)

ICIL D18 74090W/45 =US 4111-211

Smoking compsn. in ribbed sheet form - to reduce apparent density and improve combustion characteristics

IMPERIAL CHEM INDS LTD 02.05.74-GB-019245

*A97 P15 (05.09.78) *BE-828-125 A24b-03/14 +A24d-01/18*

Smoking mixtures comprise an uncompacted film of combustible binder and inorganic filler with one surface closely configurated with parallel ridges. The film is made by roll-milling a pasty aq. mass of the ingredients between rollers operating at successively peripheral speeds and with clearances adjusted to produce ridges. Pref. the pasty mass has a phase angle of 2-45° when tested under oscillatory shear conditions and contains carboxymethylcellulose (40%-80% by weight) as binder.

Uncompacted film with plane and ridged surfaces and uniform texture is provided. 16.5.77 as 797017 (+31.3.75 -US-563448) (7pp1364)

See Also

D12 J5 4024898 D21 DS 2025452

D2: DISINFECTANTS; DETERGENTS

D21 : DENTAL; TOILET PREPARATIONS

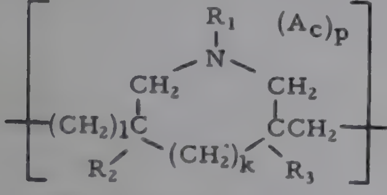
GENI/ ★ D21 23952B/13 ★BE-870-647
Compsn. for treating baldness and skin sores - contg. cholesterol, fatty acid which is pref. linoleic acid and phospho:amino:lipid which is pref. lecithin
GENIEYZ F 22.09.77-LU-078168
E17 (E15) (21.03.79) A61k

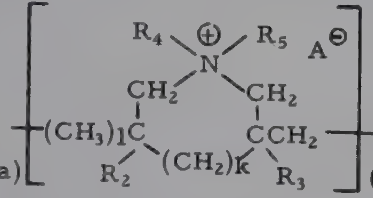
The compsn. contains: cholesterol, pref. 0, 1-5 wt %. or 8-20C chain unsatd. fatty acid, pref. linoleic acid, and pref. 0.5-8 wt %, and a phosphoaminolipid, pref. egg lecithin, and pref. 0.5-5 wt %, in a cosmetically or pharmaceutically acceptable solvent, pref. a 1-4C alcohol, partic. ethanol. The compsn. can also contain vitamin A, pref. at 3-5 wt %.

Compsn. is used for skin treatment, partic. for the scalp. If not only arrests loss of hair, but also assists its re-growth. Besides this, it can be used for the treatment of dermatological disorders and burns and sores. It gives satisfactory results in the treatment of shingles, herpes, mycoses, furuvicles, etc. 21.9.78 as 870647 (9pp1331)

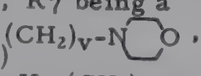
OREA ★ D21 23958B/13 ★BE-870-685
Aminated polymers used in hair and skin care products - contain specified cyclic gps. and possess durable affinity for keratin
L'OREAL SA 23.09.77-LU-078170
A96 (22.03.79) A61k

A suitable cosmetic carrier contains a polymer, pref. at a level of 0.1-10 wt %, which has cyclic gps. (Ia) and/or (Ib)

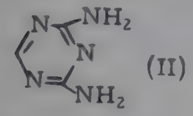

(Ia)


(Ib)

In the formulae k = 0 or 1, if k = 0, 1 = 1, if k = 1, 1 = 0, p = 0 or 1, R_2 and R_3 are H or Me. R_1 can be CH_2COOR_6, with R_6 a 1-3C alkyl gp. $CH_2CHOHCH_2Cl$, CH_2CHCH_2 (O), $(CH_2)_nCN$, n being 1 or 2, COR7, R7 being a 1-3C alkyl, CCl_3, CH_2Cl, PH, or



, v being 1 or 2, CH_2Ph, SO_2Ph, or a gp. (II)


(II)

R_4 can be H, $(CH_2)_mMe$, m being 0-21, $(CH_2)_qOEt$, q being 1 or 2, CH_2COOR_6, CH_2Ph, $CH_2CHOHCH_2Cl$, CH_2CHCH_2 (O), $(CH_2)_nCN$, n being 1 or 2 COR7, SO_2Ph, gp. (II) $CH_2CH{=}CH_2$, $CH_2CH_2OCH{=}CH_2$ or $(CH_2)_6\overset{\oplus}{N}{<}r', r'', r'''$ (r', r'' and r''' being 1-4C alkyl). A and A' are Cl, Br, I or OSO_3Me, and Ac is a mineral or organic acid, pref. HCl, HBr, HNO_3, CH_3COOH, butyric acid, or lactic acid.

The polymer can be exclusively composed of (Ia) and (Ib) in any proportion, or can contain 5-95 mole % of another monomer, pref. of certain defined monomers. The (Ia) gps. are pref. derived from the polymerisation of ≥ 1 diallyl amine, and (Ib) from the polymerisation of ≥ 1 ammonium salt. 22.9.78 as 870685 (38pp1331)

REIS/ ★ D21 24021B/13 ★BE-872-241
Dental surgical implant for securing crowns, bridges etc. - is keyed to profile machined jaw bone with tissue absorbable calcium phosphate
RIESS G 01.06.78-DT-824118 (09.12.77-DT-754917)
A96 P32 (16.03.79) A61c

The implant is of the type which comprises a body of a metal which is acceptable to the tissue of the gums. The area of the body to contact jaw bone surface is coated with a biologically stable and acceptable matrix of a polymer filled with inclusions of a calcium phosphate prepn. which will be absorbed progressively into living tissue.

The metal body has a cross-section corresp. with that of the implant and is provided with a mounting for the att achment of a bridge, crown etc. The calcium phosphate prepn. is in the form of fine particles baked together. Th body is pref. shaped as a stirrup which is precision fitte on to a machined area on the surface of a jaw bone. The calcium phosphate prepn. is pref. based on sintered, tri calcic phosphate in globules enrobed with slightly absorb able, tetracalcic phosphate.

Used as surgical implant to hold dental super-structu -es such as crowns, bridges etc. The implant is easy an inexpensive to fit. The provision for bone tissue to grow into implant cavities ensures positive keying to jaw bone without deep surgery. 23.11.78 as 872241 (20pp448)

OREA D21 74120R/40 =DS 2016-5
Hair cosmetic contg vinyl pyrrolidone copol - ymer
L'OREAL SA 08.04.69-LU-058383
*A18 (22.03.79) *BE-748-582 +A61k-07/11*

Agent for use as hair lacquer or setting lotion contains a copolymer of N-vinylpyrrolidone and normal additives. The copolymer comprises (A) 40-90% of N-vinylpyrrolidone and 60-10% of ≥1 monomer selected from (a) (meth allyl esters of 2-23C satd. fatty acids (b) vinyl ethers of 4-18C mono-alcohols or (c) 8-28C straight chain satd. a-olefins or (B) 40-90% N-vinylpyrrolidone and 40-5% of ≥1 of the monomers specified in (a) (b) or (c) and 20-3 % of ≥1 4-11C unsatd. monocarboxylic acid, the hydrocar bond chain of which may contain an oxygen atom, e.g. vinyloxyacetic acid. 7.4.70. as 016595 (6pp068)

COLG D21 88395R/47 =DS 2025-45
Polymer hair setting treatment
COLGATE PALMOLIVE CO 29.05.69-US-829116
*A16 F06 (A87 A96 D18) (22.03.79) *BE-751-185 A61k-07/09*

Hair is permanently waved or shaped by first treating with a reducing agent, e.g. ammonium thioglycolate to convert some of the disulphide gps. in the hair to mercaptan gps. Excess agent is removed by rinsing with water and the hair is treated with an olefinic monomer and a peroxide catalyst to graft polymer onto the hair. Unreacted monomer and catalyst are removed and the moist hair is put in the desired form and dried. The moist hair can be repeatedly shaped and dried.

The pref. monomers are methyl methacrylate, lauryl methacrylate, dimethylaminoethyl methacrylate and itaconic acid. 25.5.70. as 025452 (15pp068)

OREA D21 58788V/33 =DS 2405-21
Delayed action anti-perspirant prods - contg an aluminium deri and acid hydrolysed starch in powdered form
L'OREAL SA 05.02.73-LU-066960
*A96 (A11) (22.03.79) *DT2405-217 A61k-07/38*

Coated microcrystals of antiperspirant Al derivs. e.g. Al chlorohydrate, are useful in antiperspirant prepns. The Al deriv. is coated with starch, partly degraded by acid hydrolysis with a viscosity (after Stormer)of 60-70 (65) and with molecules made up of 30-40% amylose and 60-70% amylopectin.

The antiperspirant is more effective and longer lasting 4.2.74. as 405217 (6pp068)

DEGS D21 19036X/11 =DS 2440-42
Gold-deficient dental alloys - contg. gold, palladium, silver, bas metals e.g. copper, iron, iridium, rhenium, tin, indium, zinc
DEUTSCHE GOLD & SILBER 23.08.74-DT-440425
*M26 (22.03.79) *DT2440-425 C22c-05/04*

Noble metal alloy has a low content of Au for glazing porcelain for dental structures, e.g. crowns and bridges The alloy contains 0-45% Au, 25-60% Pd, 15-45% Ag, 0-0.5% Ir, 0-2% Cu, 0-2% Fe, 0-1% Rh, 0-6% Sn, 0-4% In and 0-1% Zn. Non-noble constituents must amt. to 3

10%.

The alloy has good mechanical properties and good resistance to corrosion. 23.8.74. as 440425 (3pp068)

HERA ★ D21 24038B/13 ★DS 2739-839

Gold soldering alloy for joining gold dental alloys - does not contain cadmium or zinc and has good flow properties and is non-toxic

HERAEUS W C GMBH 03.09.77-DT-739839

M26 P55 (22.03.79) B23k-35/30

Au-Ag-Cu soldering alloy has the compn. (by wt.) 20-36 (34.8)% Au, 35-50 (42)% Ag, 10-30 (15)% Cu, 1-8(5)% In, 0.1-6 (3)% Pd, and 0.1-5 (0.2)% Sn.

The alloy is used for joining noble metal dental alloys in the prodn. of dentures. It has a fine-grained structure and exhibits good corrosion resistance. It is age-hardenable, and being highly ductile, has good working properties. 3.9.77. as 739839 (2pp095)

WIEL- ★ D21 24110B/13 ★DT 2741-277

Copper-free gold dental alloy - contains germanium-titanium or cerium Mischmetal as grain refiner

FA TH WIELAND 14.09.77-DT-741277

M26 (22.03.79) C22c-05/02

The gold casting alloy, which does not contain Cu, has the compsn. 40-60% Au, 25-40% Ag, 5-20% Pd, 1-6% In and contains as grain refiner 0.01-0.1% Ge or Ti or Ce mischmetal. The grain refining alloy component has a m.pt. which is at least 700°C lower than the m.pt. of known grain refining elements such as Ir and Ru.

The alloy presents a saving in costs as it does not contain Pt. 14.9.77 as 741277. (6pp095)

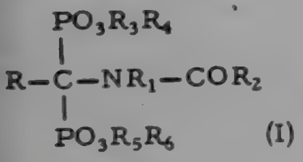
BENC ★ D21 24121B/13 ★DT 2741-513

Calcium phosphate di:hydrate stabilisation against hydrolysis - by treating with acylamino-alkylidene-di phosphonic acid

BENCKISER J A GMBH 15.09.77-DT-741513

B06 E33 (B05 E11) (22.03.79) A61k-07/16 C01b-25/32

In a new procedure for stabilising calcium hydrogen phosphate dihydrate against hydrolysis, $CaHPO_4 \cdot 2H_2O$ is treated with a diphosphonic acid of formula (I) or its water-soluble salt (where R_1, R_2 and R are H or lower alkyl; and R_3, R_4, R_5 and R_6 are H or alkali).



$$R-\underset{\underset{PO_3R_5R_6}{|}}{\overset{\overset{PO_3R_3R_4}{|}}{C}}-NR_1-COR_2$$

(I)

$CaHPO_4 \cdot 2H_2O$ is used as a polishing agent in dentifrice prepns. such as tooth-pastes and tooth-powders. (I) give better stabilisation against hydrolysis than the corresponding non-acylated amino-substd. diphosphonic acid derivs. 15.9.77 as 741513. (12pp280)

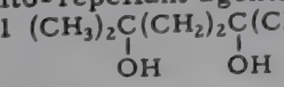
ANIS ★ D21 24240B/13 ★DT 2841-134

Mosquito-repellent agents - contg. 2,5-di:methyl-2,5-hexane:diol (BE 21.3.79)

ANIC SPA 21.09.77-IT-027751

B05 (D22) (22.03.79) A01n-09/24 C07c

Mosquito-repellant agents contain 2,5-dimethyl-2,5-hexanediol



$$(CH_3)_2\underset{OH}{\underset{|}{C}}(CH_2)_2\underset{OH}{\underset{|}{C}}(CH_3)_2$$

(I) as active substance.

(I) is long-acting, and is water-soluble so that it can be formulated in aq. media. Pref. formulations are aq.solns. creams, lotions, sprays, impregnating agents for cloths, and thermal diffusion tablets. 21.9.78 as 841134. (8pp280)

PROC D21 23634A/13 =GB 1542-907

Stabilised granular detergent compsns. - contg. impure optical brightener and peracid bleaching system

PROCTER & GAMBLE CO 20.09.76-GB-038822

*E14 (28.03.79) *DT2741-671 C11d-03/04 +C11d-10/02*

A granular detergent compsn. is prepd. contg. a base powder compsn. contg. a co-dried mixt. of 1-40 wt.% of synthetic organic detergent; 0.1-2 wt.% of impure optical brightening agent which is a deriv. of 4,4'-di(sym-triazinyl-amino)-stilbene-2,2'-disulphonic acid or its salt; 3-90 wt.% of pH regulator medium having pH in 1% aq. soln. of ≤ 9.3 contg. ≥1 detergency builder.

Total compsn. also contains a bleach system contg. 5-35 wt.% of a persalt bleaching agent, and 1-20 wt.% as activator for bleaching agent.

Compsn. is used as a low-temp. bleaching detergent compsn., esp. at temps. 20-60°C. Discolouration is not encountered during storage. 20.9.76 as 038822 (10pp).

FARB D21 17987A/10 =GB 1542-980

Low molecular wt. poly:ol used as antifreeze and in polymer prodn. - prepd. by condensing formaldehyde hydrate with hydroxy-aldehyde and hydroxy-ketone formaldehyde co catalyst (BE 28.2.78)

BAYER AG 31.08.76-DT-639084

*A41 E17 G04 (A60 A97 D16) (28.03.79) *DT2639-084 C07c-31/18 C08g-18/32*

A mixt. is prepd. contg. ≥1 polyhydroxyl cpd. and opt. ≥1 hydroxy aldehyde and/or ≥1 hydroxyketone, by condensing an aq. formaldehyde soln. and/or paraformaldehyde dispersion contg. 20-65 wt.% formaldehyde at 70-100°C.

The condensn. is carried out in the presence of a divalent lead catalyst either attached to a carrier or in salt form; and a co-catalyst contg. ≥1 hydroxyaldehyde and ≥1 hydroxyketone contg. ≥75 wt.% 3-6C cpds. where molar ratio 3C:4C cpds. is 0.5-2.0:1, 4C-5C cpds. is 0.2-2.0:1 and 5C:6C cpds. is 0.5-5.0:1. pH of reaction mixt. is maintained at 6.0-7.0 by addn. of base until 10-60 wt.% starting material has reacted, then at pH 4.0-6.0 so that it is lower by 0.5-3.0 units in first condensn. Reaction is stopped by cooling and acidification to deactivate catalyst when residual formaldehyde content is 0-10 wt.%.

Colourless prods. are formed, which are free from decomposition prods. Prods. are used in polyurethane prepn. 26.8.77 as 035921 (17pp931).

CABA/ ★ D21 24299B/13 ★GB 1543-029

Periodontal powder for treating bleeding gums and gingivitis - contains dried potassium alum and sodium bi:carbonate

CABARDO A M 04.01.78-GB-000220

B06 (28.03.79) A61k-33/06

Powder for periodontal treatment consists of evenly dried potassium alum (I) and $NaHCO_3$ in approx. wt. ratio 2:1.

The mixt. may also contain (a) ≥1 antiseptic (specifically methyl salicylate and/or eucolyptus oil), (b) ≥1 flavouring (specifically oil of peppermint and/or anise oil); (c) ≥1 sweetener (specifically saccharin) and (d) a colouring agent.

Used to control gum bleeding and for treating chronic or acute gingivitis. The powder is used to brush the teeth or massage the gums, or is made into a paste with water and this applied, 2 or 3 times a day, with a cotton swab. 4.1.78 as 000220 (2pp1251).

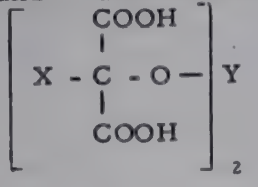
MONS D21 36938A/21 =GB 1543-145

Oral tartar inhibitor compsns. - contg. poly:carboxylic acids of the alkylene di:oxy-di:carboxylic type

MONSANTO CO 27.12.76-US-754371 (15.11.76-US-741824)

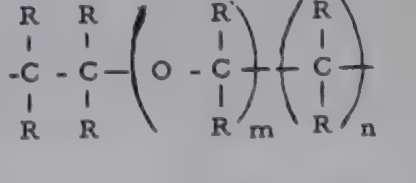
*B05 E17 (28.03.79) *DT2750-873 A61k-07/16*

Physiologically acceptable oral compsns. for inhibiting the formation of dental calculus comprise a propanedioic acid of formula (I) or their physiologically acceptable salt and a suitable carrier.



$$\left[X-\underset{\underset{COOH}{|}}{\overset{\overset{COOH}{|}}{C}}-O-\right]_2 Y$$

(I)



$$-\underset{\underset{R}{|}}{\overset{\overset{R}{|}}{C}}-\underset{\underset{R}{|}}{\overset{\overset{R}{|}}{C}}-\left(O-\underset{\underset{R}{|}}{\overset{\overset{R}{|}}{C}}\right)_m\left(\underset{\underset{R}{|}}{\overset{\overset{R}{|}}{C}}\right)_n$$

(II)

Y is CR_2 or (II). Each X is CR_3 if Y is CR_2, or $-O.CR_2COOH$ if Y is (II). Each R is H or lower alkyl. m is 0 or 1. n is m+(0-3). 2m+n is 0-3.

Compsns. are e.g. dentrifrices or chewing gums. 14.11.77 as 047268 (10pp974).

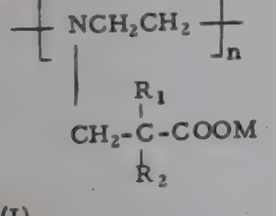
BIKO- ★ D21 24708B/13 ★J5 4023-135

Cosmetic compsn. - contg. aminoacid-form high molecular amphoteric surfactant

BIKOEN KK 20.07.77-JA-087184

A96 (A14) (21.02.79) A61k-07/06 C11d-01/90

Cosmetic compsn. is characterised by contg. aminoacid-form high molecular emphoteric surfactant having repeating units of formula (I).



(I)

In the formula, R_1 and R_2 are each H, halo or 1-10C alkyl; M is H, alkali metal atom or 1-10C alkyl; and n is integer > 1. In (I) R_1, R_2 and M may be different in each repeating unit; proviso is that M is H or alkali metal atom in ⩾ 1 repeating unit.

The high molecular amphoteric surfactant is a solid substance and its aq. 10% soln. is an emulsion of saponification degree 50%, as opaque soln. of saponification degree 70% or a transparent soln. of saponification degree 100%. It exhibits (a) emollient and protecting effect on hair, through its film-forming property, (b) foaming property, (c) viscosity-increasing effect, (d) having similar structure as EDTA the including effect on metals and the softening effect on hard water and (e) dissolving activity for water insoluble steriliser even under acidic condition. 20. 7. 77 as 087184 (5pp5)

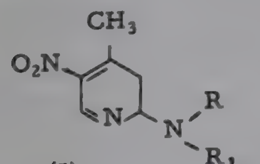
KOEI ★ D21 24783B/13 ★J5 4023-631

2-Substd. amino-5-nitro gamma-picoline derivs. - used as direct dyeing pigment for hair

KOEI CHEM IND KK 22.07.77-JA-088741

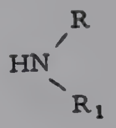
E23 (22.02.79) C09b-57

New picoline derivs. are of formula (I).



(I)

In (I) R is H or 1-4C alkyl gp.; R_1 is 1-4C alkyl gp. or alkanol gp. Prepn. of (I) comprises e.g. dehydrochlorination of 2-chloro-5-nitro-γ-picoline with amine of formula,



(I) can beused as direct dyeing pigment for hair or as raw material for aq. soln., suspension liq. or emulsion type dyeing agent for hair, and has reduced allergic reaction to humans. 22. 7. 77 as 088741 (14pp57)

MINA- ★ D21 25065B/13 ★J5 4024-905

Transparent soap prepn. - by pouring kneaded soap, wetted with e.g. water, into mould, before or after charging of soap glue, cooling etc.

MINASAMA SEKKEN KK 26.07.77-JA-090112

E17 (D24) (24.02.79) C11d-09/26

Soap is prepd. by pouring mechanically-kneaded soaps of arbitrary shapes wetted with ⩾ 1 of water, glycerine, propylene glycol, lower alcohols, etc. into the mould of arbitrary shape before or after charging with soap glue for mould-kneading prepd. by mixing dyes, perfumes, white sugar, etc., cooling and solidifying and drying the mixts.

The transparent soaps contg. mechanically-kneaded soaps have an attractive external appearance and are dissolved and foam satisfactorily when used with cold water. They are produced over a period of 1 month, different from the conventional ones produced over a period of 2-3 months. 26. 7. 77 as 090112 (2pp136)

KANE ★ D21 25068B/13 ★J5 4024-908

Non-irritating liq. shampoo - contains quat. ammonium salts, sodium chloride, poly:hydric alcohol(s), hydrocarbon(s), oils, sorbitan fatty acid ester(s), etc.

KANEBO KK 26.07.77-JA-090779

A96 E19 (D25) (24.02.79) A61k-07/06 C11d-01/62 C11d-10

The shampoo contains (1) 0.1-2.0 wt.% quat. ammonium salts of formula (1) $[RN(CH_3)_2R']^+Cl^-$ (I), (2) 0.5-40 wt.% NaCl, (3) 1-10 wt.% polyhydric alcohols, (4) 1-7 wt.% liq. or paste hydrocarbons, (5) 0.1-2.0 wt.% animal or vegetable oils, (6) 0.1-2.0 wt.% sorbitan fatty acid esters, (7) 1-10 wt.% ethyl alcohol, (8) 10-40 wt.% higher fatty acid potassium salts and (9) 22-85.2 wt.% water. The shampoo separates into two distinct layers.

In (I) R is 6-17C alkyl or alkenyl; R' is benzyl, 4-nitrobenzyl, 3,4-dichlorobenzyl, 2-chlorobenzyl. 4-chlorobenzyl, 2,4-dichlorobenzyl, isomerictrichlorobenzyl, methylbenzyl, ethylbenzyl, dimethylbenzyl, 2,4-dimethylbenzyl, 3,4-dimethylbenzyl or methyl. Component (1) is e.g. lauryldimethylbenzyl ammonium chloride, octyldimethylbenzyl ammonium chloride, lauryltrimethyl ammonium chloride. Component (4) is e.g. liq. paraffin, hydrogenated polyisoprene, squalane.

The shampoo does not irritate the skin and hair, prevents damage to the hair, imparts lustre and flexibility to and has excellent foaming and cleaning power, storage stability and scurf-preventing property. 26. 7. 77 as 090779 (9pp136)

KIMI- ★ D21 25105B/13 ★J5 4024-964

Moulding materials prodn. - by mixing alginic acid composite salt, calcium sulphate, soda ash, diatomaceous hearth, calcium carbonate and sodium borate

KIMITSU KAGAKU KENK 26.07.77-JA-089602

A11 E33 P32 (E34) (24.02.79) A61f-01/24 C08l-05/04

Moulding material comprises 100 pts. alginic acid composite salts prepd. by masking 3/10-8/10 of the carboxyl gps. contained in alginic acid with sodium or potassium or magnesium, and masking the remainder of the carboxyl gps. with above divalent metal salts other than magnesium; 30-40 pts. of Ca sulphate; 15-25 pts. soda ash; 200-300 pts. diactomaceous diatom earth; 300-500 pts. Ca CO_3 and 0.5-3.0 pts. Na borate, and opt. wetting agents, colour elements, perfumes and pH indicators.

No coagulant is required. Above 1000 cc of moulding materials can be prepd. without forming undissolved part. 26. 7. 77 as 089602 (3pp136)

FARH D21 60322Z/00 =NL-159-633

Maddrell salt preparation - useful as dental powder

HOECHST AG (KNAP) 27.06.67-DT-K62653

*E34 (15.03.79) *BE-717-150 C01b-25/44*

Maddnell salt (water insol. $NaPO_3$) is prepd. by heating NaH_2PO_4 at ~450°C to remove water vapour. The NaH_2PO_4 has a surface area of $\geqslant 0.1 m^2/g$. (BET) and during the heating at 200-450°C, the partial water vapour pressure is maintained at 50-450mm by controlling the rate of heating to $<30°C/min$. or by controlling the rate of passage of gas low in water vapour content, over the reaction material. 19. 6. 68 as 008614 (7pp549)

GILL ★ D21 25657B/13 ★US 4111-653

Stabilised aq. alkaline stannite depilatory compsn. - comprises stannous tin complexed with poly:hydroxy:mono:carboxylate anion

GILLETTE CO 16.02.77-US-769386

E12 (05.09.78) A61k-07/15

An aq. sol. stannite depilatory compsn. comprises 0.2-0.8 M (0.3-0.5 M) Sn^{2+} complexed with a 5-7C polyhydroxymonocarboxylate anion (I) having 4-6 OH gps. Molar ratio of Sn^{2+}: (I) is 2:1-1:2 (3:2-4:3) and compsn. pH is 12.8-13.3 (12.9-13.2). (I) is esp. gluconate.

Compsn. is pref. thickened for ease of use, e.g. with 20% kaolin. Activity is enhanced by addn. of anionic, nonionic or ampholytic surfactant(s) e.g. fatty taurates, alkyl and arylsulphonates, amine oxides, sorbitan esters, sulphobetaines, etc. Used Sn (II) salts can be used to prepare the stannite, esp. $SnCl_2 . 2H_2O$ (opt. via. $SnO . xH_2O$).

Alkali stannites are stabilised for longer times and can be used safely at higher pH than previously possible. 16. 2. 77 as 769386 (4pp949)

WILK D21 49204Y/28 =US 4111-827

Aerosol foams esp. for shaving - stabilised with nitrogen-contg. surfactant and fatty alcohol

WILKINSON SWORD LTD 27.02.75-GB-008249

*A97 E16 (A25 E13) (05.09.78) *GB1479-706 C11d-17*

Aerosol shaving foam dispenser contains as foamable medium an aq. concentrate contg. (i) 1-15 wt.% of a N-contg. surfactant (I); a water-dispersible lauric polyamide (2:1) o m.pt. 53-57°C, acid number ⩾ 10 and alkali number 136-156; or a tris-(polyoxyethylene) alkyl ammonium phosphate (ii) 0.5-6 wt.% long chain 12-18C fatty alcohol and (iii) 1-1 wt.% (a) water-(in)soluble nonionic surfactant of HLB 3-40

5-12C alkyl-substd. benzene or naphthalene gp., (b) 12-18C alkyl sulphosuccinate or a benzene or naphthalene sulphosuccinate contg. a straight chain 5-12C alkyl gp. or (c) an N-coconut-acyl-N-methyl taurate.

(I) is a cpd. of formula $RC(O)N(Y)(CH_2CH_2O)_nH$, $R'-Z-N(R)(R^2)\longrightarrow O$ or $[NABCD]^+[X]^-$. In the formulae, R is 12-18C alkyl. Y is H or $(CH_2CH_2O)_mH$. m is 1-30. n is 1-30. n + m is 1-40. When Y is H, n is >10. R^1 is 11-17C alkyl. R^2 is 1-3C alkyl. Z is CH_2 or $CH_2CONH(CH_2)_x$. x is 2-5. A is 12-18C alkyl. X is an anion. Either B, C and D are 1-3C alkyl; or B and C are $(CH_2CH_2O)_y$ where y is an integer (B and C providing 2-12 ethoxy units) and D is 1-3C alkyl; or B, C and D complete a pyridine nucleus. 27.2.76 as 662265 (6pp992)

LIFE- ★ D21 25809B/13 ★US 4112-066
Breath freshener compsns. contg. calcium hydroxide - opt. with magnesium hydroxide and/or copper gluconate
LIFE SAVERS INC 21.06.76-US-697887
E12 (E33) (05.09.78) A61k-07/16 A61k-09/68

Breath freshener compsn. comprises $Ca(OH)_2$ dispersed in a non-toxic carrier. Amt. of $Ca(OH)_2$ is pref. 0.05-1 wt.%. Compsns. may also contain $Mg(OH)_2$ and/or Cu gluconate.

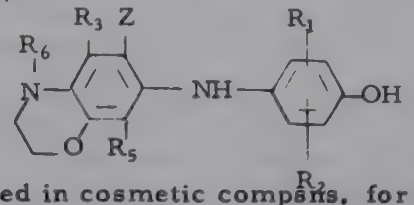
Pref. compsns. contain (i) 0.025-1 wt.% $Ca(OH)_2$ and 0.025-1 wt.% $Mg(OH)_2$; or (ii) 0.04-0.99 wt.% $Ca(OH)_2$ with 0.005-0.01 wt.% Cu gluconate opt. together with 0.04-0.99 wt.% $Mg(OH)_2$.

Compsns. may be in the form of sweets, chewing gum, dental creams, mouthwashes, etc. 21.6.76 as 697887 (8pp949)

OREA D21 05779U/05 =US 4112-229
Diphenylamines - as indoaniline leuco derivs in hair dyes
L'OREAL SA 14.07.71-LU-063527 (11.08.69-LU-059265)
*A96 E24 (E23) (05.09.78) *NL7209-718 C07d-265/14*

New cpds. are of formula (I) (where R_1 is Me or Cl; R_2 is H or Me; R_3 is H or Me; R_5 is H, R_6 is H or Me; and Z is amino or OH).

(I)



(I) are used in cosmetic compsns. for the hair, e.g. hair dye compsns. and hair setting lotions. A specific (I) is N-[(6'-amino-1'-oxa-4'-aza-1',2',3',4'-tetrahydro)-7'-naphthyl]-4-amino-2-methylphenol. 18.5.77 as 798011 Div. ex. 4024627; 3787174 C.i.p. 3792090 (+6.8.70; 11.7.72; 11.9.73; 30.9.75 - US-061833; 270650; 396296; 618244) (13pp976)

See Also

D13 DT 2839502 D23 J5 4024805

D22: BANDAGES; DRESSINGS

SCOV D22 41056F/00 =DS 1518-347
2-haloethyltrialkylammonium halides plant growth
VEBA CHEMIE AG 23.07.65-DT-S37426 (23.07.65-DT-518347)
*B05 C03 E16 +P34 (22.03.79) *DT1518-347 +A01n-05 A61l-13 B01f-17 C07c-87/30*

2-Chloroethyl-trimethylammonium chloride (I) is produced by reacting trimethylamine with excess 1,2-dichloroethane (II) at elevated temp.

Process is operated, without additional solvent, using 2-10 times the molar excess of (II), at a reaction temp. of 50-80°C. The new process gives almost theoretical yields of (I).

(I) so produced is useful as a plant-growth regulator, disinfectant or emulsifier. 23.7.65. as 537426 (2pp481)

HARP/ D22 82568R/44 =DS 1907-486
Chemical concentration control apparatus
HARPER N C (HAR /) 15.02.68-GB-007537
*J04 R26 (22.03.79) *ZA6901-074 +G05d-11/08*

The concn. of a disinfectant in the water of a swimming pool is controlled by adding a predetermined amount of disinfectant within a cycle. Between this moment and the subsequent taking of a sample, a predetermined time is allowed to elapse. The concentration is then measured by adding an indicator to the sample. The whole process is cyclically repeated to keep the concentration within narrow limits.

This allows for a time which is necessary for a homogeneous distribution of the disinfectant. 14.2.69. as 907486 (9pp39)

ETHI D22 11368S/06 =DS 2037-813
Polypropylene suture thead for medical - use
ETHICON INC 31.07.69-US-846412
*A17 F01 P34 (A34 A96) (22.03.79) *NL7011-148 A61l-17*

Monofilamentary, surgical suture material (I) comprises isotactic polypropylene (II) of dia. 50.8-508 µm and the following characteristics of (II): wt. av. mol.wt. 294,000-316,000; no. ave. mol.wt. 78,400-82,100; tensile strength 3.9-8.9 g/den; loop strength 3.3-7.9 g./den.; elongation at break 36-62%; and Young's Modulus 2,200-3,680 Kg/cm^2.

(I) is produced by stretching fibres (obtd. by melt

original length; heating it to 141-149°C; and shrinking the stretched monofilamentary fibre to 91-76% of its stretched length.

(I) has improved flexibility. 30.7.70. as 037813 (15pp 481)

DESI D22 04179Y/03 =DS 2531-260
D-panthenol anhydrous spray solutions - contg an oil as solvent and an alcohol and a chlorinated hydrocarbon as solubilizers
DESITIN WERK KEINKE GMBH 12.07.75-DT-531260
*A96 B05 (22.03.79) *DT2531-260 A61k-31/16*

New aerosol non-aq. D-panthenol dispersions in oil are used for spraying skin tissues or wounds. A pref. compsn comprises a non-toxic oil or oil mixt., (100 pts. wt.); D-panthenol, (0.5-25 wt.%); 1-8C alkanol as solvent, (10-300 pts. wt.); and a chlorinated 1-2C hydrocarbon, including $CFCl_3$, as propellant. 12.7.75. as 531260 (2pp047)

FARB D22 87976A/49 =DS 2723-118
Disinfectant contg. benzyl alcohol hemi:formal and acid - for controlling microbes in paint, dyes, water etc.
BAYER AG 23.05.77-DT-723118
*E14 F06 G02 P34 (E15) (22.03.79) *DT2723-118 A61l-13*

Microbiocidal compsn. comprises benzyl alcohol hemiformal, (3-50 pts. wt.) as the active components; an acid, pref. a carboxylic, hydroxycarboxylic or inorganic acid, (3-25 pts. wt.); isoPrOH, (5-45 pts. wt.); water, (40-80 pts. wt.); and opt. a benzyldimethylalkylammonium chloride, (4-40 pts. wt.); and a tenside, (5-25 pts. wt.).

The prods. are used for the protection of materials or as disinfectants. 23.5.77. as 723118 (5pp047)

WEIS/ ★ D22 24084B/13 ★DT 2740-747
Hunting trophy boiling device - with adjustable holder for antlers on float
WEISS A 09.09.77-DT-740747
(22.03.79) A01n-01

A device for the boiling and bleaching of heads of deer to prepare antlers for mounting as trophies compensates for the evaporation of the liq., yet prevents the antlers or their rosettes from being attacked. The holder is mounted on a circular float, pref. with a central opening which the right depth of immersion. 9.9.77 as 740747. (7pp39)

RAUS- ★ D22 24179B/13 ★DT 2838-590

Surgical compress mfr. - using drum with suction strips and cutters followed by folding station

RAUSCHER & CO 09.09.77-OE-006511

P32 +P34 (22.03.79) A61f-13 A61l-15

Surgical compresses are made of muslin strips with turned-over longitudinal edges on a drum for crosswise folding, followed by a device for lengthwise folding. The drum shell has suction strips which communicate with a suction pipe inside the drum. The cutters on the drum cooperate with a separate cutter plate to cut the muslin strip by shear action.

The required suction capacity is reduced and the severe shocks caused in conventional machines when their cutters contact a roller in the drum frame are eliminated. 5.9.78 as 838590. (21pp39)

FISC/ ★ D22 24248B/13 ★FR 2395-032

Reservoirs for volatile atmospheric reagents e.g. disinfectants - sized to rest on a standard light bulb for heat source

FISCHER H 22.06.77-FR-019702

P34 (23.02.79) A61l-09/02

Blocks of absorbant (cellulosic material contg. a volatile material for conditioning local atmospheres, e.g. for deodourising or disinfectant purposes, are made in the form of a 'C' or 'O' profile with a metal cover on one face and the bore end sized to rest on a conventional light bulb as a source of heat for dissipating the volatile constituent(s). Typically the block is about 2 mm thick and 85 mm overall dia., with an internal opening of 45 mm dia. 22.6.77 as 019702 (6pp515)

GAMB/ ★ D22 24251B/13 ★FR 2395-066

Autoclave, partic. operating alternately under pressure and vacuum - incorporates joint ensuring fluid-tightness under both conditions without necessity for mechanical means of tightness

GAMBINI J 21.06.77-FR-019026

J04 Q65 (23.02.79) B01j-03/04 F16j-15/46

An autoclave, partic. one operating alternately under steam press. and under vacuum, as in sterilisation, incorporates an annular joint surrounding the opening and mounted so as to slide in a housing in a flange integral with the autoclave vessel and in the same plane as the opening. Means are provided for making the bottom of the housing communicate with the atmos. or with a source of press., pref. the boiler which feeds steam to the autoclave vessel, or with a source of vacuum. The dimensions of the joint are such that it projects by its outer face outside the housing, even when it is bearing by its inner face on the bottom of the housing.

The invention ensures that the autoclave is fluid-tight under vacuum or under press. without it being necessary to provide mechanical means of tightening the door. 21.6.77 as 019206 (5pp1192)

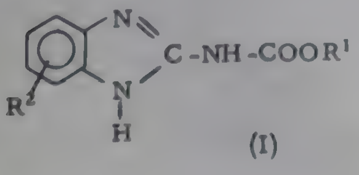
FARB D22 61390Y/35 =GB 1542-829

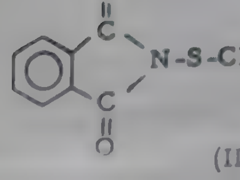
Microbicidal agents for adhesives, textiles and paper - contg. benzimidazole-carbamate and trihalomethylthio-phthalimide

BAYER AG 20.02.76-DT-607033 (20.02.76-DT-607030)

*C02 E13 F06 (F09) (28.03.79) *DT2607-033 A01n-09/02*

Microbicidal compsn. contains (1) a benzimidazolyl alkyl carbamate (I) (where R^1 is 1-4C alkyl opt. substd. by OPh or by 1-4C alkoxy; R^2 is H, 1-4C alkyl, halo or NO_2, but R^1 and R^2 are not both CH_3) and (2) (i) a halomethyl-thiophthalamide (II) (where R^{4-6} are F or Cl) or (ii) N, N-dimethyl N'-phenyl-(N'-fluorodichloromethylthio)-sulphamide or (iii) tetramethylthiuram disulphide and 1-methylol-2-thiono-1, 2-dihydrobenzthiazole.


(I)


(II)

A synergistic effect between (1) and (2) is

partic. effective against fungi. The compsn. is partic. for preserving adhesives, textiles and paper. 16.2.77 as 006467 (+ 20.2.76 - DT - 007031) (9pp945).

STAU D22 58200X/31 =GB 1542-831

1,3-Dichloro-acetone oxime alkyl carbonates - prepd. by reacting 1,3-dichloroacetone oxime with alkyl haloformate (BE190776)

STAUFFER CHEMICAL CO 20.01.75-US-542160

*B05 C03 H01 P34 (D15) (28.03.79) *DT2601-867 A01n-09/20*

Process water is treated to inhibit the growth of sulphate-reducing bacteria by contacting with an effective amt. of 1, 3-dichloroacetaneoxime acetate or propionate. Pref. the bacterium is of a species Desulfovibria.

Process prevents e.g. plugging of injection wells in oil prodn.. 20.1.76 as 19183/78 Div.ex. 1542832 (3pp974).

STAU D22 58200X/31 =GB 1542-832

1,3-Dichloro-acetone oxime alkyl carbonates - prepd. by reacting 1,3-dichloroacetone oxime with alkyl haloformate (BE190776)

STAUFFER CHEMICAL CO 20.01.75-US-542159

*B05 C03 H01 P34 (D15) (28.03.79) *DT2601-867 A01n-09/20 C07c-131*

Novel 1, 3-dichloroacetaneoxime derivs. are of formula $(CH_2Cl)_2C=N-O-CO-O-R$ (I). R is 1-6C alkyl, pref. methyl, or n-butyl. Pref. (I) are prepd. by reacting $(ClCH_2)_2C:NOH$ with Hal.COOR where Hal is halogen.

(I) are bactericides and fungicides. They are active against Desulfovibria. 20.1.76 as 002136 (3pp974).

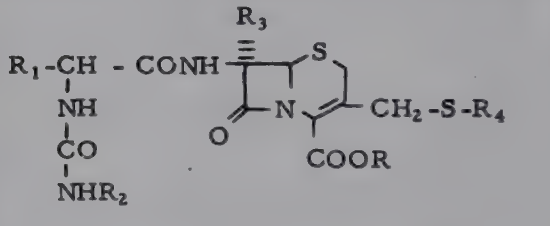
SQUI D22 96110X/51 =GB 1542-90

3-Triazolyl thio derivs. of ureido cephalosporins - obtd. by acylatio of corresp. 7-amino cpds.

SQUIBB E R & SONS INC 08.09.75-US-611040

*B02 C02 (D13) (28.03.79) *US3996-217 A61k-31/54 C07c 501/36*

3-Triazolyl derivs. of ureido-7α-methoxy or desmethoxy cephalosporins of formula (I) are new. In (I), R is H, lower alkyl, (di)-phenyl lower alkyl, tri(lower alkyl)silyl, tri-haloethyl, a salt forming ion or $-CH(R_5)-O-COR_6$; R_1 is H, lower alkyl, 3-7C cycloalkyl, 3-7C cycloalkenyl, 3-7C cycloalkadiene, or phenyl or phenyl lower alkyl opt. having 1-3 substits. from halogen, lower alkyl, lower alkoxy and OH, or R_1 is (un)substd. thienyl, furyl, pyrryl, pyridyl, (iso)thiazolyl, (is)oxazolyl, thiadiazolyl or tetrazolyl, where the substd. is halogen or 1-4C alkyl and the heterocyclic gp. is attached by a C atom. R_2 is H or lower alkyl; R_3 is H or methoxy; R_4 is opt. substd. triazole; R_5 is H or lower alkyl and R_6 is lower alkyl, pheny or phenyl lower alkyl.


(I)

Cpds. (I) have a broad spectrum of antibacterial activity against gram positive and gram negative organisms. They may be used as antibacterial agents e.g. in cleaning or surface disinfecting compsns. or to combat infections. They may also be used as nutritional supplements in animal foods. 6.9.76 as 036855 (20pp984)

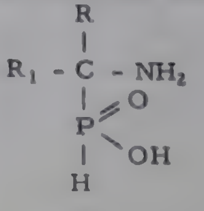
CIBA D22 82995Y/47 =GB 1542-93

Substd. (1)-amino-methane-phosphonous acid derivs. - useful a antimicrobials for in vivo and in vitro applications

CIBA GEIGY AG 21.05.76-GB-021000

*B05 C03 E11 (28.03.79) *BE-854-843 C07f-09/48 + C07c-119/0*

Phosphonous acid derivs. of formula (I) are new. In (I), and R_1 are indep. H, deuterium, lower alkyl, lower alkenyl, lower alky-nyl, cycloalkyl, aryl or 3-7 membered heterocycli ring contg. ≥1 O, N or S atoms and which may be fused to an aromatic, suc


(I)

alkyl it may opt. be substd. by 6-10C aryl, 3-7 membered heterocyclic ring as above, 1 or 2 $-COOR_2$, $-OR_2$ or $-SR_2$ gps. where R_2 is H or 1-3C alkyl, $-SS-CH_2-CH-(NH_2)-PO_2H_2$ gps., $-NR_3R_4$ gps. where R_3 and R_4 are indep. H, lower alkyl or R_3 and R_4 together form a $\geqslant$6C polymethylene chain opt. interrupted by O or N, $-NH-C(=NH)NH_2$ gps or halogen and when R or R_1 or the substit. of a lower alkyl gp. is aryl gp. or heterocyclic ring it may opt. be substd. by 1-3 halogens, $-COOR_5$, $-OR_5$ or SR_5 gps. where R_5 is H or 1-3C alkyl, methylenedioxy gps. or $-NR_3R_4$, or R_1 and R_2 together form a 2-7C polymethylene chain opt. interrupted by O, N or S.

Cpds. (I), the corresp. switterion form, and salts with acids or bases and their optical isomers with the proviso that R and R_1 are not both H, are antimicrobial agents useful for the treatment of diseases in humans and animals as antiseptic agents and for the protection of materials from microbial attack. 30.5.77 (16pp984).

RESE D22 53827Y/30 =GB 1543-010

Imparting water absorbency to cellulosic material - by graft copolymerising with vinyl monomer and subjecting to decrystallisation

RESEARCH CORP 09.03.76-US-665181

*A87 F06 +P21 (28.03.79) *US4036-588 +C08f-06 C08f-08*

Water-absorbent properties are imparted to a cellulose-contg. material by graft-copolymerising onto the material $\geqslant$1 ethylenically unsatd. monomer, dimer or oligomer contg. a hydrophilic gp.. Graft-copolymerised material is treated with a decrystallising agent for cellulose in an amt. and for a time sufficient to increase the water absorbency of material.

Pref. graft-copolymerisation is effected in the presence of high energy radiation, esp. in a dose of 0.1-50 megarads. Monomer, dimer or oligomer is pref. acrylic acid, methacrylic acid, acrylamide, 2-hydroxyethyl (meth)acrylate, vinyl pyrrolidone, vinyl pyridine, vinyl alkyl ether, maleic anhydride, poly(maleic acid half esters) or polystyrene sulphonic acid.

Prod. is used in disposable diapers, catamenial receptors, surgical swabs etc.. 15.2.77 as 006223 (5pp).

SAIZ/ ★ D22 24445B/13 ★J5 4022-250

Health socks or stockings - impregnated with ink compsn. contg. copper powder, preventing Tinea Pedis

SAI Z 20.07.77-JA-086146

C03 F06 G02 P21 P32 (20.02.79) A41b-11 A61f-13

The socks or stockings are produced using an ink compsn. consisting of an ink for silk screen printing process (3 pts. wt.) and a resinous ink (1 pt. wt.) by one litre of volume is mixed with 300 g of copper powders and cyclohexane as diluent adjusting its concn. and the resulting mixt. is coated on a bottom surface of socks or stockings.

Socks or stockings protect arch skin and heel skin of human legs from Tinea Pedis (Athlete's foot). 20.7.77 as 086146 (3pp15)

KURE ★ D22 24446B/13 ★J5 4022-252

Deodorising antifungal inner sole - comprises spherical activated carbon adhered to vinylidene chloride resin material

KUREHA CHEM IND KK (KIHA-) 19.07.77-JA-085653

A83 F07 P22 (20.02.79) A43b-10 A43b-17

The inner sole is produced by piling up coarse net-form back cloth of vinylidene chloride system synthetic resin monofilament (A); honeycomb-form intermediate cloth of the same resin monofilament as (A), (B); sheet of short fibre non-woven cloth of the same resin as (A) on which spherical activated carbon of 0.1-1 mm dia. (80-100 g/m^2 in the amt. adhered) is stuck by a latex having continuous bubbles and contg. antifungal agent soln. (C); and finely woven surface cloth of the same resin monofilament as (A)(D) and fusing and fixing.

The resulting inner sole is excellent in gas permeability, deodorising activity and antifungal activity. As bonding and cutting by fusion can be simultaneously carried out, cutting process can be omitted. 19.7.77 as 085653 (4pp50)

KAKE ★ D22 24686B/13 ★J5 4023-095

Deodorant material for applying to e.g. pigsty - comprises urea and a nonionic surfactant e.g. a polyoxyethylene ether cpd.

KAKEN CHEM KK 21.07.77-JA-087969

E19 J01 P34 (E37) (21.02.79) A61l-09/ B01d-53/16*

The deodorant comprises urea and a nonionic surfactant, e.g. polyoxyethylene nonylphenylether, polyoxyethylene-octylphenylether etc. The deodorant exhibits excellent effect within short period and excellent stability, and is capable of converting by absorption reaction, odour substances, e.g. satd. and unsatd. fatty acids, H_2S, NH_3, SO_2, H_2S, aliphatic and aromatic aldehydes, mercaptans and org. amines etc. (contained in exhausted or waste gas) into odourless substances.

Opt. a perfume, a pigment, a dye-stuff, a sterilising agent an insecticide etc. may be added. The deodorant is used, e.g. as soln., powder, granules, tablet and capsules, etc., and may be coated with a film.

In an example, 20 litres of a soln. of deodorant contg. 100 ppm of urea and 50 ppm of polyoxyethylene-nonylphenylether was sprayed uniformly against a pigsty (30 m^2). After about 5 mins., bad odour was completely extinguished, and the generation of the bad odour was suppressed effectively by one spraying per day. 21.7.77 as 087696 (3pp34)

HAMA- ★ D22 24972B/13 ★J5 4024-287

Deodorising element for air cleaner - obtd. by impregnating hygroscopic felt non textile cloth or glass fibre with volatile deodorising agent

HAMAMATSU KOSAN KK 27.07.77-JA-090017

J01 P34 (23.02.79) A61l-09/ B01d-53/16*

A multilayer mat made of hygroscopic felt, non-textile cloth or glass fibre is impregnated or coated with a volatile deodouring agent and housed in a casing or a large number of small pieces of hygroscopic materials such as felt, cloth or glass fibre are coated or impregnated with the volatile deodouring agent and packed in a casing, or th agent is charged in a bottom space of the casing and covered with the hygrascopic material so that the agent is volatilised outside through the material.

The volatilising rate of a deodorising agent contained in the air cleaner or deodorising unit is combined. 27.7.77 as 090017 (6pp26)

BINC D22 00155W/01 =NL-159-618

Burning air from isolation compartment of ambulance - heat can be fed to radiator

BINZ CO 30.07.73-DT-338601

*P33 P34 +Q12 Q15 (15.03.79) *BE-818-261 B60h-03*

The air from an isolated ambulance in which patients with infectious illnesses are carried is drawn off via a suction fan and is fed into a combustion chamber to be mixed with fuel oil and ignited before being exhausted to the atmosphere. The bacteria present in the air are killed by the heat of combustion.

The vacuum created by the fan ensures that the pressure in the interior of the passenger compartment of the vehicle is lower than atmospheric so that no air escapes from the interior via leaks in the vehicle body. The heat generated in the combustion process is transferred into the cooling water circuit of the vehicle engine cooling system. The heat is then given up in the vehicle radiator or can be used to heat the interior of the vehicle as dictated by a thermostat control in the passenger compartment. 24.7.74 as 010017. (5pp1370)

JANC D22 13618R/09 =NL-159-662

Fungicidal and insecticidal 1-(beta-aryl)ethylimidazole - ethers and amines

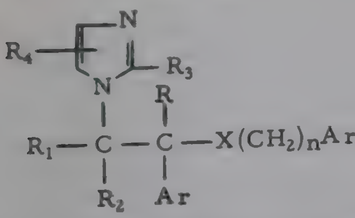
JANSSEN PHARMACEUT NV 23.07.69-US-848767 (19.08.68-US-753729)

*B03 C02 (15.03.79) *NL6912-331 A01n-09/12 C07d-233/60 +A61k-31/41 C07d-409/06*

New 1-(β-aryl)-ethylimidazole derivs. (I) and acid addn. salts exhibit marked activity against a broad spectrum of fungi and bacteria.

In the formula, R, R_1 and R_2 are H or 1-6C alkyl; X is O or NH; n is 1 or 2; Ar and Ar^1 are phenyl, opt. substd.

Ar^1; Ar is also opt. halo-substd. thienyl; R$_3$ is H or (m)ethyl; and R$_4$ is H or methyl; with the proviso that when X is NH, R is H.


(I)

Specific (I) is 1-/2,4-dichloro-β-(2,4-dichlorobenzoyloxy)-phenethyl/-imidazole or an acid addn. salt.

13.8.69 as 012331. (19pp913)

FARH D22 11597R/08 =NL-159-674
Prepn of dialkyl phosphine oxides
HOECHST AG 16.08.68-DT-793203
*A36 B05 E11 (15.03.79) *NL6912-116 C07f-09/53*

Dialkyl phosphine oxides of formula R$_1$R$_2$POH (I) (where R$_1$ and R$_2$ are each 1-6C alkyl), are produced by reacting dialkyl halophosphines of formula R$_1$R$_2$P-hal (or their hydrohalide adducts) with a non-oxidising acid in water.

(I) are obtd. in useful yields, i.e. without (almost) no disproportionation to P acids and PH$_3$. They are useful intermediates, some (esp. the lower alkyl derivs.) have bactericidal and bacteriostatic activity and they are also useful as polymer flame retardants and, esp., as reaction components in radical-catalysed reactions (on account of their purity). 8.8.69 as 012116. (6pp922)

MEDI= ★ D22 25215B/13 ★SU-605-616
Medical instruments sterilisation - using ultrahigh frequency field and dielectric heat-resistant medium, e.g. zeolite, having cavity for locating instrument
MEDICO BIOLOGICAL 01.08.76-SU-393079
P34 (06.04.78) A61l-01

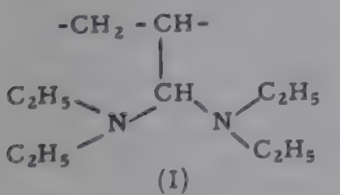
Medical instruments are sterilised in the ultra-high frequency field in a medium with high dielectric loss and stable at >100°C.

To prevent formation of toxic volatile cpds. during the treatment the instrument are sterilised in a cavity of solid material, pref. zeolite. The heat generated by UHF field treatment in the solid contg. instruments kills micro-organism on the surface of the instrument. The field itself may have indirect bactericidal action.

Zablotskii, L.L., Klimarev, S.I., Loganov, A.G. et al. Bul. 17/5.5.78. 1.8.76. as 393079(2pp938)

TSPO= ★ D22 25312B/13 ★SU-605-812
Water-soluble polyelectrolyte used as flocculant in hydrometallurgy - is obtd. by alkylating di:amino-tetra:ethyl-propylene
TASHK POLY 19.07.76-SU-388392
A91 (D15) (15.04.78) C08f-08/02 C08f-26/02

Water sol. polyelectrolyte of improved physical-chemical properties is based on N-alkylation of poly-(3,5-diamono-N,N,N',N'-tetraethylpropylene) having chain link structure of formula (I):


(I)

This gives 2 quaternary ammonium gps. per unit chain length (previously only 1). The resultant polyelectrolyte has high flocculating capacity and inhibiting and bactericidal properties.

The product may be used as flocculant (in hydrometallurgy and water purification), wetting agent (in textile and household products), and bactericide (in medicine and agriculture).

Akhmedov, U.K., Mirzaev, A.T., Akhmedov, K.S. Bul. 17/5.5.78. 19.7.76. as 388392(2pp114)

ELEX D22 63718X/34 =SU-606-531
Charging unit for supplying eg cans of food - to a steriliser continuously via a lock chamber SW280676)
ELECTROLUX AB 02.12.74-SW-015089
*P34 (24.03.78) *DT2552-225 A23l-03/02*

In order to prevent loss of heat when loading and unloading baskets of cans, the loading and unloading locks each have a valve with a through passage for baskets and a mechanism working medium supply system, and a piston within the cylinder.

The forward end of the piston carries a sleeve with a seal cooperating with the valve surface, and a second piston for moving the baskets is located in the sleeve. The unloading mechanism second piston pref. has a hook on its forward end for pulling baskets through the lock.

Andersson, B.L., Falvik, N.A. Bul. 17/5.5.78. 25.11.75 as 191852 (4pp1358)

COMP D22 27483W/17 =US 4111-672
Mineral fibre panel mfg plant with wet scrubber - for fumes repeatedly recycled through fibres being processed
SAINT-GOBAIN INDUSTRIES 10.10.73-FR-036169 (22.10.76-FR-031860)
*F04 L01 +P43 (05.09.78) *BE-820-942 C03b-37/04*

Mineral fibres are formed by gas blast attenuation, the fibres being collected on a foraminous surface and the gas being recirculated. The flow ahead of the surface is sprayed with water and water and entrained solids are separated from the gas in the recirculation path. Separated water is heat-exchanged with a medium and solids are separated from it.

The water is recirculated to the spray heads. Gas temperature in the forming section ahead of the surface is regulated by varying the heat transfer between separated water and medium. Heat-exchange may be indirect, or the medium may be air into which the water is sprayed.

3.12.76 as 747432 (+2.10.74, 5.2.76-US-511500, 655503) (37pp1358)

CIBA D22 43931Y/25 =US 4111-844
Synergetic microbicide contg. halogenated hydroxy diphenyl ether - together with anion-active solubilising surfactant and opt. solvent esp. water
CIBA GEIGY CORP 14.10.76-CH-013008 (15.12.75-CH-016278)
*E14 F06 P34 (05.09.78) *DT2656-234 C11d-01/12 C11d-03/48*

A synergistic microbicidal compsn. consists of (a) 20-50000 (100-10000) ppm, w.r.t. compsn., of 2,4,4'-trichloro-2'-hydroxy diphenyl ether, (b) an anionic surfactant selected from alkylsulphonates, alkylsulphates, alkylnaphthalene sulphonates and dialkylsulphosuccinates, and (c) water. Component (b) is present at a ratio of (a):(b) of 1:2-30 (1:2-10).

Compsns. are used to protect materials from micro-organisms, e.g. for disinfecting and finishing laundry goods, disinfecting metals, plastics and paint surfaces, etc. Compsns. can also be used to disinfect the skin.

6.12.76 as 747565 (5pp992)

JOHJ ★ D22 25759B/13 ★US 4111-922
Bacteriostatic hydrocolloidal dispersions with high water absorbency - obtd. by random free-radical interpolymerisation of alpha,beta unsatd. carboxylic acid, alcohol and crosslinking agent
JOHNSON & JOHNSON 07.04.76-US-674471 (10.07.72-US-270118)
A14 F06 G02 (F09) (05.09.78) C08f-220/34

Interpolymer (I) is obtd. by polymerisation of (A), (1) 10-9% (on total mixt.) of an ester of an α,β-unsatd. carboxylic acid and a mono- or polyhydric alcohol contg. a terminal quat. ammonium gp. and (2) 90-10% (on total mixt. of ≥ 1 α,β-unsatd. comonomer dispersible in aq. medium in th presence of (B) ≥ 0.02 wt.% of a cross-linking agent which is a difunctional monomer dispersible or sol. in aq. media, and is an ester of amide of an α,β-unsatd. carboxylic acid.

(2) comprises (a) ≥ 10 wt.% (on mixt. of monomers) of an acid comonomer, or (b) ≥ 20 wt.% (on mixt. of monomers) of an amide comonomer or (c) ≥ 10 wt.% (on mixt. of monomers) of a combination of acid and amide comonomers, contg. ≥ 5 wt.% of an acid monomer.

The interpolymer has a water-absorbing capacity of ≥ 10 times its own wt. after drying at 100°C for 3 hrs. and may be a film, gel or hydrophilic particle and when prepd. as an aq. colloidal dispersion or suspension can be converted into a gel or dry powder, which is used as a thickening agent. Articles coated with (I) have lubricious surfaces and are esp. suitable for medical instruments to be inserted into body openings, e.g. proctoscopes. (I) shaped into e. g. contact lenses and (I) cast into a self-supporting, transparent, conformable film is esp. useful as a wound dressing for which it provides an occlusive bacteriostatic dressing. 7.4.76 as 674471 (+25.9.74-US-509207) (8pp960)

MITU D22 20398Y/12 =US 4111-932

Antibacterial acylamino benzyl pencillin derivs - prepd. by (N)-acylating amino-benzyl penicillins

MITSUBISHI CHEM IND KK 16.02.76-JA-015563 (08.09.75-JA-108708)

*B02 (05.09.78) *DT2640-432 C07d-499/68*

6- [O-2-prolylamino-2-(4-hydrophenyl)acetamido] penicillanic acid and its non-toxic acceptable salts, are novel and possess antibacterial activity. They may be used in fuels, cutting oils, cleaning or disinfecting compsns.

The cpds. may be prepd. by reacting the amino acid with the appropriate 6-(2-amino-2-acylacetamido)penicillanic acid in the presence of condensing agent. 12.8.76 as 713808 (+8.9.75, 6.2.76 (2); 14.2.76-JA-108709; 012119; 012121; 015335) (16pp393)

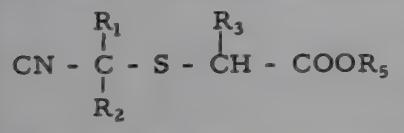
SQUI D22 11360V/07 =US 4111-978

Cyano-methylthio-acetamido-cephalosporanic acids - antibacterials useful as medicaments, disinfectants, and animal feed additives

SQUIBB E R & SONS INC 04.08.72-US-278168 (10.10.74-US-513674)

*B02 C02 (05.09.78) *BE-803-199 C07c-121/16*

Cyanomethyl-thio-acetic acid derivs. of formula (I) are novel cpds. and intermediates for cephalosporin derivs.



$$CN-\underset{R_2}{\overset{R_1}{C}}-S-\overset{R_3}{CH}-COOR_5 \qquad (I)$$

R_1 and R_2 are H, (hydroxy)phenyl, chlorophenyl, benzyl or phenethyl. R_3 is H, (hydroxy)phenyl, aminophenyl, chlorophenyl or benzyl. R_5 is H or lower alkyl. Provisos are that $\geqslant 1$ of R_{1-3} is other than H.

An example of (I) is DL-2[(cyanomethyl)thio]-2-phenyl acetic acid. 1.9.77 as 829707 Div. ex. 3855212 (+10.10.74 -US-513674) (7pp393)

NEWE- ★ D22 25803B/13 ★US 4112-054

Method of removing ethylene oxide from gas compsns. - by conversion to e.g. glycol(s) in an acidic soln.

NEW ENGLAND IND CHE 25.05.77-US-800160

E13 J01 (05.09.78) B01d-53/34

At least 97% of the ethylene oxide (I) contained in a gas compsn. is removed by passing the gas through an aq. acidic soln. to dissolve (I) and convert it to products contg. ethylene glycol. The soln. has a pH <4, an initial temp. $<$ 50°C and a vol. of 440 ml/mole ethylene oxide. The temp., vol. and pH are controlled to prevent evolution of (I) from soln. prior to conversion.

Used for removal of (I) from gaseous effluent utilised to sterilise articles, esp. for medical use. 25.5.77 as 800160 (5pp1355)

JOHJ ★ D22 25844B/13 ★US 4112-153

Controlling water repellency of nonwoven fabric - by heating to decompose surfactant in the binder, for diaper facing sheets

JOHNSON & JOHNSON 04.04.77-US-783928

A81 F04 P32 (F09) (05.09.78) A61f-13/16 D21h-01/34

Water repellency of selected regions of a wettable, bonded non-woven fabric contg. a heat-labile surfactant (I) is increased by heating these regions to a temp. at which (I) is unstable for long enough to denature (I) without damaging the fabric.

(I) is nonionic and/or ionic, specifically an alkanedicarboxysulphonate ester salt; polyoxyethylene deriv. of partial long chain fatty acid ester or a polyoxyalkylene sorbitan monolaurate. Esp. Na dioctylsulphosuccinate or polyoxyethylene (20) sorbitan monolaurate are used. The fabric is pref. heated to 240-600 (280-400)°F for 10-100 (20-60) secs.

Used for making fabric of controlled wettability for use as facing sheets in disposable diapers. 4.4.77 as 783928 (7pp1251)

OLIN ★ D22 25845B/13 ★US 4112-154

Cigarette tipping papers of uniform porosity - made by printing base papers with inks of various viscosities depending on porosity

OLIN CORP 02.09.77-US-830183

A82 F09 P73 P78 (A11) (05.09.78) B32b-07/14 B44d-05

Uniform porosity in porous cigarette tipping papers made from base papers of different porosity is achieved by first measuring the porosity of the base paper. This is then coated with a liq. soln. having a relatively higher viscosity for lower porosity paper, and a lower one for high porosity paper. A predetermined uniform porosity is achieved in the coated area.

The soln. is a printing ink (esp., coating suspension, paper size, cellulose ether or carboxymethylcellulose. It can be applied evenly over the entire paper or over random areas on one surface. Esp. it has viscosity 8-11 sec (Zahn) and the base paper has porosity 700-1800 Filtrona air permeability units.

Used in ventilated filter tip cigarettes. Uniform porosity ensures uniform air dilution and hence consistent tar and nicotine yields. 2.9.77 as 830183 (4pp1251)

PROC D22 49719A/28 =US 4112-167

Skin cleaning tissue, esp. toilet paper - of low density material impregnated with lipophilic cleaning emollient

PROCTER & GAMBLE CO 07.01.77-US-757712

*F09 P28 +P73 (05.09.78) *BE-862-731 B32b-21/04 +B32b-03*

Skin cleansing product, especially suitable as toilet tissue, comprises a soft flexible web with a low density wiping zone of void index under 1 p.s.i. pressure of 10-68; the wiping zone is treated with 10-150% by weight of lipophilic cleansing emollient comprising a mixture of isopropyl palmitate, cetyl alcohol, non-ionic surfactant and petrolatum.

The lipophilic cleansing emollient reduces dehydration of the soil and weakens soil-skin adhesive forces while the wiping zone entraps and removes the soil from the skin. Improved skin cleansing properties are provided. 7.1.77 as 757712 (9pp1364)

MINN ★ D22 25856B/13 ★US 4112-177

Porous pressure-sensitive adhesive coated tape prodn. - by laminating a double layer of adhesive to a porous fibrous backing layer

MINNESOTA MINING CO 23.01.78-US-871377

A96 G03 P73 (A14 A81) (05.09.78) B32b-03/26

A microporous pressure sensitive adhesive coated medical tape is made by forming two layers of adhesive in contact and then laminating the two layers under pressure to a porous fibrous backing layer.

The adhesive layer contacting the backing layer may be based on a blend of natural rubber or an acrylic polymer, and the adhesive layer furthest from the backing layer may be based upon a soft rubbery acylate copolymer. The former adhesive layer may be applied from a water based solution.

During the lamination step, the adhesive layers are rendered microporous thus making the tape breathable. 23.1.78 as 871377 (5pp525)

See Also

D12 J5 4024898 D21 DT 2841134 D25 SU 605543

D23: OILS; FATS; WAXES

SHEL D23 33794A/19 =GB 1542-975

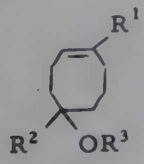
Cyclooctene derivs. contg. opt. esterified tert. hydroxyl gp. - are used for perfumery and are prepd. from di:alkyl-cyclooctadiene, e.g. by epoxidation and redn.

SHELL INT RES MIJ BV 01.11.76-GB-045309

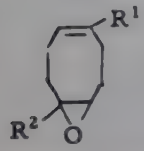
*E15 (28.03.79) *DT2748-798 C07c-35/20 C07c-69/02*

Cyclooctene derivs. of formula (I) are new. In (I) R^1 and R^2 are 1-4C alkyl, and R^3 is H or $\leqslant$ 4C acyl. Pref. R^1 and R^2 are Et or Me, and R^3 is acetyl.

Pref. (I) is prepd. by the redn. of the epoxide deriv. of formula (II) with the aid of sodium and liq. ammonia to form the alcohol deriv. of (I), which is opt. converted into the ester form of (I). Cpds. of formula (II) such as tert-butylhydroperoxide can be formed by the epoxidation of cyclooctadiene derivs..



(I)



(II)

Prods. are used in the aroma chemical field, esp. the acetate ester of 1,5-dimethylcyclooct-1-en-5-ol which has the aroma of an attractive woody odour. 1.11.76 as 045369 (5pp931).

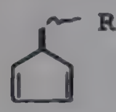
SAGA ★ D23 24477B/13 ★J5 4022-353

2-Chloro-2-cyano-7-alkylidene-bi:cyclo(2,2,1)-5-heptene - prepd. by reacting cyclopentadiene with aldehyde over base and prod. with 2-chloro-acrylonitrile

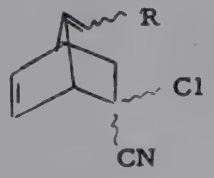
SAGAMI CHEM RES CENTRE 21.07.77-JA-086603

E15 (20.02.79) B01j-01/08 C07c-121/46

2-Chloro-2-cyano-7-alkylidene-bicyclo [2,2,1]-5-heptene (I) is prepd. by reacting cyclopentadiene with aldehyde (II) over a base and reacting the resultant 6-alkylfulvene (III) with 2-chloroacrylonitrile (IV).



(III)



(I)

In the formulae, R is 2-7C straight or branched alkyl. (I) can be converted into 7-alkylnorcamphor being useful as a perfume or perfume composition and also methyl dihydrojasmonate known as a perfume. In an example, a mixt. of 6-butylfulvene (0.304 pts. by wt.) and 2-chloroacrylonitrile (0.992 pts.) was stirred at room temp. for 2 days. Excess of 2-chloroacrylonitrile was evapd. to give an oily material, which was chromatographed on a column to give purified 2-chloro-2-cyano-7-pentylidenebicyclo [2,2,1]-5-heptene (0.490 pts.). 21.7.77 as 086603 (9pp104)

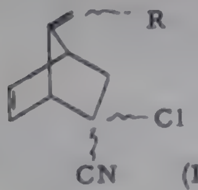
SAGA ★ D23 24478B/13 ★J5 4022-354

Perfume intermediate 2-chloro-2-cyano-7-alkyl bi:cyclo(2,1,1)-heptane - prepd. by reducing 2-chloro-2-cyano-7-alkylidene bi:cyclo-(2,2,1)-5-heptene

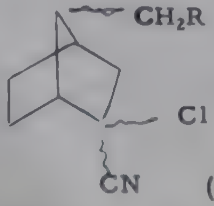
SAGAMI CHEM RES CENTRE 21.07.77-JA-086604

E15 (20.02.79) B01j-23/56 C07c-121/46

2-Chloro-2-cyano-7-alkylbicyclo [2,2,1]heptane (I)(where R is 2-7C staight or branched alkyl) is prepd. by reducing 2-chloro-2-cyano-7-alkylidene-bicyclo-[2,2,1]-5-heptene (II) over hydrogenating catalyst.



(II)



(I)

(I) can be converted into 7-alkylnorcamphor being useful as a perfume or perfume compsn, and also into methyl dihydrojasmonate known as a perfume.

Specifically, hydrogenation is carried out over catalyst such as platinum oxide, palladium, nickel or rhodium in a inert solvent such as benzene, n-hexane, methanol, ethanol, acetic acid or tetrahydrofuran at 0-50°C, pref. room temp. 21.7.77 as 086604 (8pp104)

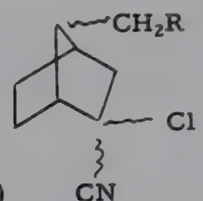
SAGA ★ D23 24479B/13 ★J5 4022-35

7-Alkyl-nor:camphor prepn. - for use as perfume intermediate, by hydrolysing 2 chloro-2-cyano-7-alkyl-bi-cyclo(2,2,1) heptene i presence of base

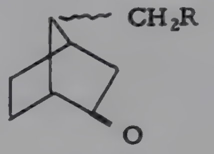
SAGAMI CHEM RES CENTRE 21.07.77-JA-086605

E15 (20.02.79) A61k-07/46 B01j-23/56 C07c-49/27 C11b-09

7-Alkylnorcamphor of formula (I) is prepd. by hydrolysin 2-chloro-2-cyano-7-alkylbicyclo[2,2,1] heptene of formula (II) in the presence of a base.



(II)



(I)

In the formulae, R is 2-7 straight or branched alkyl (I) can be converted into methyl dihydr jasmonate bein useful as a perfume. Specifi ally hydrolysis is effected over a base such as KOH, NaOH or Na_2S in a solvent such as (m)ethanol. THF benzene, DMSO, DMF or HMPA at 0-50°C. 21.7.77 as 086605 (8pp104)

HASE ★ D23 25018B/13 ★J5 4024-80

3,5-Octa:dien-1-ol geometrical isomers - used as flavourings f food, drinks, cosmetics and medicines

HASEGAWA KK 27.07.77-JA-089253

E17 (D13 D21) (24.02.79) A61k-07/46 C07c-29 C07c-33/02 C07c 67/08 C07c-69/02

Flavourings comprising geometric isomers of 3,5-octadien-1-ol, of formula (I) are used in food and drinks, cosmetics and prods. for sanitation and medicine.

$$H_5C_2 \sim CH{=}CH \sim CH{=}CH \sim CH_2.CH_2OR \quad (I)$$

In the formula, R is H or -COR' gp.; R' is 1-5C alkyl or 2-5C alkenyl; cis-3-trans-5- or trans-3-cis-5- geome rical isomer when R is H.

Prodn. of geometrical isomers of 3,5-octadien-1-ol o formula (II) comprises reacting cis-3-trans-5-, trans-3-

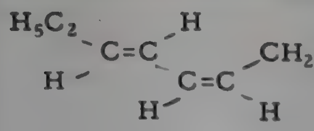
$$H_5C_2 \sim CH{=}CH \sim CH{=}CH \sim CH_2.CH_2OCOR' \quad (II)$$

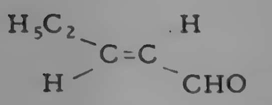
cis-5-, cis-3-cis-5- or trans-3-trans-5-octadien-1-ol o the formula (III) with carboxylic acid of formula

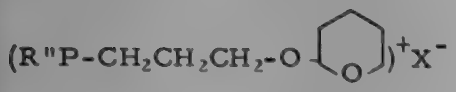
$$H_5C_2 \sim CH{=}CH \sim CH{=}CH \sim CH_2.CH_2OH \quad (III)$$

$(R'CO)_nX$ or its anhydride or acid halide opt. in the presence of catalyst. In the formula, R' is alkyl or alkenyl; X is -PH, halogen or O atom; when X is -PH or halogen atom, n is 1; when X is O atom, n is 2.

Prodn. of cis-3-trans-5-octadien-1-ol of formula (IV


(IV)


(V)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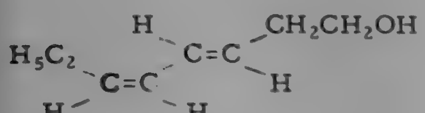

(VII)

comprises contacting trans-2-pentenol of the formula (V) with halogenated-γ-(2-tetrahydropyranyloxy)-propyl phosphonium salt of the formula (VI) in the presence of base and treating reactant with acid. In the formula, R" is triphenyl or tributyl and X is halogen atom.

Prodn. of trans-3-cis-5-octadien-1-ol of formula (VII) comprises reducing 3, 5-octadien-1-ol of the formula $H_5C_2C{\equiv}C\text{-}C{\equiv}CCH_2CH_2OH$ with aluminum hydride series reducing agent and subjecting resultant trans-3-octane-5-in-1-ol to catalytic hydrogenation.

Cis-3-cis-5- or trans-3-trans-5-octadien-1-ol is an attractant for Silk Moth, Bmhyx mori L. and Gipsy Moth, Lymantria dispar L. 27.7.77 as 089253 (24pp69)

UBEI ★ D23 25039B/13 ★J5 4024-842

Hydroxy-benzaldehyde cpds. - useful in pharmaceuticals and perfumes

UBE INDUSTRIES KK 25.07.77-JA-088290

B05 E14 (24.02.79) B01j-23/72 C07c-45/18 C07c-47/56

Hydroxybenzaldehyde cpd. is produced by oxidising hydroxymandelic acid cpd. with mol. oxygen-contg. gas in basic aq. medium in the presence of brass and/or bronze.

Hydroxybenzaldehyde cpd. is useful as material of pharmaceuticals and perfume. The cpd. may be produced in high yield in short time. 25.7.77 as 088290 (6pp69)

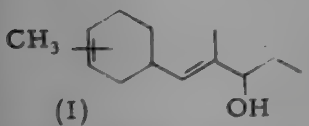
TAKS ★ D23 25045B/13 ★J5 4024-856

1-Methyl:cyclohexenyl 2-methyl-1-penten-3-ol - prepd. from isoprene, acrolein and di:ethyl ketone, and used as perfume material

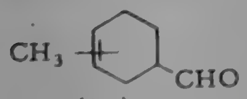
TAKASAGO PERFUMERY KK 28.07.77-JA-090847

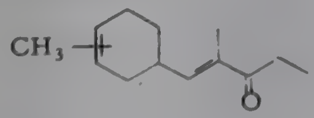
E15 (24.02.79) A61k-07/46 C07c-175

2-(3 or 4-methyl-3-cyclohexenyl)-2-methyl-1-penten-3-ol of formula (I) is new. This cpd. has an aroma like spirit oil of flower and can be used as a perfume component e.g. on mixing with other conventional perfume ingredients.


(I)

Typically, (I) is prepd. by subjecting isoprene and acrolein to a Diels-Alder reaction to give cpd. (IV) then condensing this cpd. with diethylketone to give ketone cpd. (VI) and then reducing this cpd. with $LiAlH_4$.


(IV)


(VI)

28.7.77 as 090847 (3pp22)

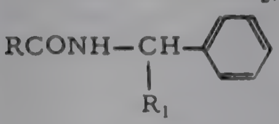
SUMO D23 68029R/38 =NL-159-655

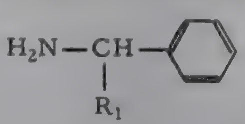
Fatty acid amides from alipahtic acids or - derivs and benzylaminines

SUMITOMO CHEMICAL KK 15.03.68-JA-017132 (21.12.67-JA-082279)

*(15.03.79) *DL--74-261 +A23l-01/30 A61k-31/16 C07c-103/58*

Fatty acid amide of formula (I), having hypocholesterolaemic activity, is prepd. by reacting a fatty acid RCOOH, its acid halide, 1-4C alkyl ester, or glyceride, or its anhydride $RCO\cdot O\cdot OCR_2$, with an amine of formula (II).


(I)


(II)

In the formulae, R is 15-19C opt. satd. aliphatic hydrocarbyl; R_1 is alkyl (esp. n-pentyl, n-heptyl, n-nonyl, n-tridecyl); and R_2 is as R and 1-4C alkyl or alkoxy.

(I) is taken at a daily dose of 0.1-10 mg., added to various food e.g. dairy prods., animal and vegetable oils, cereals and similar prods., confectionery, processed meat and fish etc. The amt. of (I) added to the food depends on the quantity of the partic. food consumed per day. Specific foods enriched with (I) are bread, crackers, biscuits, confections. 20.12.68 as 018372. (9pp913)

UNIL D23 34031V/18 =SU-606-552

Edible oils with increased polyunsaturated acid content - by extraction with N-substituted amide solvents

UNILEVER NV 18.10.72-GB-048039

*(19.04.78) *NL7314-265 C11b-07*

The content of polyunsaturated fatty acids bound to glycerol in edible oils containing ≥ 50% linoleic acid is raised by (a) contacting the oil with a solvent system consisting of an N-substuted amide at a temp. at which two liquid phases are formed, one of which is an oil fraction rich in bound linoleic acid dissolved in the polar solvent and the other is a light fraction contg. the remainder of the oil, (b) separating the two fractions, (c) removing the polar solvent from the rich fraction and (d) recovering the oil fraction rich in bonded linoleic acid.

Products have a high content of polyunsaturated acids bound to glycerol and are thus more suitable for consumption, e.g. in margarine, cooking fat and frying oils.

The starting oil is pref. high in linoleic acid content, especially safflower oil, sunflower oil or cottonseed oil. The polar solvent is e.g. dimethylformamide or N-methylpyrrolidone. The polar solvent may contain small amount of water or a 1-4C alkylene glycol in a wt. ratio 4:1 to 10:1. The oil may be mixed with a non-polar solvent before extraction to increase the density difference between the two phases: suitable non-polar solvents are, e.g. 3-10C paraffins and especially a light petroleum fraction wit a boiling range of 96-98°C. The extraction may be carried out continuously, e.g. in counterflow at -20 to +50°C.

Parsons, A.M. Bul. 17/5.5.78. 17.10.73. as 967539 (4pp)

PETL ★ D23 25703B/13 ★US 4111-774

Animal fat purificn. by electro-filtration - avoiding losses and hydrolysis of water washing

PETROLITE CORP 11.02.77-US-768002

P41 (05.09.78) B03c-05

Rendered animal fat is freed from finely divided solids an non-glyceride extractives by electrofiltration, i.e. by pa-sing the fat in liquid from through a bed of dielectric particulate solid in a high voltage direct current electric field

The process is shorter and simpler than conventional refining, does not generate waste water, does not cause hydrolysis of fat and increase of acid no., and avoids losses of fat. 11.2.77 as 768002 (4pp955)

See Also

D13 DT 2839814 D13 GB 1542864

D24 : SOAP ; SOAP DETERGENTS

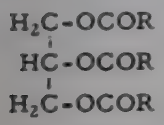
ASAE ★ D24 24766B/13 ★J5 4023-607

Metal fat mfr. - giving granular prods. contg. no unreacted aliphatic acid or fat

ASAHI ELECTROCHEM IND KK 22.07.77-JA-088730

E12 (22.02.79) C07c-53/24

Process comprises reacting an aliphatic acid (e.g. satd. aliphatic carboxylic acids, e.g. capric, lauric, myristic, palmitic or stearic acid, unsatd. aliphatic carboxylic acids, e.g. palmitoleic, petroselinic, oleic, vaccenic linolenic or arachidonic acid, satd. aliphatic hydroxycarboxylic acid, e.g., sabinic, juniperic, lanopalmitic or hydroxypalmitic acid, and unsatd. aliphatic hydroxycarboxylic acid, e.g., ricinoleic acid, etc.) and/or fat or oil of formula (I).



$$\begin{array}{l} H_2C\text{-}OCOR \\ \;\;| \\ HC\text{-}OCOR \\ \;\;| \\ H_2C\text{-}OCOR \end{array} \quad (I)$$

where R is an (un)satd. aliphatic (hydroxy)carboxylic acid (e.g. animal oils, vegetable oils or fish oil contg. such an aliphatic acid) with a metal oxide and/or hydroxide (e.g. of Zn, Cd, Sn, Pb, Fe, Ca, Mg, Ba, etc.) in the presence of a polyol (e.g. glycols, glycerins in an amt. of 1.5-15% of the prod.

Process prevents viscosity increase and foaming during the saponification and can provide high-quality granular metal soaps contg. no unreacted aliphatic acid nor fat and discoloration. 22.7.77 as 088730 (6pp59)

UNIL ★ D24 B/13 ★OE 7708-396

Liq. soap

UNILEVER NV 05.10.77-GB-041467

(15.03.79) C11d-09/04 23.11.77 as 008396

See Also

D21 J5 4024905

D25 : OTHER DETERGENTS

BADI ★ D25 23957B/13 ★BE-870-683

Stabilising nonionic surfactant against alkali discolouration - by incorporation of semicarbazide deriv. esp. an acid salt

BASF AG 23.09.77-DT-742805

E16 (22.03.79) C11d

Nonionic surfactant contg. polyalkylene oxide gps. and with terminal OH gps. incorporates 0.01-0.3 mole/dm^3 of ⩾ 1 semicarbazide deriv. which is soluble in it. This deriv. is pref. the salt of a 6-30C satd. or unsatd. acid.

The nonionic surfactant can be a (low foaming) constituent of a detergent. e.g for washing bottles or dishes, which also contains alkaline constituents such as phosphates, silicates, carbonates, or caustic alkalis. Such alkaline ingredients can react with the nonionic surfactant at elevated temps. to produce an undesirable discoloration. This is inhibited by the addn. of the semicarbazide deriv. without adverse effect on the desirable properties of the nonionic surfactants. 22.9.78 as 870683 (8pp1331)

HENK D25 00685R/01 =DS 1929-193

Detergent with compatible softener and - wetting agent

HENKEL KG AUF AKTIEN (COLG) 12.06.68-US-736292

*(22.03.79) *DT1929-193 +C11d-01/42*

A washing agent with a softening effect comprises a mixt. of (a) an N-2-hydroxyalkylamine (I) and (b) a surfactant (mixt.) including ⩾ 1 anionic sulphonate or sulphate surfactant in a wt. ratio of (a) to (b) of 1:10 to 1:1.

Amine (I) has the formula $R\text{-}CHOH\text{-}CH_2\text{-}NR_1R_2$ (where R is an 8-24C aliphatic hydrocarbon gp.; R_1 is $-R_3(OR_4)_n$-OH (where R_3 and R_4 are 2-3C alkylene and n= 0-3) or 1-4 C alkyl or cyclohexyl and R_2 is H, 1-3C alkyl, 2 ,3-dihydroxypropyl or $-R_3(OR_4)_n$-OH or R_1 and R_2 together with the N atom form a morpholine, piperazine or piperidine gp).

Agent gives a softer wash without yellowing. 9.6.69. as929193 (8pp068)

UNIL D25 81222X/44 =DS 2616-350

Powdered spray-dried detergent compns - from aq suspensions giving homogeneous incorporation of activators of per-compounds

UNILEVER NV 18.04.75-GB-016147

*E19 (E37) (22.03.79) *BE-840-887 C11d-03/39 C11d-11/02*

Prepn. of cleansing/washing powder comprises heating an aq. dispersion contg. at least one surfactant, a carrier salt, an organic activator for peroxy cpds. (e.g. acylcarboxamides, acylsulphonamides, acylcyanurates, carbonic esters or pyrocarbonic esters), and opt. other additives, with pH 8.5-12 to a temp. of 60-90°; the warm mixt. is spray-dried in air at about 275-350° (exit temp. 100-115°); and the material produced is mixed with a peroxy cpd.

Activators should not lose more than 15% of their activity in this process; a prefd. activator is N,N,N',N'-tetraacetylethylenediamine. 14.4.76. as 616350 (8pp047)

DEGS D25 34984A/20 =DS 2651-442

Sodium percarbonate particles coated with dehydrated sodium perborate - useful as storage stable bleaching agent

DEUTSCHE GOLD & SILBER 11.11.76-DT-651442

*E34 (22.03.79) *BE-860-762 C01b-15/10 +C11d-03/10*

Sodium percarbonate compsn. comprises percarbonate particles coated with sodium perborate of formula $Na_2BO_2.3H_2O.H_2O_2$ (contg. 54g water per mole), and opt. sodium silicate in addn. Pref. the dehydrated perborate contains at least 15 wt.% active O. Prepn. of these particles comprises dampening sodium percarbonate with water, (insufficient to form the perborate tetrahydrate), followed by mixing with the anhydrous perborate; this procedure may be repeated up to several times.

The prods. are used in washing and cleansing prepns. 11.11.76. as 651442 (7pp047)

AIRW- ★ D25 24173B/13 ★DT 2838-08

Powdery carpet cleanser and deodorant compsns. - contai granular inorganic salt carrier, agglomerant, volatile air-freshene and opt. antistatic agent

AIRWICK AG 02.09.77-US-830238

E37 (22.03.79) D06l-01 D06m-11

Powdery carpet-care compsn. contains, by wt. w.r.t. tota wt., (a) ⩾ 40(55-99)% granular inorganic salt (I), having particle dia. 0.06-0.25mm., as carrier, and 0.1-45% agglomerating agent (II), e.g. starch, together with volatile odour improver, e.g. deodorant and air-freshener, made up of (b) < 25% (II) and < 20% odour improver.

The compsns. are used to improve the odour of natura and/or synthetic fibre carpets, by application to carpet surface and removal, e.g. by suction cleaning, together with bonded impurities.

The compsns. are non-dusting, coat only fibre tips an can be removed without clogging suction cleaner parts; and provide a long-lasting clean and air-freshening effect 31.8.78 as 838089. (18pp200)

KAOS ★ D25 24205B/13 ★DT 2839-430
Sodium percarbonate readily dissolving in tap water with foaming - prepd. by controlled heating and cooling, for use in bleaching preparations, detergent compsns. and soaps
KAO SOAP KK 13.09.77-JA-111001
E34 (22.03.79) C01b-15/10 C11d-03/39

Sodium precarbonate readily dissolving in tap water with foaming is prepd. by heating ordinary sodium percarbonate at 110-135°C for 5-60 mins. (pref. 7-30 mins.), and then cooling within 10 mins. (pref. 5 mins.) to or below 90°C (pref. below 70°C).

The loss of active oxygen is diminished. The handling of the prod. is facilitated, and the working conditions are improved. Stable foam is produced. The sodium precarbonate treated by this method can be used in bleaching prepns., detergent compsns., soaps, etc.; opt. in combination with Na_2SO_4, Na_2CO_3, sodium silicates, and anionic, non-ionic or ampholytic surfactants. 11.9.78 as 839430. (12pp70)

LIOY ★ D25 24218B/13 ★DT 2839-619
Easily rinsed out granular detergent compsns. - contain alpha-olefin-sulphonate, polyoxyethylene polyoxypropylene alkyl ether and inorganic builder
LION FAT & OIL KK 12.09.77-JA-108782
A97 E17 (A25) (22.03.79) C11d-17/06

Granular detergent compsn. contains (a) a 12-18C α-olefin-sulphonate (A), (b) a polyoxyethylene-polyoxypropylene-9-15C-alkyl ether contg. 6-22 C_2H_4O- and 2-8 C_3H_6O units (B), and (c) an inorganic builder (C). Wt. ratio (A):(B) is 4:1 to 1:1.

The compsns. retain their powder properties during transport and/or storage and are easily rinsed out in use.

Disulphonate content of (A) is pref. <15 (<10)wt.%. Wt. ratio alkene sulphonates:hydroxyalkane sulphonates in (A), may be 40:60 to 90:10 (50:50 to 80:20). (C) is esp. $Na_4P_2O_7$ or Na silicate in which mol. ratio Na_2O:SiO_2 is 1:2.8 to 1:3.4. The compsns. opt. contain organic builders, citric acid, chelating agents, fluorescent brighteners, perfumes, etc. 12.9.78 as 839619. (17pp200)

RHON ★ D25 24271B/13 ★FR 2395-310
Stabilising phosphate contg. washing liquids to cold storage - by adding water immiscible solvent as a micro-emulsion
RHONE-POULENC INDUSTRIES 24.06.77-FR-019394
E19 (E34) (23.02.79) C11d-03/43 D06l-01/04

A process improving the cold storage stability of a washing liq. contg. $\geqslant 1$ surfactant and $\geqslant 1$ phosphate comprises adding $\geqslant 1$ water immiscible solvent for the surfactant in the form of a micro-emulsion.

The phosphates are pref. $\geqslant 1$ of potassium pyrophosphate and tripolyphosphate. Specified solvents are 1,2-dichloroethane, methylene chloride, trichloroethylene, tetrachloroethylene, carbon tetrachloride, perchlorethylene, toluene, benzene and xylene. A co-solvent also pref. used esp. to a propanol or butylglycol.

The process enables a high solids content and storage stability down to < 0°C. 24.6.77 as 019394 (9pp597)

STKA- ★ D25 24869B/13 ★J5 4023-792
Laundry thickening agent for preventing clogging of spray nozzle - comprises ethylene glycol, propylene glycol, glycerine or 3-methyl pentane-1,3,5-tri:ol
ST KAGAKU KOGYO KK 23.07.77-JA-088738
E17 (22.02.79) D06m-13/16

The agent comprises water-soluble ethylene glycol, propylene glycol, glycerine and/or 3-methyl pentane-1, 3, 5-triol having slow evaporating rate of room temp. and rapid evaporation at 100-150°C.

In an example, a laundry thickening agent was composed of 1.5% of vinyl acetate emulsion, 1.0% glycerine silicone and perfume and balance water. 23.7.77 as 088738 (2pp84)

NIPC ★ D25 24982B/13 ★J5 4024-299
High bulk density sodium silicate hydrate prodn. - useful as additive for detergents and as binder for castable refractories
NIPPON CHEM IND KK 27.07.77-JA-089166
E34 L02 (23.02.79) C01b-33/32

100 Wt. pts. of hydrated sodium silicate particles of 15-

and 25-60 wt. pts. of a sodium silicate aq. soln. are mixed. The mixt. so obtd. in a granular but not paste form, is dried either in one process including granulation and drying or in separate drying process, e.g. rotary dryer, after granulation at a temp. below the effervescent temp. of the granular mixt. to obtain hydrated sodium silicate particles of a 15-30 wt.% moisture content.

Use of high concns. of sodium silicate aq. soln. increases the prodn. of the prod. per particle by spray drying compared to other methods, and the particles are utilised as a carrier or raw material. 27.7.77 as 089166 (7pp117)

LIOY ★ D25 25066B/13 ★J5 4024-906
Liq. detergent compsns. - comprise magnesium alkyl-benzene-sulphonate, magnesium salt of alkyl polyoxyethylene ether sulphuric acid ester and polyethylene glycol
LION FAT & OIL KK 26.07.77-JA-089527
A97 E12 (E17) (24.02.79) C11d-01/22 C11d-03/37 C11d-10/02

The compsns. contain (1) mixts. comprising (a) Mg linear alkyl-benzene sulphonates and (b) Mg salts of alkylpolyoxyethylene ether sulphuric acid esters in wt. ratios of 4:1 to 1:1 in amts. of 10-30 wt.% of the compsn., and (2) polyethylene glycol of polymerisation degree of 4-50 in amts. of 5-25 pts. wt. to 100 pts. wt. of Component (1).

The compsns. remove easily food soil from glass, metal, ceramic or plastic tablewear and do not form film of water spot on the tablewear washed.

Pref. the alkylbenzene sulphonates contain 11-14 C alkyl gps. are pref. used. Magnesium salts of alkylpolyoxyethylene ether sulphuric acid esters contg. 12-15C alkyl gps. and having ethylene oxide-average addition mole number of 1-4 are suitable. 26.7.77 as 089527 (5pp136)

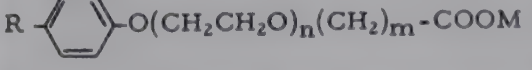
UGIN D25 77580V/45 = J7 9004-359
Atomised sodium percarbonate prepn - by atomising reactants in reaction chamber and injecting hot air/carbon dioxide mixture
UGINE KUHLMANN 28.08.73-FR-031041
*E34 (06.03.79) *BE-816-421 C01b-15/10*

Na percarbonate is prepd. by sepg. atomising into a reactor chamber a hot aq. soln. of NaOH and an aq. H_2O_2 soln. and introducing separately a hot mixt. of an acid CO_2, the H_2O_2 being in stoichimetric excess $\ngtr$ 5%. The atomised percarbonate is thus prepd. in situ in the atomisation reactor instead of being atomised after its prepn. The atomised powder forms homogeneous mixts. with other detergent powders and is used in washing and bleaching compsns. 28. 8. 74 as 098008 (clg. 28. 8. 73-FR-031041) C01b 15/10 (6. 3. 79) UGINE KUHLMANN (4pp) (J50051099)

KAOS D25 41255T/26 = NL -159-709
Cleaning and bleaching fluid - contg hypochlorite surfactant and alkali, with increased stability
KAO SOAP KK 09.12.70-JA-109106
*E14 (15.03.79) *DT2160-409 C11d-01/06 C11d-07/54*

Liq. cleansing agent is prepd. by incorporating in water a surface active material, an alkali metal hypochlorite and an alkaline material, e.g. an alkali metal hydroxide.

The surfactant has the formula



where R is 8-22C alkyl, n is 1-40; m is 1 or 2 M is an alkali metal. The alkali metal hypochlorite contains $<{}^1/_{10}$ mol. alkali metal chloride per mol hypochlorite. The Cl-content of the cleanser is 0.5-13 wt.%. 8.12.71 as 016832 (5pp549)

SHEL D25 58991S/37 = NL -159-710
Washing or cleaning compositions contg inorganic salts as viscosity stabilisers
SHELL INT RES MIJ BV 25.08.67-GB-039224
*E14 (E17) (15.03.79) *CH-509-402 C11d-01/83 C11d-03/04*

Washing concentrate is prepd. using an aq. soln. contg. $\geqslant$ 20 wt.% active washing material comprising (a) $\geqslant 1$ alkali-ammonium-, or amino salts of alkylbenzene-sulphonic acid having 8-16C in the alkyl gp. and (b) $\geqslant 1$ polyethylene glycol ethers of primary or secondary 8-18C alcohols or alkyl phenols having 8-16C in the alkyl gp.

The soln. opt. contains a solubilising agent. In addn. the soln. contains 0.5-10 wt.% $MgSO_4$. 31. 7. 68 as 010827

(4pp549)

WITC D25 69718T/44 =NL-159-711

Phosphate-free built detergent compns - having enhanced soil suspension props and uniform performance for natural and synthet

WITCO CHEMICAL CORP 05.05.71-US-140556

*A97 E34 (A11) (15.03.79) *CA-912-396 C11d-03/08*

Phosphate-free washing powder contg. a synthetic detergent, an alkali silicate, an alkali carbonate and an alkali sulphate is prepd. with the following compsn. (a) 5-25 wt.% linear sodium alkyl-benzene sulphonate, having 8-18C in the alkyl gp.; (b) 10-25 wt.% amorphous water-sol, sodium silicate having a ratio $SiO_2:Na_2O$ of 1:1-3:1, (c) 10-50 wt.% sodium (bi)carbonate or sodium sesquicarbonate, (d) 25-60 wt.% sodium sulphate, (e) 0-10 wt.% organic binders e.g. a salt of citric acid, and (f) 0-10 wt.% known additives. 5.5.72 as 006108 (5pp549)

HENK D25 75753V/44 =NL-159-712

Textile cleaning bath contg alumino silicates

HENKEL KG AUF AKTIEN 13.04.73-OE-003277

*F06 (15.03.79) *BE-813-581 C11d-03/12*

The washing and opt. bleaching of textiles is carried out in an aq. bath contg. insoluble silicates which bind the hardness of the water and are removed after washing.

The silicates consist of finely divided cpds. of formula $(Kat_{2}/_{n}O)_x Mo_2O_3.(SiO_2)_y$ where Kat is Ca exchangeable cation and x is 0.7-1.5; Mo is B or Al and y is 0.8-4. They have a Ca-binding capability of ≥50 mg CaO per g. water-free active material. The silicates have a particle size of 100-0.1μ. 13.3.74 as 003381 (14pp549)

HENK D25 76861V/44 =NL-159-713

Washing agents for dish washing machines - contg. mixed boron or aluminium silicates as calcium binding cpd

HENKEL KG AUF AKTIEN 09.11.73-OE-009450 (13.04.73-OE-003277)

*+P28 (15.03.79) *NL7403-382 C11d-03/12*

Kitchen utensils are machine washed using an aq. bath contg. a water insol. silicate. The silicate used is a finely divided Ca-binding material, of binding activity of 50mg CaO/g., of a water-free active material of formula $(Kat_{2}/_{n}O)x. Mo_2O_3(SiO_2)_y$ (where Kat is Ca-exchanging cation of valency n; x is 0.7-1.5; Mo is B or Al; and y is 0.8-4).

The pref. active material has the formula 0.7-1.1 $Kat_2/nO. Mo_2O_3$ 1.3-2.4 SiO_2. 13.3.74 as 003382 (15pp549)

CHPR- D25 60999V/34 =SU-605-543

Alkaline bromine complex washing agents - of polyphosphates have good cleaning and disinfecting action

INST CHEM PRZEMYS 07.02.73-PO-160632

*B06 C03 E11 +P34 (D22) (06.04.78) *NL7401-692 A61l-13 C01b-25/40*

Complexes of formula (A) have been prepared:

$$M(PO_3M)_xOH....Br-Q.....HO(PO_3M)_xM \qquad (A)$$

In the formula, M = alkali metal; x = 2-50; and Q = Br or I. (A) are cleaning/disinfecting agents. They have specially good activity against acid-resistant and spore-forming bacteria and those having a fatty outer layer and may thus be used for treating diseases of the respiratory system (e.g. bronchial pneumonia or tuberculosis of the lungs). They may also be used to disinfect equipment used in agriculture, the food industry, veterinary processes etc.

(A) are prepd. by reacting an alkaline polyphosphate with $(IBr_2)^-$ or IBr (or their complexes with non-ionic surfactants) at 0.50°C using ≯2 mole polyphosphate per mole interhalogen cpd. (IBr_2^-), or IBr may be prepd. by reacting appropriate amt. of Br, with aq. soln. of an alkali iodide at 0-60°C and this may then be converted to complex with non-ionic surfactant. The complexes (A) where Q is I, may be stabilised by adding an alkali or alkaline earth metal bromide.

Klopotek, A., Profits, J., Uminski, E. et al. Bul. 16/30.4.78. 11.4.75. as 994840 (2pp)

FMCC ★ D25 25655B/13 ★US 4111-65

Low temp. fabric bleaching with per-oxygen cpds. - activated b sulphonic anhydride

FMC CORP 03.10.77-US-838851

E19 F06 (05.09.78) D06i-03/02

Low temp. bleaching of stained and/or soiled fabrics com prises treatment with an aq. peroxygen bleach soln. of pH 6-12 contg. a sulphonic anhydride of formula $R_1SO_2OSO_2R$ (I) as activator. (R_1 and R_2 = 1-18C alkyl, 3-7C cycloalky phenyl, naphthyl, or heterocyclyl with 1 or 2 rings of 5-6 members contg. 1 or 2 N, O or S. They can be same or different except when phenyl or naphthyl in which case they are different).

Pref. (I) have R_1 = opt. fluorinated lower alky, and R_2 as R_1 or phenyl opt. substd. by lower alkyl or Cl. Mole ratio of peroxygen: (I) is 20:1-1:3 and peroxygen is esp. provided at 2-2000 ppm active O by Na perborate tetrahydrate. (I) activate bleaching at < 60°C, i.e. domestic laundry temps. 3.10.77 as 838851 (8pp1251)

UNIL D25 33143Y/19 =US 4111-82

Bleaching auxiliary compsns. - contg. bleaching activator an stabiliser for per cpds. and nonionic surfactant (BE 3.5.77)

LEVER BROTHERS CO 03.11.75-GB-045661

*E19 (05.09.78) *DT2650-429 C11d-07/22 +C11d-10/02*

A bleaching assistant in the form of co-granulated particles of dia. 0.2-3 mm, for use in or with washing and bleaching compsns., consists of (a) 50-85 (60-75) wt.% of ≥ beaching activator (I) for per cpds., having a titre in a pe acid formation test of ≥1.5 ml 0.1 N sodium thiosulphat (b) 2-25 (5-20) wt.% ≥1 stabiliser (II) for per cpds. an (c) 7-30 (10-25) wt.% nonionic surfactant (III) of m.pt. 35°C.

(I) is a specified N-acyl cpd., O-acyl cpd. or carbonic acid ester, esp. N,N,N',N'-tetraacetyl-ethylenediamine. (II) is ethane-1-hydroxy-1,1-diphosphonic acid, amino-tr (methylene phosphonic acid), ethylene diamine-tetra-(me hylene phosphonic acid) or EDTA, or an alkali metal salt of one of the acids.

(III) is a polyalkylene oxide adduct of a prim. or sec. alcohol, a polyalkylene oxide adduct of a fatty acid (amid polyalkylene oxide adduct of an alkylphenol each having 5 25 ethylene oxide gps. per mol. and 8-22C atoms in the hydrophobic moiety, or a polyethylene oxide adduct of pol propylene glycol contg. 20-300 ethylene glycol ether gps. and 10-100 propyleneglycol ether gps. 2.11.76 as 73798 (5pp992)

STEP ★ D25 25735B/13 ★US 4111-85

Particulate surfactant compsn. for synthetic detergent formulations contains sodium alpha-olefin sulphonate and sodium silicate

STEPAN CHEMICAL CO 04.11.77-US-848644 (08.03.76-U 664753)

E12 (E34) (05.09.78) C11d-01/14 C11d-03/08

A particulate surfactant compsn. for use in prodn. of synthetic detergent formulations comprises 25-65 (36-54 wt.% Na silicate (I), 25-65 (36-54) wt.% Na α-olefin sulphonate (II), 0.2-2 wt.% NaCl or Na_2SO_4, and 4-15 wt.% water. (I) has $SiO_2:Na_2O$ wt. ratio 1-2.8:1 (pref. 2.4:1). (II) is obtd. from 14-18C (16-18)C α-olefin(s).

Compsn. is homogeneous, storage-stable, free-flowi beads of hygroscopicity ≯ 5% free water after standing in an atmos. of normal humidity. Particle size is such tha ≮ 90 wt.% have ≮ 2 dimensions 0.001-1 mm, and bul density is 0.25-0.50 g/ml tamped. Compsn. is prepd. spray drying at 220-450°F an aq. suspension comprising (on total wt. basis) 35-65 wt.% solids (comprised of the above compsn.) and 65-35 wt.% water.

Compsn. is almost entirely comprises of detergent ac ive components and can be simply and readily dry-mixed with other detergent components. When added to contain they reduce water requirements in slurry prepn. and giv improved spray drying. 4.11.77 as 848644 (15pp949)

PROC D25 65875W/40 =US 4111-854

Universal household cleanser esp for hard surfaces - contg anionic surfactant sulphuric acid reaction prod and protein deriv

PROCTER & GAMBLE CO 15.03.74-FR-008994

*A97 (05.09.78) *DT2510-245 C11d-01/02 C11d-03/33*

General purpose household cleaning compsn. contains (A) 3-30 wt.% water-soluble, organic, anionic, surface active detersive sulphuric acid reaction prod; (B) 2-20 wt.% lower polypeptide of mol. wt. < 600 and isoelectric point ⩾ 5.5 or a protein hydrolysate contg. ⩾50 wt.% of such poly peptides and up to 15 wt.% of amino acids and up to 25 wt.% penta and higher polypeptides; and (C) as balance a neutral carrier. Wt. ratio (A):(B) is 6-1:1. (A) is a 12-22C paraffin sulphonic acid, an alkyl benzene sulphonic acid contg. 3-18C in the alkyl gp. or a 10-22C alkyl sulphuric acid ester with an alkali metal or (substd.) ammonium cation.

Compsn. gives effective overall cleaning with removal of organic and inorganic soil, soil suspension and grease emulsification. It is non-filming, non-spotting and non-streaking. 17.3.75 as 559185 (8pp945)

PROC D25 64945Y/37 =US 4111-855

Stable liq. enzyme-contg. builder-free washing agents - contg. a polyacid and calcium ions as well as surfactants and solvent

PROCTER & GAMBLE CO 09.12.76-GB-051465 (08.03.76-GB-009258)

*A97 (D16) (05.09.78) *BE-852-170 C11d-01/83 C11d-03/36*

Unbuilt liq. detergent compsn. comprises (A) 35-75 wt.% surfactant mixt., (B) 0.05-1.5 wt.% polyacid, (C) 0.5-15 mmole/l compsn. free Ca ions, (D) 0.01-2 wt.% alkaline proteolytic enzyme of isoelectric point >8; and (E) as balance water and 2-15 wt.% of the compsn. organic solvent comprising 2-6C aliphatic alcohol contg. 1-3 hydrocarbyl gps. Compsn. has pH 6.0-7.5.

(A) comprises (1) ethoxylated aliphatic alcohol or ethoxylated alkyl phenol and (2) synthetic anionic surfactant of formula R_3SO_3M where R_3 is 12-24C alkyl or alkylphenyl contg. 9-15C in the alkyl gp.; and M is Na, K, NH_4 or mono-, di- or tri-alkanolamines having 2-3C in the alkanol gp. Wt. ratio (1):(2) is 1-5:1.

The compsns. show a performance equiv. to granular built heavy duty detergent compsns. and have excellent storage stability. 7.3.77 as 775213 (9pp945)

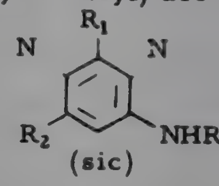
UNIL D25 31318Y/18 =US 4112-226

Triazine derivs. removal from stilbenic fluorescent agents - by treatment with a strong base in aq. media (NL 26.4.77)

LEVER BROTHERS CO 24.10.75-GB-043849

*E24 (E13) (05.09.78) *DT2647-421 C07d-251/08*

Non-fluorescent triazine deriv. impurities of formula (I) (where R_1 is O H or halogen; R_2 is OH or $-NR_4R_5$; R_4 and R_5 are each H or (substd) alkyl or aryl; and R_3 is (substd.) alkyl or aryl) are removed from fluorescent agents, selected from 4,4'-di(sym-triazinylamino)stilbene-2,2'-disulphonic acids and salts, by contacting, at 1 atmos. and ⩾ 75°C, with an aq. soln. contg. 0.5-5 wt.% alkali metal hydroxide, in an amt. of 25-150 ml/g of fluorescent agent, which remains undissolved; and sepg the fluorescent agent from the aq. soln.



(I)

The process is simple and avoids prior art disadvantages. 22.10.76 as 734686 (4pp976)

See Also

D21 J5 4024908

ABBO 01.07.76 ABBOTT LABORATORIES B04 D16 =GB 1543-130
Alpha-amylase enzymatic determination - 10637A/06
*ADEL/ 08.09.77 ADELBERGER F D14 *DT 2740-462
Oven door handle - 24066B/13
AHSC 02.07.75 AMER HOSPITAL SUPPL CORP B04 D16 #CA 1050-908
Rapid enzymatic hydrolysis of triglycerides - 55487W/33
AIRP 12.04.76 AIR PRODUCTS & CHEM INC D15 =OE 7702-487
Activated sludge treatment ok phosphate-contg. aq. effluent - 55841Y/32
AIRP 25.07.77 AIR PRODUCTS & CHEM INC C03 D16 (C04 D13) =J5 4024-774
Biomass with high phosphorus and nitrogen content - 14434B/08
*AIRW- 02.09.77 AIRWICK AG D25 E37 *DT 2838-089
Powdery carpet cleanser and deodorant compsns. - 24173B/13
AJIN 03.04.73 AJINOMOTO KK C03 D15 H04 (C04 D13 D16) =J7 9004-547
Waste-water treatment - 04310X/03
AJIN 28.10.76 AJINOMOTO KK D16 =GB 1543-098
Amino acid bio:assay microbe preservative - 46789A/26
*AJIN 19.07.77 AJINOMOTO KK D16 E17 *J5 4023-192
Citric acid prodn. in high yield - 24724B/13
*AJIN 20.07.77 AJINOMOTO KK B02 D16 E11 (D13) *J5 4023-194
Inosine-5′-mono:phosphoric acid prepn. - 24726B/13
*AJIN 23.07.77 AJINOMOTO KK D16 E17 (D17 E13) *J5 4023-193
Citric acid and D-fructose prepn. - 24725B/13
*AKGO= 20.08.76 AS KIRG ORGANIC CHE C03 D13 (D16) *SU -605-599
'Granulated microbial biomass prepn. - 25209B/13
*AKMI= 17.08.76 AS KAZA MICOBIOL D16 *SU -605-830
Strong wines heat treatment unit - 25330B/13
*ALFA 20.06.77 ALFA-LAVAL EVA-DRY D14 J08 *FR 2395-477
Drying plant for pulverulent prods. e.g. for dried milk powder prodn. - 24283B/13
*ALTM/ 22.04.76 ALTMAN J E D14 *US 4111-112
Sectioning cored fruit positioned on stationary spindle - 25601B/13
AMCY 20.06.77 AMERICAN CYANAMID CO B04 C03 D16 =FR 2395-276
Antibiotic BL 580 ZETA useful as anticoccidiosis agent - 00004B/01
*AMET 18.10.74 AMETEK INC C03 D15 J03 M25 (D13 D16 D17) *US 4111-768
Sepg. colloidally suspended solids from fluid system - 25700B/13
AMFI 06.11.75 AMERICAN FILTRONA CORP A88 D18 =CA 1049-876
Tobacco smoke filter with annular filter - 41388Y/23
AMFI 24.12.75 AMERICAN FILTRONA CORP A88 D18 =CA 1049-878
Tobacco smoke filter - 93967X/50
ANAL- 10.04.73 ANALYTAB PROD INC D16 =DS 2417-184
Identification of unknown bacteria - 75231V/43
*ANDE/ 14.09.77 ANDERSEN B C D12 *DT 2839-719
Poultry liver and heart separation - 24224B/13
ANDE/ 14.09.77 ANDERSEN B C D12 =GB 2004-175
Poultry liver and heart separation - 24224B/13
ANDE/ 14.09.77 ANDERSEN B C D12 =NL 7809-343
Poultry liver and heart separation - 24224B/13
ANDO/ 27.03.74 ANDO M D13 =NL -159-569
Ready-to-eat rice product - 70058W/42
ANIS 27.03.75 ANIC SPA D23 E13 =OE 7602-255
Cyanomethyl-substd tetrahydropyran- or -furane derivs - 76212X/41
ANIS 21.09.77 ANIC SPA B05 D21 (D22) =BE -870-661
Mosquito-repellent agents - 24240B/13
*ANIS 21.09.77 ANIC SPA B05 D21 (D22) *DT 2841-134
Mosquito-repellent agents - 24240B/13
ANLI/ 14.09.77 ANLIKER W D15 J02 #DT 2741-243
Ejector mixer for fluids partic. gas into liq. - 11578Y/07
*ANVR 14.09.77 AGENCE NAT VALORISATION D13 *DT 2839-466
Foam-forming egg-white substitute for confectionery - 24207B/13
ANVR 14.09.77 AGENCE NAT VALORISATION D13 =NL 7809-286
Foam-forming egg-white substitute for confectionery - 24207B/13
ARAI/ 12.09.77 ARAI T B04 D16 =DT 2839-668
Antibacterial and antitumour saframycin(s) A, B, C, D and E - 22518B/12
*ASAE 22.07.77 ASAHI ELECTROCHEM IND KK D24 E12 *J5 4023-607
Metal fat mfr. - 24766B/13
ASAH 20.06.77 ASAHI KASEI KOGYO A88 D15 J01 (A11) =FR 2395-060
Hollow cellulose ester ultrafiltration membrane - 00328B/01
*ASAH 20.07.77 ASAHI CHEMICAL IND KK A88 D15 J01 *J5 4021-971
Electrodialysis of inorganic electrolyte contg. organic anion - 24398B/13
ASII= 21.07.77 AS SIBE IRKUT ORG B03 C01 D21 E11 #J5 4023-134
Compsn. contg. silatran deriv. - 74333Y/42
*ATCH= 22.03.76 AS TADZ CHEM INST D16 J01 *SU -606-625
Collector for non-sulphide ore flotations - 25493B/13
*AUCO= 14.09.76 AS UKR COLLOID CHEM D15 J01 *SU -606-603
Modified keramzite filter material for purificn. of mine water - 25480B/13

BABW 22.07.77 BABCOCK & WILCOX CO D15 E36 J01 K05 =J5 4023-082
Electrodialysis and ion-exchange treatment of ionised soln. - 82185A/46
BADI 01.10.76 BASF AG C03 D13 =OE 7706-990
Aq. preservative for animal feed - 25194A/14
*BADI 23.09.77 BASF AG D25 E16 *BE -870-683
Stabilising nonionic surfactant against alkali discolouration - 23957B/13
BATT 01.04.77 BATTELLE MEMOR INST D17 =FR 2395-314
Sugars prodn. by hydrolysis of lignocellulosic material - 72708A/41
*BATT 22.09.77 BATTELLE DEV CORP C03 D16 *BE -870-651
Viral and bacterial microbial insecticide micro-granule - 23954B/13
BAUM- 21.06.77 BAUMGARTNER PAPIERS D18 F07 =FR 2395-487
Optical check of moving strand - 02156B/02
BAXT 08.04.74 BAXTER TRAVENOL LAB D13 (D16) =OE 7502-648
Lipolytic enzyme system from Mucor miehei - 58739W/36
BAYL- 24.03.75 BAYLOR COLLEGE MEDI D15 E13 =CA 1050-878
Sterilisation of holding tanks and toilet bowls - 20585X/11
*BEAF 21.07.76 BEATRICE FOODS CO D13 *US 4112-123
Nutritionally balanced single food compsn. - 25828B/13
*BEAF 15.02.77 BEATRICE FOODS CO D13 *US 4112-125
Food colour and flavour carrying particle - 25830B/13
BEGH- 13.09.77 BEGHIN-SAY SA A96 D22 F07 (A14) =DT 2831-211
Mfg. absorbent flexible sheet for baby's napkins etc. - 76400A/43
BEGH- 13.09.77 BEGHIN-SAY A96 D22 F07 (A14) =GB 2004-201
Mfg. absorbent flexible sheet for baby's napkins etc. - 76400A/43
BEGH- 13.09.77 BEGHIN-SAY SA A96 D22 F07 (A14) =NL 7809-338
Mfg. absorbent flexible sheet for baby's napkins etc. - 76400A/43
BEGH- 20.09.77 BEGHIN-SAY SA A96 D22 F07 =DT 2835-822
Stratified absorbent prod. used as dressing or protective slip - 01969B/02
BEHW 29.04.74 BEHRINGWERKE AG B04 D16 =DS 2420-706
Schistosome antigens prodn. - 74341W/45
BEHW 10.06.75 BEHRINGWERKE AG B04 D16 =OE 7604-201
Stable microbial clumping factor - 96508X/52
BEHW 31,07.76 BEHRINGWERKE AG B04 D16 =DS 2634-584
Non-toxic immunogen used in tetanus vaccine - 10610A/06
*BELL- 09.09.77 GEBR BELLMER KG D15 *DT 2740-645
Sewage basin raking system - 24078B/13
*BELU 03.05.76 BELO UNIV D16 (D13) *SU -605-833
Bacterial strain of streptococcus lactis - 25332B/13
*BEMR/ 30.08.76 BEMROSE H F D14 *US 4110-916
Forced air food dryer - 25581B/13
*BENC 15.09.77 BENCKISER J A GMBH B06 D21 E33 (B05 E11) *DT 2741-513
Calcium phosphate di:hydrate stabilisation against hydrolysis - 24121B/13
BENI- 08.12.75 BENIER BV D11 =CA 1049-848
Kneader, forming lumps into balls of dough - 41664Y/24
BEPE- 23.05.77 BEPEX CORP D15 F09 J01 (D14 D16) =US 4111-115
Continuous disc type filter press for dewatering slurries - 88131A/49
BERT- 23.12.68 BERTIN & CIE D15 H03 J01 =NL -159-744
Reocvery of oil floating on water - 45019R/25
BETT- 28.01.74 BETTCHER IND INC D12 =OE 7409-094
Air driven annular boning knife - 89781V/52
*BIKO- 20.07.77 BIKOEN KK A96 D21 (A14) *J5 4023-135
Cosmetic compsn. - 24708B/13
BIMA- 23.06.77 BIMAK SRL D13 =FR 2394-986
Domestic ice cream machine with two separate mixing bowls - 76374A/43
BINC 30.07.73 BINZ CO D22 =NL -159-618
Burning air from isolation compartment of ambulance - 00155W/01
*BIND- 15.09.77 BINDICATOR CO D13 *GB 2004-393
Measuring material moisture content in powdered milk processing - 24342B/13
BIOM- 14.09.77 INST BIOMEDIZIN TEC D22 =WP 7900-145
Anodic oxidn. sterilisation of fluids - 22267B/12
*BLAN/ 21.06.77 BLANIE J M M P D18 E17 (E33 E34) *FR 2394-989
Treating tobacco smoke to remove harmful elements - 24244B/13
BOEF 11.08.69 BOEHRINGER MANNHEIM GMBH B04 D16 =J7 9004-280
Enzymatic conversion of glucose - 15069S/08
BOEF 16.11.76 BOEHRINGER MANNHEIM GMBH D15 =DS 2652-229
High vol. loading activated sludge plant for waste water purificn. - 36618A/21
BOEH 12.08.76 BOEHRINGER C H SOHN B04 D16 =BR 7705-326
Immobilised enzyme on hardened porous protein support - 12290A/07
BORS/ 12.08.77 BORST A H D15 =DK 7803-505
Combined waste water treatment and rubbish disposal - 89700A/50
BORS/ 12.08.77 BORST A H D15 =DK 7803-506
Combined waste water treatment and rubbish disposal - 89700A/50
BORS/ 12.08.77 BORST A H D15 =SW 7808-559
Combined waste water treatment and rubbish disposal - 89700A/50
BORS/ 12.08.77 BORST A H D15 =SW 7808-560
Combined waste water treatment and rubbish disposal - 89700A/50
BRAS- 21.06.77 BRASS KRONENBOURG D16 =FR 2395-080
Beer cask sorting with automatic identification of coded labels - 76369A/43
*BREA= 24.09.76 BREAD BAKING IND D11 *SU -605-588
Bread of improved quality and storage life - 25199B/13
*BRIM 27.06.75 BRISTOL MYERS CO B04 D16 *US 4112-071
Figaroic acid antibiotic complex obtd. from ATCC 31129 - 25812B/13
BROO- 29.10.74 BROOKSBANK A88 D18 F07 =DS 2548-200
Leather conveyor belt for fibres - 18856X/11
BRPE 19.05.76 BRITISH PETROLEUM LTD D13 E17 (D11) =US 4112-122
Inhibiting growth of microorganisms on foods - 82990Y/47

BRUL/ 05.04.76 BRULE R D13 =CA 1049-835
Freezable sweet souffle prepn. - 08203A/04
BRUN/ 04.08.77 BRUNDBJERG N D22 =NO 7802-503
Charge absorbing, insulating casing for regenerating type air purifier - 12339B/07
BUHL 24.06.77 BUHLER GEBR AG D23 =FR 2395-137
Set gap seal for flaking rolls prodn. - 02181B/02
•BUTT= 03.05.76 BUTTER CHEESE PROD D16 (D13) *SU -605-833
Bacterial strain of streptococcus lactis - 25332B/13

•CABA/ 04.01.78 CABARDO A M B06 D21 *GB 1543-029
Periodontal powder for treating bleeding gums and gingivitis - 24299B/13
CALP- 28.07.77 CALPIS SHOKUHIN KOG B04 D16 =J5 4024-801
Antibacterial protein C-3603 - 14419B/08
•CARN- 28.02.77 CARNATION CO D12 E24 *US 4112-126
Counter colouring of denatured meat prods. - 25831B/13
CARR- 09.09.77 CARRIER FOURS CHAUX D16 =DT 2838-873
Treating household rubbish to be spread on a tip - 19666A/11
CARR- 09.09.77 CARRIERES & FOURS C D16 =NL 7809-139
Treating household rubbish to be spread on a tip - 19666A/11
CARV/ 19.09.77 CARVALHO R J D15 #DT 2742-085
Waste water treatment by flocculation and oxidation - 70472Y/39
CATA- 13.09.77 CATALYTIC GENERATOR A97 D13 #DT 2741-229
Chill prevention for banana underpeel - 70627Y/39
CELA 09.02.72 CELANESE CORP A97 D18 =SU -605-525
Smoking mixtures - 49533U/35
CELF- 11.08.77 CELFIL CO ESTABLISH D18 F09 =DK 7803-537
Mfr. of paper band for cigarette filter tips - 89704A/50
CHAL- 23.06.77 CHALLENGE-COOK BROS D18 =FR 2395-315
Tumbler drum for treating hides - 75993A/42
•CHAR/ 21.11.77 CHARM S E B04 D13 J04 *BE -872-177
Detection of antibiotics in liquid samples e.g. milk, body fluid - 24010B/13
•CHEM- 17.08.77 CHEMED CORP A97 D15 E16 *US 4111-679
Controlling microorganisms in aq. systems - 25663B/13
CHET 09.04.68 CHEMETRON CORP D14 J01 =NL -159-590
Thin film thermal evaporator - 63219Z/00
CHIM- 10.08.73 CHIMICASA GMBH B05 D13 E12 =DS 2434-483
Saccharin or cyclamate sugar substitute - 14659W/09
CHPR- 07.02.73 INST CHEM PRZEMYS B06 C03 D25 E11 (D22) =SU -605-543
Alkaline bromine complex washing agents - 60999V/34
CHRI- 08.08.77 CHRIST FILS SA D13 (D15 D16) =DK 7802-901
Proteinaceous food made by controlled fermentation of waste water - 25801A/14
CHSC- 18.03.77 CHEM INST SCHAFER A97 D25 E19 =FR 2395-309
Cleanser concentrate for laboratory diagnostic analysis appts. - 69295A/39
CIBA 03.09.73 CIBA GEIGY AG B03 C02 D22 E13 =CA 1051-000
1-Dichlorofluoromethylthio 3-phenyl imidazolidine diones - 19613W/12
CIBA 14.09.73 CIBA GEIGY AG D25 =CA 1050-710
Optical brighteners in dust-free, easy-flowing form - 24557W/15
CIBA 23.07.75 CIBA GEIGY CORP A97 D15 E19 =US 4111-804
Inhibiting boiler scale formation - 11502Y/07
CIBA 15.12.75 CIBA GEIGY CORP D22 E14 F06 =US 4111-844
Synergetic microbicide contg. halogenated hydroxy diphenyl ether - 43931Y/25
CIBA 21.05.76 CIBA GEIGY AG B05 C03 D22 E11 =GB 1542-938
Substd. (1)-amino-methane-phosphonous acid derivs. - 82995Y/47
CIBA 20.07.77 CIBA GEIGY AG A26 B07 C03 D22 (A18 A96 B04) =J5 4022-487
Water insoluble polysiloxane hydrogel - 09935B/05
•COKE 14.10.75 COCA-COLA CO D13 *US 4112-130
Spray drying orange juice slurry - 25835B/13
COLG 29.05.69 COLGATE PALMOLIVE CO A16 D21 F06 (A87 A96 D18) =DS 2025-452
Polymer hair setting treatment - 88395R/47
COLG 07.09.73 COLGATE PALMOLIVE CO D22 =CA 1050-891
Aerosol body deodorant powder - 19655W/12
COLG 10.08.77 COLGATE PALMOLIVE CO D22 =DK 7802-949
Baby's disposable napkin with adhesive securing straps - 87884A/49
COLG 12.09.77 COLGATE PALMOLIVE CO A97 D25 =DT 2838-800
Particulate phosphate free washing product - 06094B/04
COLG 12.09.77 COLGATE PALMOLIVE CO A97 D25 =NL 7809-249
Particulate phosphate free washing product - 06094B/04
•COMM 29.10.74 IMC CHEMICAL GROUP INC A11 D13 K04 (A95) *US 4112-220
Nitrate ester(s) of galactomannan gums - 25878B/13
COMP 22.10.76 SAINT-GOBAIN INDUSTRIES D22 F04 L01 =US 4111-672
Mineral fibre panel mfg plant with wet scrubber - 27483W/17
•CONS= 23.08.76 CONSERVE VEG DRYING D13 *SU -605-592
Dry soluble cabbage powder mfr. - 25203B/13
•CONS= 23.08.76 CONSERVE VEG DRYING D13 *SU -605-593
Two/stage prodn. of sterilised fruit-filled cottage cheese - 25204B/13
CORE- 24.06.77 COREXI SA D13 =FR 2394-985
Making cooked sugar pastilles contg. volatile ingredients - 07737B/04
•CORG 14.09.77 CORNING GLASS WORKS D16 *GB 2004-300
Composites of microbes bound to porous support - 24332B/13
CORP 04.01.77 CPC INT INC D17 E13 (D16) =GB 1543-094
Maltose prepn. by enzymatic saccharification of starch - 34997A/20
CRAN 25.09.68 CRANE CO D15 J04 =DS 1906-529
Mxed bed ion exchange demineralisation of water - 22397R/14
CSIR 18.07.77 COMMONWEALTH SCIENT ORG D14 =BR 7804-607
Threshing drum for stripping haulm from vegetable matter - 11282B/06
•CUTT 12.05.75 CUTTER LABS B04 D16 *US 4112-068
Cultivation of viruses in canine lung cell strain culture system - 25811B/13
CUTT 12.09.77 CUTTER LABS B04 C03 D16 #NL 7709-998
Foetal canine lung diploid cell line - 08406A/05

DAIL 19.07.77 DAICEL KK D18 E33 =J5 4021-679
Filter for tobacco smoke - 20245B/11
•DANG- 14.09.77 DANGER H KG D11 *DT 2741-294
Waffle moulding machine - 24111B/13
•DEEP- 16.05.77 DEEPWATER CHEM B05 C03 D13 E16 *US 4111-991
One step prepn. of halogen salts - 25780B/13
DEGM 12.08.75 DEGREMONT SA D15 =GB 1543-083
Sludge recovery device fixed to rotating bridge - 85054X/46
DEGM 24.03.76 DEGREMONT SA D15 =US 4111-802
Reaction and decantation treatment plant for waste water - 52272Y/30
DEGS 04.02.72 DEUTSCHE GOLD & SILBER C03 D13 =NL -159-568
N-acylmethionine feed additives - 46773U/33
DEGS 16.03.74 DEUTSCHE GOLD & SILBER C03 D13 E17 =SU -606-530
Propylene glycol propionate used as silage additive - 64180W/39
DEGS 23.08.74 DEUTSCHE GOLD & SILBER D21 M26 =DS 2440-425
Gold-deficient dental alloys - 19036X/11
DEGS 11.11.76 DEUTSCHE GOLD & SILBER D25 E34 =DS 2651-442
Sodium percarbonate particles coated with dehydrated sodium perborat - 34984A/20
DEGS 05.08.77 DEUTSCHE GOLD UND SILBER D15 E33 J01 =BR 7805-007
Mfr. of aluminosilicate cation exchangers contg. surfactants - 09982B/06
DESI 12.07.75 DESITIN WERK KEINKE GMBH A96 B05 D22 =DS 2531-260
D-panthenol anhydrous spray solutions - 04179Y/03
DESO- 09.08.74 DESOWAG-BAYER HOLZS C03 D22 E12 F09 (C01) =CA 1050-882
Preservative and marking agent for wood - 15161X/09
•DIES- 23.02.78 DIESSEL GMBH D16 J01 (D15) *DT 2807-674
Liq. sepn. after passing through filter - 24152B/13
•DIES- 08.03.78 DIESSEL GMBH D16 *DT 2809-910
Alcohol, wort and carbon di:oxide determination in beer - 24153B/13
•DNIN 19.07.77 DAINIPPON INK CHEM KK D13 E24 *J5 4023-168
Coloured ice cakes prepn. - 24718B/13
•DORI- 27.07.77 DORIKO KK D15 *J5 4024-455
Biological treatment of waste water by fluid contacting method 24990B/13
DORO 05.09.74 DORR OLIVER INC D15 J01 =CA 1051-132
Continuously operating sedimentation pit for clarifying liquids 07471X/05
DOWO 27.07.77 DOW CORNING CORP A96 C03 D21 (A26) =J5 4024-959
Emulsions of polar liq. in methyl-siloxane fluid - 80048A/44
DRES 14.07.77 DRESSER INDUSTRIES INC D15 =BR 7804-528
Sludge siphon collector for settling tank - 06444B/04
•DRIS- 26.04.71 DRISAN PACKAGING LT D13 *US 4112-124
Sterile food packaging in flexible envelope - 25829B/13
•DUNA/ 01.07.76 DUNAISKII SH P D14 *SU -606-616
Animal feeds mixer - 25490B/13
DUNC 18.10.73 DUNCAN FLOCKHARD CO LTD B04 D16 =CA 1050-886
Vaccines from apyretogenic virus fragments - 29077W/18
DUPO 21.10.76 DU PONT DE NEMOURS CO A88 D15 J01 =GB 1543-138
Selectively permeable membrane prepn. - 32458A/18
DYNN 08.09.77 DYNAMIT NOBEL AG B04 D16 =NL 7809-156
Racemisation of optically active N-acyl-aminoacid(s) - 04131B/03
•DZNI= 28.11.72 DZERZ NITROGEN IND C03 D13 *SU -606-572
Complex phosphate(s) as animal feed additives - 25465B/13

•EAST 02.09.77 EASTMAN KODAK CO A96 C03 D13 *DT 2838-308
Pill for ruminants resistant to conditions in the rumen - 24176B/13
•EAST 09.09.77 EASTMAN KODAK CO A97 B04 D16 J01 *DT 2839-170
Chromatographic material for purificn. of biologically active materi 24191B/13
EAST 09.09.77 EASTMAN KODAK CO A97 B04 D16 J01 =US 4111-838
Chromatographic material for purificn. of biologically active materi 24191B/13
•EBAI 21.07.77 EBARA INFILCO KK D15 E36 J01 *J5 4023-071
Treatment of waste soln. contg. hydrazine - 24669B/13
EFFE- 15.08 77 EFFEM FOODS PTY LTD C03 D13 =SW 7808-613
Animal food, esp. for cats and dogs, based on animal blood - 14161B/
•EIKE- 22.07.77 EIKEN KAGAKU KK B04 D16 *J5 4023-188
Culture medium for detecting bacterial acyl:amidase - 24723B/13
EISA 08.11.75 EISAI KK B04 D16 =CA 1050-884
Pancreatic esterase prepn. - 46196Y/26

ELED 30.05.73 DENKI KAGAKU KOGYO A96 B04 D16 (A14) =DS 2413-694
Water-insolluble immobilized enzyme prepns - 85867V/50
ELEX 02.12.74 ELECTROLUX AB D22 =SU -606-531
Charging unit for supplying eg cans of food - 63718X/34
ERAP 23.12.68 ESTR RECH ACTIV PETROL D15 H03 J01 =NL -159-744
Reocvery of oil floating on water - 45019R/25
*ESMI- 13.09.77 ESMIL BV D15 *GB 2004-192
Appts. for distilling water esp. sea water - 24314B/13
ESMI- 13.09.77 ESMIL BV D15 =NL 7710-010
Appts. for distilling water esp. sea water - 24314B/13
ETHI 31.07.69 ETHICON INC A17 D22 F01 (A34 A96) =DS 2037-813
Polypropylene suture thead for medical - 11368S/06
ETHI 12.01.76 ETHICON INC A96 D22 F01 (A25) =OE 7700-093
Synthetic, absorbable, surgical sutures and prostheses - 48808Y/28
ETHI 03.05.76 ETHICON INC D22 (D16) =OE 7703-097
Evaluating microbiological sterility by colour - 79357Y/45
ETHY 17.09.73 ETHYL CORP D25 E16 =CA 1051-030
Alkanolamides prepd by reaction of di- and monoethanolamines - 19217W/12

*FAIR/ 11.12.75 FAIR J H D15 *US 4111-808
Sludge digester with updraught tube - 25720B/13
FANT- 02.09.77 FANTASIA CONFECTION D11 =WP 7900-125
Device for cutting sheet cakes into small pieces, e.g. petits/fours - 72063A/40
FARB 22.03.75 BAYER AG D15 =OE 7602-058
Biological treatment of effluent contg. activated sludge - 75668X/41
FARB 20.02.76 BAYER AG C02 D22 E13 F06 (F09) =GB 1542-829
Microbicidal agents for adhesives, textiles and paper - 61390Y/35
FARB 31.08.76 BAYER AG A41 D21 E17 G04 (A60 A97 D16) =GB 1542-980
Low molecular wt. poly:ol used as antifreeze and in polymer prodn. - 17987A/10
FARB 23.05.77 BAYER AG D22 E14 F06 G02 (E15) =DS 2723-118
Disinfectant contg. benzyl alcohol hemi:formal and acid - 87976A/49
FARB 25.06.77 BAYER AG A96 D21 (A14) =FR 2395-020
Two/part dental filling paste compsn. - 87799A/49
*FARB 16.09.77 BAYER AG A88 D15 J01 (A14) *DT 2741-669
Semipermeable membranes for reverse osmosis and ultrafiltration - 24128B/13
FARH 27.06.67 HOECHST AG D21 E34 =NL -159-633
Maddrell salt preparation - 60322Z/00
FARH 16.08.68 HOECHST AG A36 B05 D22 E11 =NL -159-674
Prepn of dialkyl phosphine oxides - 11597R/08
FARH 17.12.73 HOECHST AG A11 D12 E19 F01 =OE 7410-009
Cellulose derivs with urea or triazinone derivs - 44357W/27
FARH 18.07.74 HOECHST AG B03 C02 D13 E13 =CA 1050-978
6-Methyl-2H-1,3-oxazine-2,4(3H)-dione-3-sulphonyl halides - 09489X/06
FARH 18.07.74 HOECHST AG B05 D13 E13 =CA 1051-021
Intermediate beta-acyloxy-crotonic acidamido-N sulphohalides - 09484X/06
FARH 01.08.75 HOECHST AG A96 D22 (A11 A94) =OE 7605-660
Hydrophilic support carrying water insol. cellulose ester particles - 09342Y/06
FARH 29.10.76 HOECHST AG A97 D13 =OE 7707-686
Oven cooked products stable to storage in humidity - 32043A/18
FARH 25.07.77 HOECHST AG A60 D22 E16 M25 (D21) =J5 4024-804
Non-symmetrical sec. ether-amine derivs. - 10263B/06
FARH 11.08.77 HOECHST AG A81 D18 F06 G03 =DK 7803-538
Water vapour absorbent and permeable adhesive compsn. - 12365B/07
FARH 11.08.77 HOECHST AG A82 D22 F08 (A83 A84 A96) =DK 7803-539
Water vapour absorbent and permeable rubber web - 12364B/07
*FARM- 29.09.76 FAR-MAR-CO INC A97 D13 *US 4112-133
Liq. smoke compsn. contg. added food acid and solubiliser - 25837B/13
FARM- 09.09.77 FAR-MAR-CO INC D13 (D11) =NL 7801-692
Whole wheat grain fractionation - 22280B/12
*FATS= 08.10.76 FATS RES INST D13 (D16) *SU -605-834
Bacterial strain of Streptococcus diacetilactis - 25333B/13
FERO 01.12.66 FERROSAN B05 C03 D13 =NL -159-586
Dispersible vitamin preparations - 32400F/00
*FESS/ 22.02.77 FESSLER J H D16 E12 *US 4112-128
Rapid chemical cold stabilisation of wine - 25833B/13
*FINL/ 16.09.77 FINLEY W T D15 *WP 7900-150
Elevating nutrient-rich ocean water from aphotic to photic zone - 25900B/13
FIRM 26.08.77 FIRMENICH SA D23 E15 =GB 2004-274
Spiro cpd. prodn. for use in perfumery industry - 18353B/10
*FIRM 15.09.77 FIRMENICH SA B07 D13 E13 (B05 D23) *DT 2839-814
2-Formyl-bi:cyclo-heptane-3-carboxylate derivs. prodn. - 24225B/13
*FISC/ 22.06.77 FISCHER H D22 *FR 2395-032
Reservoirs for volatile atmospheric reagents e.g. disinfectants - 24248B/13
FMCC 23.12.74 FMC CORP C03 D22 E19 (C01 D15) =CA 1050-880
Water-soluble chlorine-releasing composition - 52580X/28
*FMCC 03.10.77 FMC CORP D25 E19 F06 *US 4111-651
Low temp. fabric bleaching with per-oxygen cpds. - 25655B/13
FOOD- 17.10.74 FOOD TECH INC D13 (D17) =CA 1049-838
Agglomeration of dehydrated sugary syrups - 20674X/11
*FOOD= 28.06.76 FOOD IND CORRESP A97 D16 (A14 A25) *SU -605-829
Table wine prodn. - 25329B/13
*FORE= 28.11.72 FOREST-STEPPE RANCHING C03 D13 *SU -606-572
Complex phosphate(s) as animal feed additives - 25465B/13
FRIT- 06.08.75 FRITZSCHE DODGE & O B05 D13 E17 (D18 E15) =CA 1050-815
Aromatising compsns. contg. dialkyl diacyl succinates - 13243Y/08
FRRR 21.09.77 FERRERO P & CIA SPA D13 =DT 2800-309
Filled floatable spherical food prod. - 08058B/05
*FRRR 21.09.77 FERRERO P & CIA SPA D11 *DT 2800-310
Bakery products for use with e.g. milk instead of known cereals - 24151B/13
*FRUI= 05.05.76 FRUIT ECONOMY RES D14 *SU -605-602
Fruit grader with endless belts - 25212B/13
FUJI 14.09.77 FUJISAWA PHARM IND KK B02 C02 D13 =DT 2839-730
Aminal feed compsn. contain bicyclomycin - 22499B/12
FUJI 14.09.77 FUJISAWA PHARM IND KK B02 C02 D13 =NL 7809-386
Aminal feed compsn. contain bicyclomycin - 22499B/12
FUKO 08.09.77 FUJI OIL KK D13 =DT 2839-060
Hard vegetable butter compsn. for chocolate - 22530B/12
FUKO 08.09.77 FUJI OIL KK D13 =NL 7809-187
Hard vegetable butter compsn. for chocolate - 22530B/12

*GAMB/ 21.06.77 GAMBINI J D22 J04 *FR 2395-066
Autoclave, partic. operating alternately under pressure and vacuum - 24251B/13
GBFE- 08.04.74 GB FERMENTATION IND D13 (D16) =CA 1050-909
Lipolytic enzyme system from Mucor miehei - 58739W/36
GECI 01.12.66 GENERAL CIGAR INC A97 D18 =NL -159-571
Tobacco prods contg acetylated methyl hydroxyethyl - 06509Q/00
*GENI/ 22.09.77 GENIEYZ F D21 E17 (E15) *BE -870-647
Compsn. for treating baldness and skin sores - 23952B/13
GENO 10.09.73 GENERAL FOODS CORP D12 =CA 1050-813
Simulated meat products of vegetable protein - 21326W/13
GENO 25.04.74 GENERAL FOODS CORP B05 D13 E14 =CA 1050-812
Laevo-asparagyl-laevo-phenyl alanine sweetener - 76096W/46
GENO 08.05.74 GENERAL FOODS CORP C03 D13 E17 =CA 1050-810
High moisture content feed for animals esp dogs - 77065W/47
GENO 01.11.74 GENERAL FOODS CORP C03 D12 =CA 1050-811
Shelf-stable intermediate-moisture animal foods prepn. - 57440Y/32
GENO 10.02.75 GENERAL FOODS CORP D13 =CA 1050-807
Shaped starch-contg. foodstuffs - 65266X/35
GENO 22.06.76 GENERAL FOODS CORP C03 D13 E24 #CA 1050-808
Red colouration of animal food by pigments from Monascus purpureus - 46866Y/26
*GILL 16.02.77 GILLETTE CO D21 E12 *US 4111-653
Stabilised aq. alkaline stannite depilatory compsn. - 25657B/13
GIVA 25.07.77 GIVAUDAN L & CIE SA D23 E13 (D13 D21 D25) =J5 4024-893
1,4-Epoxy-1,3,3-tri:methyl-2-cyclohexane prepn. - 12275B/07
GOSE- 19.07.77 GOSEI KAGAKU KENKYU D18 E33 =J5 4021-679
Filter for tobacco smoke - 20245B/11
*GPOL= 20.05.76 GEOR POLY D13 *SU -605-596
Whipped confectionery prepn. - 25207B/13
*GPOL= 20.05.76 GEOR POLY D13 *SU -605-600
Foaming agent for halva mfr. - 25210B/13
GREA- 22.06.77 GREAT WESTERN SUGAR D17 E13 (D16) =FR 2395-313
Glucose prepn. by enzymatic hydrolysis of cellulosic material - 63250A/35
*GREE- 20.07.77 GREEN FOODS KK D13 (D16) *J5 4023-170
Prepn. of chlorella extract of good taste and flavour - 24719B/13
*GUIL/ 22.06.77 GUILLAUME J P D17 J01 *FR 2395-057
Decanter for purifying water contg. particulate materials - 24249B/13
*GUND- 10.04.78 GUNDLACH E KG D11 *DS 2815-417
Mass produced cake mould - 24043B/13

*HAMA- 27.07.77 HAMAMATSU KOSAN KK D22 J01 *J5 4024-287
Deodorising element for air cleaner - 24972B/13
*HANS/ 28.10.76 HANSON D R D11 *US 4111-624
Imprinting irregularly spaced dough pieces - 25646B/13
*HARE/ 06.10.76 HARENDZA-HARINXMA A D15 E33 *US 4111-800
Simultaneous carbonisation of refuse and sewage sludge - 25716B/13
HARP/ 15.02.68 HARPER N C D22 J04 =DS 1907-486
Chemical concentration control apparatus - 82568R/44
HARV- 15.12.75 HARVARD COLLEGE A97 B04 D16 E17 =US 4111-751
Affinity resin for purifying alcohol dehydrogenase - 03996B/02
*HASE 27.07.77 HASEGAWA KK D23 E17 (D13 D21) *J5 4024-805
3,5-Octa:dien-1-ol geometrical isomers - 25018B/13
HAUN 27.03.75 HAUNI-WERKE KORBER KG D18 =GB 1542-883
Hollow cigarette tip ptrodn - 77780X/42
HAVE- 20.06.77 HAVERHILL MEAT PROD D12 =FR 2394-981
Device for removing fat from lean heat on a carcass - 03434B/02

HAVE/ 26.06.74 HAVERSTOCK C B D22 #CA 1050-847
Bandage for closing wound without stitching - 12371W/07
HAYB 25.07.77 HAYASHIBARA BIOCHEM A11 B07 D13 G02 (A82 B04
D17) =J5 4023-195
Film-forming glucan elsinan - 78591A/44
HENK 12.06.68 HENKEL KG AUF AKTIEN D25 =DS 1929-193
Detergent with compatible softener and - 00685R/01
HENK 13.04.73 HENKEL KG AUF AKTIEN D25 F06 =NL -159-712
Textile cleaning bath contg alumino silicates - 75753V/44
HENK 13.04.73 HENKEL KG AUF AKTIEN D25 =NL -159-713
Washing agents for dish washing machines - 76861V/44
HENK 16.04.74 HENKEL KG AUF AKTIEN D22 E17 (E15) =CA 1050-892
Anhydrous, deodorising cosmetic prods esp. aerosols - 72481W/44
HENK 16.08.75 HENKEL KG AUF AKTIEN C03 D22 E17 F06 (D21) =CA
1050-876
Permonocarboxylic aq. concentrate stable to storage - 12715Y/08
HENK 16.08.75 HENKEL KG AUF AKTIEN C03 D22 E17 F06 (D21) =CA
1050-877
Permonocarboxylic aq. concentrate stable to storage - 12715Y/08
HENK 20.09.76 HENKEL KG AUF AKTIEN D21 E19 =OE 7706-707
Poly:carboxylic acid hydroxyalkyl ester(s) - 23492A/13
HENK 20.09.76 HENKEL KG AUF AKTIEN D21 E19 =OE 7706-708
Poly:carboxylic acid hydroxyalkyl ester(s) - 23492A/13
HENK 23.06.77 HENKEL KG AUF AKTIEN D21 E15 =FR 2395-023
Skin protection against longer wavelength UV - 01873B/02
HENK 23.06.77 HENKEL KG AUF AKTIEN D21 E13 =FR 2395-024
Skin protection against longer wavelength UV - 01874B/02
HENK 23.06.77 HENKEL KG AUF AKTIEN D21 E19 =FR 2395-025
Skin protection against longer wavelength UV - 01875B/02
HENK 20.07.77 HENKEL KG AUF AKTIEN A97 D23 E19 =J5 4022-310
Acyloin prepn. by aldehyde condensn. - 10248B/06
HENK 05.08.77 HENKEL KG AUF AKTIEN D15 E33 J01 =BR 7805-007
Mfr. of aluminosilicate cation exchangers contg. surfactants - 09982B/06
HENN/ 22.05.73 HENNING W D13 =DS 2325-900
Smoking aroma agent for foodstuffs - 87395V/51
*HERA 03.09.77 HERAEUS W C GMBH D21 M26 *DS 2739-839
Gold soldering alloy for joining gold dental alloys - 24038B/13
HERC 04.05.73 HERCULES INC A14 D15 G06 (A89 A91) =CA 1051-143
High mol wt water-sol imidazole polymers - 62030X/33
HIES/ 20.05.77 HIESINGER E D15 J01 (D13 D16) =OE 7703-609
Filter with filter aid on support fabric between chambers - 68980A/39
HITA 28.02.75 HITACHI KK D15 E36 =GB 1542-951
Treating waste water contg. fluorine - 78455X/42
*HITB 26.07.77 HITACHI CHEMICAL KK A91 D15 E33 J01 *J5 4024-286
Removal of heavy metals from water - 24971B/13
HOFF 15.09.76 HOFFMANN-LA ROCHE INC B05 D13 E24 =US 4111-992
Carotenoid inters. prepn. from 3-alkoxy cycloalk 2-enones - 97408X/52
HOFF 04.02.77 HOFFMANN-LA ROCHE AG B05 D16 =OE 7700-747
Anthracyclinone-type antibiotic SM-173B - 58746A/33
HOFF 12.09.77 HOFFMANN-LA ROCHE AG B05 D13 E17 (D16) =DT 2839-
228
D-Arabitol prepn. by Pichia haplophila microorganism fermentation -
22403B/12
HOFF 14.09.77 HOFFMANN-LA ROCHE AG D21 E16 (E13) =GB 2004-185
Cosmetic compsn. having anti-seborrhoea activity - 22379B/12
HOFF 14.09.77 HOFFMANN-LA ROCHE AG D21 E16 (E13) =NL 7808-604
Cosmetic compsn. having anti-seborrhoea activity - 22379B/12
HOIS/ 07.01.76 HOISS J D15 =OE 7609-418
Crude water distillation system - 50577Y/29
HOKA 03.01.75 HOKKAIDO SUGAR KK D16 =SU -606-554
Alpha galactosidase prodn. - 41760X/22
*HOKU- 26.07.77 HOKUREN NOGYO KYODO C03 D13 *J5 4024-779
Feedstuff prepn. - 25017B/13
*HOKU- 12.09.77 HOKUREN FED AGRICULTURE D15 *NL 7809-229
Reducing COD of effluent water - 25184B/13
HORI- 12.01.76 HORIBA LTD D15 J04 =DS 2701-075
Continuous oil concentration monitor for water supplies - 52606Y/30
*HOUD 17.04.70 HOUDAILLE INDS INC D15 F09 J02 *US 4112-025
Method of oxygenating liquid - 25792B/13
HOUR- 28.04.75 HOUSTON RES INC D15 E19 =GB 1543-225
Oxidising organic refractory cpds. in waste waters - 87245X/47
HOWA/ 12.11.73 HOWARD H H D13 #NL -159-570
Potato sugar leaching - 75253U/49
HOWM- 23.06.77 HOWMEDICA INC D21 M26 =FR 2395-320
Hot-workable cobatl-chromium-nitrogen alloys - 00491B/01
HULE- 12.09.77 HULETTS SUGAR LTD D17 =DT 2839-304
Vertical cylindrical continuous vacuum crystalliser esp. for sugar pro -
06105B/04
HULE- 12.09.77 HULETTS SUGAR LTD D17 =NL 7809-295
Vertical cylindrical continuous vacuum crystalliser esp. for sugar pro -
06105B/04

*IBAY/ 23.07.77 IBAYASHI T C03 D13 *J5 4023-173
Nourishing food tonic prepn. - 24721B/13
ICIL 02.05.74 IMPERIAL CHEM INDS LTD A97 D18 =US 4111-211
Smoking compsn. in ribbed sheet form - 74090W/45
ICIL 17.04.75 IMPERIAL CHEM INDS LTD B05 C03 D13 (B03 C02) =US
4112-120
Animal growth-promoting benzo-quinone derivs - 81223X/44
ICIL 23.06.77 IMPERIAL CHEM INDS LTD B06 D21 E33 =FR 2395-022
Cleaning teeth using specified rare earth element cations - 00007B/01
ICIL 02.08.77 IMPERIAL CHEM INDS LTD A97 D16 E13 (D17) =DT 2833-
742
Enzyme fixed to support - 08018B/05
ICIL 09.08.77 IMPERIAL CHEM INDS LTD D16 (D13) =DK 7803-508
Industrial aerobic fermentation - 11897B/07
ICIL 09.08.77 IMPERIAL CHEM INDS LTD D16 (D13) =NO 7802-699
Industrial aerobic fermentation - 11897B/07
ICIL 08.09.77 IMPERIAL CHEM INDS LTD D16 (D13) =NL 7809-125
Microbiological prodn. of single cell protein - 18028B/10
INFL 28.07.77 INT FLAVORS & FRAGR INC B07 D23 E13 (B03 D13 D18)
=J5 4024-866
5-Alkanoyl-2-furfuryl-thio-di:hydro-2,5-di:alkyl- 2H)furan-3-one(s) -
53306A/29
INRE 21.06.76 INST RECH SCIENTIFIQUE B04 D21 (D16) =OE 7704-350
Anticaries bacterial lysates - 00459A/01
INRG 27.09.73 INST NAT RECH AGRON C03 D16 =SU -605-524
Prevention of take-all of cereals - 14370W/09
INRG 01.09.77 INST NAT RECH AGRON D13 =WP 7900-121
Obtaining food proteins from vegetable materials esp. soya - 16009B/09
*INSE 24.06.77 INST NAT RECH CHIMIQUE D15 *FR 2395-227
Treating effluent by the activated sludge method - 24263B/13
INSF 25.07.77 INST FRANCAIS PETROL D17 E34 H01 (D16) =J5 4024-
281
Extraction of oil by flooding with bio:polymer solns. - 14436B/08
*IZAR/ 13.08.75 IZARD J A A88 D15 J01 *CA 1050-899
Reverse osmosis kit for producing potable water from sea water -
24029B/13

JANC 19.08.68 JANSSEN PHARMACEUT NV B03 C02 D22 =NL -159-
662
Fungicidal and insecticidal 1-(beta-aryl)ethylimidazole - 13618R/09
JAPS 22.09.75 JAPAN SYNTHETIC RUBBER A11 D23 F09 =CA 1050-967
Highly pure fatty acids, resin acids and sterols - 25527Y/15
JOHA/ 21.07.75 JOHANSSON J A O A97 D22 #CA 1050-879
Disinfectant contg. complex-bonded iodine - 44138X/24
*JOHJ 10.07.72 JOHNSON & JOHNSON A14 D22 F06 G02 (F09) *US
4111-922
Bacteriostatic hydrocolloidal dispersions with high water absorbency -
25759B/13
JOHJ 12.12.74 JOHNSON & JOHNSON D22 =CA 1049-873
Surgical drape - 70358W/42
*JOHJ 20.10.75 DEVRO INC D12 *US 4110-871
Sausage stuffing horn - 25574B/13
*JOHJ 04.04.77 JOHNSON & JOHNSON A81 D22 F04 (F09) *US 4112-
153
Controlling water repellency of nonwoven fabric - 25844B/13
*JOHM 14.09.77 JOHNS MANVILLE CORP D13 *US 4112-129
Compsn. for reducing build-up of free fatty acids in cooking oil -
25834B/13
JUNG- 18.08.71 JUNGBUNZLAUER SPIRI D16 E17 =DS 2240-052
Citric acid prepn - 10817U/08

*KAGO- 26.07.77 KAGOME KK D13 E24 *J5 4024-940
Carotenoid-contg. material for foodstuff colouration - 25093B/13
*KAKE 21.07.77 KAKEN CHEM KK D22 E19 J01 (E37) *J5 4023-095
Deodorant material for applying to e.g. pigsty - 24686B/13
*KANE 19.07.77 KANEBO KK D13 *J5 4023-139
Instant fried vegetables prepn. - 24711B/13
*KANE 26.07.77 KANEBO KK A96 D21 E19 (D25) *J5 4024-908
Non-irritating liq. shampoo - 25068B/13
KAOS 09.12.70 KAO SOAP KK D25 E14 =NL -159-709
Cleaning and bleaching fluid - 41255T/26
*KAOS 13.09.77 KAO SOAP KK D25 E34 *DT 2839-430
Sodium percarbonate readily dissolving in tap water with foaming
24205B/13
KAOS 13.09.77 KAO SOAP KK D25 E34 =GB 2004-260
Sodium percarbonate readily dissolving in tap water with foaming
24205B/13
KASP/ 27.11.74 KASPER J D11 =DS 2455-997
Dough rolling machine - 46190X/25
KEND 24.06.77 KENDALL CO D22 E13 =FR 2395-031
Sterilisation using ethylene oxide-contg. gas mixt. - 00433B/01
*KHAB/ 09.10.75 KHABIROV V V D15 J01 M25 *SU -605-632
Ion exchange column for hydrometallurgy and water desalination
25225B/13
*KIHA- 19.07.77 KIHARA SANGYO KK A83 D22 F07 *J5 4022-252
Deodorising antifungal inner sole - 24446B/13
*KIMI- 23.07.77 KIMITSU KAGAKU KENK C03 D13 *J5 4024-778
Prepn. of feedstuff for fish, etc. - 25016B/13
*KIMI- 26.07.77 KIMITSU KAGAKU KENK A11 D21 E33 (E34) *J5 4024-
964
Moulding materials prodn. - 25105B/13
KITA 05.10.72 KITASATO RES INST B04 C03 D16 =NL -159-584
Killed mycoplasma vaccine for protection of domestic animals
11403V/07
KITA 11.12.76 KITASATO RES INST B04 C03 D16 =GB 1542-995
Antibiotic AM-2282 obtd. by culturing Streptomyces - 44336A/25
*KITA 25.07.77 KITASATO RES INST B04 C03 D16 *J5 4023-118
Vaccine for treating diseases caused by Vibrio microorganisms in fish
24695B/13

*KLAI= 01.08.76 KLAIPEDA OCEAN FISH D12 *SU -605-591
Ice glazing frozen food blocks - 25202B/13

KOCH/ 26.04.76 KOCH J D12 =OE 7701-548
Rib extractor for slaughtered animal - 79740Y/45

*KOEI 22.07.77 KOEI CHEM IND KK D21 E23 *J5 4023-631
2-Substd. amino-5-nitro gamma-picoline derivs. - 24783B/13

KOHL- 29.07.76 KOHLENSAURE-W BUSE D12 J07 =OE 7705-424
Carbon di:oxide snow machine - 12425A/07

KONI/ 06.05.77 KONIG H D11 =OE 7703-264
Dough portioning device - 82558A/46

*KONI/ 16.12.77 KONIG H D11 *OE 7709-051
Portioning and cutting device for dough pieces - B/13

KONN 20.07.77 GIST-BROCADES NV A81 B04 D25 (A96 A97 D16) =J5 4023-190
Enzyme particles resistant to powdering under pressure - 06068B/04

*KRFT 02.09.75 KRAFT INC D13 *US 4112-131
Continuous in/line process cheese prodn. - 25836B/13

KROF/ 24.03.76 KROFTA M D15 =OE 7702-061
Waste water clarification by dissolved air flotation - 36050Y/20

KRUC- 23.07.77 KRUCHEN-BETTEN BETT D12 E16 =J5 4023-712
Cleaning poultry feathers using chloro-hydrocarbon(s) - 34985A/20

*KUBI 19.07.77 KUBOTA KK D15 E36 J01 *J5 4021-963
Device for active carbon regeneration - 24394B/13

KURE 19.01.74 KUREHA KAGAKU KOGYO A97 D12 (A14) =DS 2501-287
Curved plastic sausage casings - 39246W/24

*KURE 19.07.77 KUREHA CHEM IND KK A83 D22 F07 *J5 4022-252
Deodorising antifungal inner sole - 24446B/13

*KUSE- 06.06.77 KUSEL EQUIPMENT CO D13 *US 4111-110
Portable cheese press frame - 25600B/13

KYOW 25.07.77 KYOWA FERMENTATION KK B04 D16 =J5 4023-191
Choline oxidase enzyme prodn. - 38838A/22

LABO 21.06.77 LABOFINA SA D23 J04 =FR 2395-068
Prodn. of partially sulphided nickel catalyst - 74309A/41

LAHE- 10.11.75 LAHEY CLINIC FOUND D16 #BE -835-426
Size analysis of microparticles e.g. cells - 79984W/48

LANG- 09.01.76 LANG APP GMBH D15 J04 =OE 7700-045
Dosing pump for water pipeline - 52442Y/30

*LANG- 12.09.77 LANGE B GMBH B04 D16 J04 *DT 2741-361
Determn. of variables in photometric measurement of enzyme reactions - 24117B/13

*LECO= 06.10.75 LENGD CONFECTION WK D13 *SU -605-598
Confectionery moulding appts. - 25208B/13

*LEFI= 04.07.75 LENGD FIRST MED INS B04 D16 J04 *SU -606-159
Simulating human Escherichia coli infection in dogs - 25458B/13

LEFR/ 20.01.71 LEFRANCOIS L A A D16 =SU -606-553
Fermenting vats - 52377T/33

*LEME= 03.12.75 LENGD MEAT IND PROD D12 *SU -605-589
Heat treatment installation sausage packing mechanism - 25200B/13

*LERE= 19.10.76 LENGD REFRIG IND D12 *SU -606-571
Sausage meat injector - 25464B/13

LESA 29.03.66 LESAFFRE CIE C03 D16 =NL -159-636
Removal of potassium from sugar industry by - 17600R/11

*LIBU= 12.04.76 LITH BUTTER CHEESE D13 *SU -605-595
Cottage cheese having improved storage property - 25206B/13

*LIBU= 08.06.76 LITH BUTTER CHEESE D13 *SU -605-594
Sour cream butter mfr. - 25205B/13

*LIFE- 21.06.76 LIFE SAVERS INC D21 E12 (E33) *US 4112-066
Breath freshener compsns. contg. calcium hydroxide - 25809B/13

LING- 17.07.73 LINGL CORP D15 L02 =US 4112-033
Utilisation of sewage sludge - 27638W/17

LIOT- 02.07.74 LIOT SA D13 =CA 1050-809
Liquid foodstuff conservation - 03884X/03

*LIOY 26.07.77 LION FAT & OIL KK A97 D25 E12 (E17) *J5 4024-906
Liq. detergent compsns. - 25066B/13

*LIOY 12.09.77 LION FAT & OIL KK A97 D25 E17 (A25) *DT 2839-619
Easily rinsed out granular detergent compsns. - 24218B/13

*LIVA= 17.02.76 LIVANY BIOCHEM WKS D16 J08 *SU -606-062
Granules fluidised bed dryer - 25423B/13

LNDH 17.03.75 LONDON HOSPITAL A26 D21 E33 (A60 E19) =NO 7900-128
Catalyst for curing polysulphide rubbers - 61588X/33

LUPO- 28.06.77 LUPOFRESH ALLFELD D16 =DT 2759-343
Hop drying kiln - 02120B/02

*MACH- 08.12.77 MACHINES CHAMBON SA D17 *BE -872-161
Infrared preheat of sugar lumps between moulding and drying - 24007B/13

*MACH- 12.12.77 MACHINES CHAMBON SA D17 *BE -872-162
Drying tunnel esp. for moulded moist sugar lumps - 24008B/13

MANI- 21.09.76 INST MANIPULACNICH D17 =GB 1543-134
Measuring water content of crystalline sugar - 23673A/13

*MATU 18.07.77 MATSUSHITA ELEC IND KK A97 D18 J01 *J5 4022-276
Non-toxic tobacco filter with high activity at low temp. - 24447B/13

MCCA/ 16.08.76 MCCARTNEY J S D22 #CA 1050-845
Protective dressing allowing air to reach a wound - 25568A/14

MCLE/ 13.03.75 MCLEAN P J D15 =CA 1050-922
Domestic hot water tank - 51965Y/29

*MEAT- 31.05.77 MEAT IND TECH AB D18 (D12) *SW 7706-308
Roller for carcass-skinning machine - 25553B/13

*MEAT= 08.06.76 MEAT DAILY IND DES D12 *SU -606-570
Animal carcass processor - 25463B/13

*MEAT= 01.07.76 MEAT IND RES INST D13 *SU -605-824
Fat extraction from animal bones - 25324B/13

*MEDI= 01.08.76 MEDICO BIOLOGICAL D22 *SU -605-616
Medical instruments sterilisation - 25215B/13

MEGG 09.04.76 MEGGLE MILCHIND GMB A96 B05 C03 D13 =DS 2615-715
Dry, antimycotic hexamethylene-tetramine thiocyanate compsns. - 74334Y/42

MEGG 22.06.77 MEGGLE MILCHINDUSTR D13 =FR 2394-984
Constant quality ripened soft cheese prepn. - 02101B/02

*MEGG 19.09.77 MEGGLE MILCHIND D13 *DT 2742-083
Protein-rich snack-like foamed food prepn. - 24140B/13

MEGG 19.09.77 MEGGLE MILCHIND GMB D13 =GB 2004-174
Protein-rich snack-like foamed food prepn. - 24140B/13

MEIJ 06.02.69 MEIJI SEIKA KK B04 D16 =NL -159-715
Antibiotics from streptomyces mycarofac - 55390R/31

*MEIS- 25.07.77 MEISEI KK D15 E36 J03 *J5 4023-078
Electrolytic cell for appts. for mfg. medical material - 24674B/13

MENG- 08.09.76 MENGELE K & SOHNE M D16 =OE 7706-467
Ensilaged fodder prepn. - 70838Y/40

MERI 13.08.65 MERCK & CO INC B04 D16 =NL -159-585
Mumps virus vaccine - 25254F/00

METT 25.04.75 M & T CHEMICALS INC C01 D22 E12 F09 =OE 7603-055
Preserving wood and wood prods - 70475X/38

MEYN/ 12.08.77 MEYN P D12 #DK 7703-611
Extractor for the cloac(s) of fowl carcasses - 07735A/04

MGEI 21.10.76 MASCH H GEIGER D15 =OE 7706-919
Trash screens and rake for water intake - 32314A/18

MILE 15.08.77 MILES LABORATORIES INC B04 D16 J04 =SW 7808-620
Device for liq. control soln. prepn. - 14632B/08

*MINA- 26.07.77 MINASAMA SEKKEN KK D21 E17 (D24) *J5 4024-905
Transparent soap prepn. - 25065B/13

MINN 21.06.77 MINNESOTA MINING CO D16 =FR 2395-312
Bacteria growing device - 00490B/01

*MINN 23.01.78 MINNESOTA MINING CO A96 D22 G03 (A14 A81) *US 4112-177
Porous pressure-sensitive adhesive coated tape prodn. - 25856B/13

MITB 21.06.77 MITSUI SHIPBUILDING ENGG D16 (D13) #FR 2395-311
Single cell protein and fat mfr. by cell cultivation - 58413Y/33

*MITK 26.07.77 MITSUI TOATSU CHEM INC B05 D13 E16 J04 (B04 D16) *J5 4024-085
Reagent for determn. of l-lysine e.g. in foods etc. - 24910B/13

*MITK 27.07.77 MITSUI TOATSU CHEM INC B04 D13 E16 J04 (B05) *J5 4024-691
Reagent for L-lysine analysis - 25010B/13

*MITQ 19.07.77 MITSUBISHI ELECTRIC CORP D15 E36 J01 *J5 4021-985
System for continuously regenerating active carbon - 24410B/13

*MITQ 19.07.77 MITSUBISHI ELECTRIC CORP D15 E36 J01 *J5 4021-986
Regenerating active carbon used in waste water treatment - 24411B/13

*MITR 25.07.77 MITSUBISHI RAYON KK A88 D15 J01 (A14) *J5 4023-080
Washing process for ultra-filtration or reverse osmosis membrane - 24676B/13

MITS 04.11.75 MITSUBISHI PRECISIO D15 J02 (D16) =US 4112-026
Bubble generator without revolving parts - 34726Y/20

*MITS- 25.07.77 MITSUBISHI RAYON ENGG A88 D15 J01 (A14) *J5 4023-080
Washing process for ultra-filtration or reverse osmosis membrane - 24676B/13

MITU 08.09.75 MITSUBISHI CHEM IND KK B02 D22 =US 4111-932
Antibacterial acylamino benzyl pencillin derivs - 20398Y/12

*MITU 26.07.77 MITSUBISHI CHEM IND KK B04 D16 *J5 4024-899
Poly-2'-azido-2'-deoxy:inosinic acid - 25063B/13

*MITU 26.07.77 MITSUBISHI CHEM IND KK B04 D16 *J5 4024-900
Double chain polynucleotide - 25064B/13

MIUR/ 27.07.77 MIURA Y A96 B04 D16 =J5 4024-478
Anticoagulant for blood or plasma - 10449B/06

*MJOL- 23.11.77 MJOLKCENT EKONOMISK D13 *BE -872-223
Protein concentrate prodn. from skimmed milk - 24015B/13

*MJOL- 23.11.77 MJOLKCENT EKONOMISK D13 *BE -872-224
Low calorie margarine mfr. - 24016B/13

*MLCW 17.02.77 MALLINCKRODT INC B07 D13 E17 (B05) *US 4112-238
2-Ethyl-hexyl gallate purificn. - 25884B/13

*MLME= 28.09.76 MOLD MEAT DAIRY IND D13 *SU -605-581
Curd making plant - 25193B/13

*MOFA= 24.09.76 MOSC FATS RES INST D11 *SU -605-588
Bread of improved quality and storage life - 25199B/13

*MOMD 21.05.76 MOSCOW MEAT DAIRY INST D13 J04 *SU -606-132
Fat and protein determn. in milk - 25456B/13

*MOMO/ 25.12.76 MOMOT V M C03 D13 E33 *SU -605-789
Automatic regulator for phosphoric acid neutralisation - 25290B/13

MONS 15.11.76 MONSANTO CO B05 D21 E17 =GB 1543-145
Oral tartar inhibitor compsns. - 36938A/21

MONS 20.06.77 MONSANTO CO D22 E15 (D21 D25) =FR 2395-033
Space deodorant compsn., used esp. as aerosol spray - 00325B/01

*MOSU 19.07.76 MOSCOW LOMONOSOV UNIV B04 D16 *SU -605-826
Protease prodn. by double fermentation process - 25326B/13
*MOSU 30.09.76 MOSCOW LOMONOSOV UNIV D16 *SU -605-827
Protease inhibitor prodn. by double fermentation - 25327B/13
MULL/ 10.09.74 MULLER H D16 =OE 7700-870
Bioreactor cooling-aeration system - 65893W/40
MULL/ 22.04.75 MULLER H D13 =CA 1050-911
Edible protein prodn. from cereals - 02188A/02
*MURA/ 22.07.77 MURAO S B04 D16 *J5 4023-196
Microbial alkaline protease inhibitor prodn. - 24727B/13

*NAAP- 07.06.76 NATIONAL APPL D16 *US 4111-753
Controlled atmos. appts., e.g. anaerobic incubator - 25691B/13
*NAKA/ 20.07.77 NAKAO K D15 *J5 4022-951
Purifying domestic or industrial waste water - 24624B/13
NARE- 12.08.77 NATIONAL RESEARCH L D22 E12 #DK 7703-601
Antimicrobial heavy metal complexes with polyfunctional acids - 79262Y/44
NARE- 12.08.77 NAT RES LABORATORIE D22 E12 #SW 7709-143
Antimicrobial heavy metal complexes with polyfunctional acids - 79262Y/44
NATR 06.09.77 NATIONAL RES DEV CORP C03 D13 =WP 7900-133
Treating fish to produce auto-immune response - 22497B/12
*NATT 07.01.77 NAT STARCH & CHEM CORP A11 D13 (A97) *US 4112-222
Granular hydroxypropylated starch deriv prepn. - 25879B/13
*NCON- 05.07.77 NTHN CONVEYOR MFG D18 *US 4111-013
Removing oil from hides - 25591B/13
NELR 24.06.77 NELSON RES & DEV D22 #FR 2395-034
Contact lens conserve solution - 76739Y/43
NEST 21.01.74 MAGGI AG B05 D16 E16 =NL -159-653
Sepg. leucine and isoleucine from aq. soln. - 49354W/30
NEST 31.07.75 SOC PROD NESTLE SA D13 =OE 7605-658
Butter substitutes and margerine type food prods. - 05602Y/04
NEST 31.07.75 SOC PROD NESTLE SA D13 =US 4112-132
Butter substitutes and margerine type food prods. - 05602Y/04
NEST 03.08.77 SOC PROD NESTLE SA D13 =NO 7802-646
Vegetable protein extracts - 14456B/08
*NEWE- 25.05.77 NEW ENGLAND IND CHE D22 E13 J01 *US 4112-054
Method of removing ethylene oxide from gas compsns. - 25803B/13
*NEWG- 17.11.77 NEW GENERATION FOOD D13 *BE -872-093
Expanded foodstuff prepd. from high protein wheat - 23989B/13
*NIHA- 21.07.77 NIHON HAISUI SEKKEI D17 *J5 4023-136
Refined sugar liquor prepn. - 24709B/13
*NIIG- 23.07.77 NI-IGATA OHRES KK C04 D15 *J5 4024-771
Odourless fertiliser mfr. - 25015B/13
*NIKK- 19.07.77 NIKKEN FOOD D12 *J5 4023-162
Sausage prepn. - 24715B/13
NIKN 31.01.75 SHIN NIPPON KOKAN D15 J01 =J7 9004-550
Sepn. of heavy metals from polluted water - 71241X/38
*NINA- 12.09.77 JAPAN NAT TAX AGEN D15 *NL 7809-229
Reducing COD of effluent water - 25184B/13
*NIOF 19.07.77 NIPPON OILS & FATS KK D13 *J5 4023-166
Conc. cream prepn. - 24716B/13
*NIPC 27.07.77 NIPPON CHEM IND KK D25 E34 L02 *J5 4024-299
High bulk density sodium silicate hydrate prodn. - 24982B/13
NIPP- 12.09.77 NIPPI INC A91 D13 (D16) #DT 2741-003
Peptide prodn. from collagen-contg. material - 83901Y/47
NIRA 24.05.71 UNITIKA KK D15 =DS 2225-216
Effluent treatment plant - 80539T/51
NIRA 12.09.77 UNITIKA KK A21 D15 F01 J01 (A14 A97) =DT 2839-641
Etherified and chelated phenolic resin - 06095B/04
NIRA 12.09.77 UNITIKA KK A21 D15 F01 J01 (A14 A97) =NL 7809-277
Etherified and chelated phenolic resin - 06095B/04
*NIRT 27.07.77 NISSO MASTER BUILDERS D17 E16 L02 M14 (E13 E33) *J5 4024-937
Rust resistant compsn. for use in concrete - 25090B/13
*NISB 28.07.77 JAPAN TOBACCO & SALT PUB D18 E17 *J5 4024-820
Dodeca-diene:di:oic acid derivs. - 25026B/13
*NISH- 20.07.77 NISHIMURA KK D12 *J5 4023-158
Food prepd. from milt of fish and shellfish - 24713B/13
*NISH/ 25.07.77 NISHIMOTO Y D13 *J5 4023-174
Medicinal food for patients using artificial kidney - 24722B/13
*NISO- 26.07.77 NIHON SOLID KK D15 F09 (D17) *J5 4024-458
Treatment of waste water contg. cellulose or starch - 24993B/13
*NISS- 25.07.77 NISSHIN SEITO KK D17 *J5 4023-137
Edible liq. sugar prepn. from molasses - 24710B/13
NITL 04.03.77 NITTO ELECTRIC IND KK A97 C03 D22 F01 (A14) =FR 2395-282
Bactericidal and fungicidal materials contg. metal ions - 69189A/39
*NITT- 26.07.77 NITTA GELATIN KK D12 (D18 D22) *J5 4024-898
Collagen sol prepn. - 25062B/13
*NONA= 12.10.76 NON ALCHOHOL BEER D13 (D16) *SU -605-601
Highly filterable kvass wort concentrate prepn. - 25211B/13

*ODME= 22.07.76 ODESS MED INST B04 D16 *SU -606-160
Obtaining stomatitis model by antigen immunisation of animals - 25459B/13

*ODST= 22.07.76 ODESS STOMATOLOGY RES B04 D16 *SU -606-160
Obtaining stomatitis model by antigen immunisation of animals 25459B/13
*OKAK/ 26.07.77 OKA K D15 E33 *J5 4024-459
Inhibitor for preventing sludge bulking due to Hyphomycetes - 24994B/1
OKMR 19.05.75 OKAMARA SEIYU KK D15 E17 (E12 E31) =J7 9004-551
Purificn. of water using an iron salt - 02602Y/02
*OLIN 02.09.77 OLIN CORP A82 D22 F09 (A11) *US 4112-154
Cigarette tipping papers of uniform porosity - 25845B/13
OREA 08.04.69 L'OREAL SA A18 D21 =DS 2016-595
Hair cosmetic contg vinyl pyrrolidone copol - 74120R/40
OREA 11.08.69 L'OREAL SA A96 D21 E24 (E23) =US 4112-229
Diphenylamines - 05779U/05
OREA 05.02.73 L'OREAL SA A96 D21 (A11) =DS 2405-217
Delayed action anti-perspirant prods - 58788V/33
OREA 20.08.76 L'OREAL SA D21 E14 =OE 7705-998
(N)-alkoxyethyl or alkoxy-propyl para phenylenediamine cpds. 14036A/08
OREA 24.06.77 L'OREAL SA D21 E13 =FR 2395-021
Dye compsns. for keratin fibres esp. hair - 06301B/04
OREA 21.07.77 L'OREAL SA D21 E12 =J5 4022-373
Bis(2-thio-(N)-oxy-pyridyl) aluminium sulphonate s) prepn. - 06053B/04
OREA 07.09.77 L'OREAL SA A96 D21 E19 =DT 2838-878
Hair dyeing compsn. contg. specified cationic polymer - 20012B/11
*OREA 23.09.77 L'OREAL SA A96 D21 *BE -870-685
Aminated polymers used in hair and skin care products - 23958B/13
OYFA 19.03.76 FARMOS OY C03 D13 =GB 1542-802
Fodder additive for ruminants - 69238Y/39

PALM/ 02.09.77 PALMER W F A88 D15 =WP 7900-129
Communal and industrial wastes treatment - 20214B/11
*PANK/ 27.05.77 PANKRATZ R R A82 D13 *US 4111-087
Cutting cheese block while maintaining block profile - 25598B/13
*PARK/ 29.11.76 PARK H B04 D16 *US 4111-754
Immunological testing device with vertical passages - 25692B/13
PERR- 25.04.75 PERRIER H SA D13 (D16) =CA 1049-834
Heat-treating granular material maintained in motion - 85366X/46
PERS 07.12.73 PERSONAL PRODUCTS CO A11 D22 (A96) #OE 7502-960
Highly water-absorbent grafted cellulose fibre - 44101W/26
PERS 09.12.74 PERSONAL PRODUCTS CO A96 D22 F07 =OE 7509-275
Particulate mixt. of grafted and ungrafted polysaccharide - 46463X/25
PERS 09.12.74 PERSONAL PRODUCTS CO A96 D22 F07 =OE 7509-276
Grafted cellulose particles of specified size - 46464X/25
*PETL 11.02.77 PETROLITE CORP D23 *US 4111-774
Animal fat purificn. by electro-filtration - 25703B/13
PFEI 10.04.75 PFEIFFER & LANGEN B05 D17 E16 =US 4111-714
Amino acids extn. from sugar beet - 65050X/35
PHIM 08.08.77 PHILIP MORRIS INC D18 =BR 7805-046
Swelling tobacco by impregnating with liquid carbon di:oxid 87871A/49
PHIM 08.08.77 PHILIP MORRIS INC D18 =NO 7802-574
Swelling tobacco by impregnating with liquid carbon di:oxid 87871A/49
*PICO- 16.09.77 PICOUT & CIE SA D14 *DT 2837-434
Safety valve for pressure cookers - 24171B/13
*PIKO/ 01.07.76 PIKOVSKAYA R I D16 *SU -605-832
Bacterial strain Proactinomyces phosphaticus - 25331B/13
*POPJ 09.07.76 POPEIL BROS INC D11 *US 4112-127
Dough processing - 25832B/13
*PPNP- 23.06.77 PPN PHARMACOL PHARM B04 D13 *FR 2395-288
Treatment of disorders caused by over eating - 24268B/13
PQCO- 14.09.77 PQ CORP D25 E33 (E11) =DT 2839-830
Sodium form zeolite for use as detergent builder - 14076B/07
PQCO- 14.09.77 PQ CORP D25 E33 (E11) =GB 2004-264
Sodium form zeolite for use as detergent builder - 14076B/07
*PREV/ 05.10.76 PREUS P D15 H03 *US 4111-813
Hydrocarbon containment and control systems - 25722B/13
PROC 15.03.74 PROCTER & GAMBLE CO A97 D25 =US 4111-854
Universal household cleanser esp for hard surfaces - 65875W/40
PROC 06.12.74 PROCTER & GAMBLE CO D11 #CA 1050-814
Snack food formed from farinaceous dough - 12643W/07
PROC 08.03.76 PROCTER & GAMBLE CO A97 D25 (D16) =US 4111-855
Stable liq. enzyme-contg. builder-free washing agents - 64945Y/37
PROC 20.09.76 PROCTER & GAMBLE CO D21 E14 =GB 1542-907
Stabilised granular detergent compsns. - 23634A/13
PROC 07.01.77 PROCTER & GAMBLE CO D22 F09 =US 4112-167
Skin cleaning tissue, esp. toilet paper - 49719A/28
PROJ- 29.09.76 PROJEKTIERUNG CHEM D17 E13 (D16) =OE 7706-863
Xylose prepn. by hydrolysis of xylan with supported enzym 25190A/14
PROJ- 17.08.77 PROJEKT CHEM VERFAH D17 =SW 7808-735
Sugars and opt. cellulose and lignin extn. from vegetable mater 14176B/08
*PROT= 24.06.75 PROTEIN BIOSYNTH D16 *SU -606-597
Yeast biomass extractor used in microbiological industry - 25474B/13
*PROV= 13.01.76 PROVISION MACH RES D13 J01 *SU -605-580
Liquid desorption installation e.g. for milk - 25192B/13

QUEN/ 10.08.77 QUENTIN G D17 =DK 7803-518
Purifying technical sugar solns. using ion exchangers - 89697A/50

RAFT 12.11.73 RAFFINERIE TIRLEMONTOISE D17 =SU -606-533
Flotation separator to clean sugar-beet - 39910V/22
RALS 06.06.75 RALSTON PURINA CO D13 =NL -159-566
Non dairy creamers for coffee - 97395X/52
*RATI- 19.09.77 VEB RATIONAL HALLE D16 *DT 2836-676
Plant extn. esp. for spirits industry - 24168B/13
RATI- 19.09.77 RATIONALIS HALLE D16 =GB 2004-197
Plant extn. esp. for spirits industry - 24168B/13
*RAUS- 09.09.77 RAUSCHER & CO D22 *DT 2838-590
Surgical compress mfr. - 24179B/13
RAUS- 09.09.77 RAUSCHER & CO VERBA D22 =OE 7706-511
Surgical compress mfr. - 24179B/13
*REIS/ 09.12.77 RIESS G A96 D21 *BE -872-241
Dental surgical implant for securing crowns, bridges etc. - 24021B/13
RESE 21.05.74 RESEARCH CORP D16 =CA 1050-910
Delayed release nutrients for mushroom culture - 22463X/12
RESE 04.09.75 RESEARCH CORP C03 D16 =US 4112-069
Administration of peptococcus asaccharolyticus to ruminants - 88324A/49
RESE 08.01.76 RESEARCH CORP B03 D13 E13 =GB 1543-168
'Di-, tri- and tetra-chloro derivs. of sucrose - 52593Y/30
RESE 09.03.76 RESEARCH CORP A87 D22 F06 =GB 1543-010
Imparting water absorbency to cellulosic material - 53827Y/30
RHON 19.11.73 RHONE-PROGIL A82 C02 D22 F09 (A23) =OE 7409-274
Wood-protective and finishing compsn - 36278W/22
RHON 22.04.74 RHONE-POULENC INDUSTRIES D16 E14 =CA 1050-912
Dextro-amino acid oxidase separation and purification - 72841W/44
RHON 30.08.74 RHONE-POULENC INDUSTRIES A91 B04 D16 J04 =US 4112-185
Inorganic support coated with epoxy and polyamine reactn. prod. - 20710X/12
*RHON 24.06.77 RHONE-POULENC INDUSTRIES D25 E19 (E34) *FR 2395-310
Stabilising phosphate contg. washing liquids to cold storage - 24271B/13
RHON 25.07.77 RHONE-POULENC INDUSTRIES D17 E34 H01 (D16) =J5 4024-281
Extraction of oil by flooding with bio:polymer solns. - 14436B/08
RICT 24.08.70 RICHTER GEDEON VEGY B01 D16 #DS 2041-965
Corticosteroids microbiological 1,2-dehydrogenation - 66325S/42
RIES/ 23.07.77 RIES G A96 D21 =J5 4024-488
Artificial tooth root of plastic loaded with a bioactive phosphate - 47821A/27
*RIKV 25.07.77 RIKEN VITAMIN OIL KK D11 *J5 4023-167
Choux mix - 24717B/13
ROHM 27.06.77 ROHM & HAAS CO A91 B04 D15 E19 (A13 D13 D17) =BR 7803-977
Crosslinked anion-exchange resin - 05441B/03

*SAGA 21.07.77 SAGAMI CHEM RES CENTRE D23 E15 *J5 4022-353
2-Chloro-2-cyano-7-alkylidene-bi:cyclo(2,2,1)-5-heptene - 24477B/13
*SAGA 21.07.77 SAGAMI CHEM RES CENTRE D23 E15 *J5 4022-354
Perfume intermediate 2-chloro-2-cyano-7-alkyl bi:cyclo(2,1,1)-heptane - 24478B/13
*SAGA 21.07.77 SAGAMI CHEM RES CENTRE D23 E15 *J5 4022-355
7-Alkyl-nor:camphor prepn. - 24479B/13
*SAIZ/ 20.07.77 SAI Z C03 D22 F06 G02 *J5 4022-250
Health socks or stockings - 24445B/13
*SAKU/ 21.08.75 SAKURAZAWA H D13 *US 4111-109
Wheat flour prod. prodn. - 25599B/13
SANI- 02.03.73 SANITIZED INC A60 C03 D22 E14 =CA 1051-018
Acylamides of beta-cyanoethylsulphonyl-amino arenes - 22544X/12
SANO 09.04.76 SANDOZ LTD B03 C02 D13 =US 4112-091
(1,4)-Disubstd. piperazine derivs. - 72500Y/41
SANO 22.06.77 SANDOZ SA B04 C03 D16 =FR 2395-030
Piglet Escherichia coli bacillosis vaccine - 00431B/01
*SAPB 21.07.77 SAPPORO BREWERIES D13 (D16) *J5 4023-171
Yeast extract with good taste and flavour - 24720B/13
SCHE- 08.09.77 SCHEID L GMBH SPEZI D12 =NL 7809-086
Injecting powdered salt to cure meat, fish etc. - 04097B/03
SCHE/ 06.08.77 SCHENCK G O D22 (D15) =NO 7802-669
Multichamber sterilising photo-reactor - 12217B/07
SCHN/ 07.05.75 SCHNITZLER E F D15 =DS 2520-397
High throughput activated sludge treatment - 87186X/47
SCHO- 11.03.77 ETABS SCHOLTES E D14 #GB 1543-018
Electric cooking oven incorporating fume destruction - 63028Y/36
SCHU/ 16.01.74 SCHUSSLER K H D15 =DS 2401-872
Sewage treatment tanks with movable partitions - 49598W/30
SCOV 23.07.65 VEBA CHEMIE AG B05 C03 D22 E16 =DS 1518-347
2-haloethyltrialkylammonium halides plant growth - 41056F/00
SEAR 11.06.75 SEARLE G D & CO B04 C03 D16 =GB 1542-848
Antifungal compsns. contg. fungal cell-lytic enzymes - 91749Y/51
SEGK 10.12.75 SEIKAGAKU KOGYO KK B04 D16 #DS 2555-587
Aq. extn. of kallidinogenase from pancreas - 94063X/50
*SEIS- 20.07.77 SEISUI KOGYO KK D15 E36 J01 M12 *J5 4022 954
Purificn. of aq. alkaline waste contg. nitrogen oxide - 24626B/13
*SELW- 21.09.77 SELWIG & LANGE D17 J01 *DT 2742-422
Continuously operating centrifuge - 24145B/13
SHEL 25.08.67 SHELL INT RES MIJ BV D25 E14 (E17) =NL -159-710
Washing or cleaning compositions contg inor - 58991S/37
SHEL 01.11.76 SHELL INT RES MIJ BV D23 E15 =GB 1542-975
Cyclooctene derivs. contg. opt. esterified tert. hydroxyl gp. - 33794A/19
SHIE 08.03.73 SHINETSU CHEM IND KK A11 D15 J01 (A88) =US 4111-810
Reverse osmosis membrane for desalting brine - 46666W/28
*SHIE 26.07.77 SHINETSU CHEM IND KK D15 E19 *J5 4024-283
Regenerator for iron cpds. removal from ion exchange resin - 24968B/13
*SHIM- 19.07.77 SHIMAKYU YAKUHIN KK D12 *J5 4023-159
Preserving Crustacea or coloured fish - 24714B/13
*SHUM 10.09.77 SCHUMACHERSCHE FAB D15 E24 F06 *DT 2740-855
Processing waste waters from vat esp. indigo dyeing - 24091B/13
SNAM 10.07.75 SNAMPROGETTI SPA B05 D16 E19 =US 4111-749
Converting racemic hydantoins to optically active aminoacids - 04318Y/03
SNAM 22.03.77 SNAMPROGETTI SPA A96 B07 D22 F01 (B04) =FR 2395-029
Biocompatible fibres contg. anticoagulant or antithrombotic - 68925A/39
SNAM 27.07.77 SNAMPROGETTI SPA A96 B07 D22 =J5 4024-986
Biocompatible polymers prepn. - 08021B/05
SNAM 14.09.77 SNAMPROGETTI SPA D15 =GB 2004-193
Multistage evapn. plant to desalinate sea-water, etc. - 18035B/10
SNAM 14.09.77 SNAMPROGETTI SPA D15 =NL 7809-290
Multistage evapn. plant to desalinate sea-water, etc. - 18035B/10
SNLE 26.00.75 STANLEY ELEC KK D15 E31 J03 =J7 9004-549
Treatment of waste liquor contg high concn of ferro-cyan complex - 62680X/33
SNOW 09.08.74 SNOW BRAND MILK PRODUCTS D12 =CA 1049-836
Fish meat slurry prodn. in the presence of decomposable acid - 25105X/14
SODB 16.01.68 SOC ETUD APPL BIOCHIM B04 D16 #DS 1642-654
Lipase neth 6 505 658 provided - 19054F/00
*SONI- 20.01.75 SONIC CORP A88 D14 *CA 1051-112
Acoustic vibrator for flowing liquids - 24033B/13
*SOUL/ 22.06.77 SOULIE Y A H D13 *FR 2394-983
Preparing high fat content crusty cheeses from milk and cream - 24243B/13
SQUI 10.10.74 SQUIBB E R & SONS INC B02 C02 D22 =US 4111-978
Cyano-methylthio-acetamido-cephalosporanic acids - 11360V/07
SQUI 08.09.75 SQUIBB E R & SONS INC B02 C02 D22 (D13) =GB 1542-904
3-Triazolyl thio derivs. of ureido cephalosporins - 96110X/51
SSEM 03.04.68 GD STA ACCOM SERA D14 =NL -159-627
Device for sorting and transferring elongated sweets - 09916R/07
STAL 09.09.77 STALEY A E MFG CO C03 D13 =DT 2838-649
Animal foodstuff block of good stability - 20013B/11
STAL 09.09.77 STALEY A E MFG CO C03 D13 =NL 7808-797
Animal foodstuff block of good stability - 20013B/11
STAM 20.06.77 STAMICARBON BV D15 =FR 2395-228
Treatment of sewerage in sealed sinkable caissons - 89632A/50
*STAU 06.01.75 STAUFFER CHEMICAL CO D16 (D13) *US 4112-223
Removing trace heavy metals from algae contg. lambda carrageenan - 25880B/13
STAU 20.01.75 STAUFFER CHEMICAL CO B05 C03 D22 H01 (D15) =GB 1542-831
1,3-Dichloro-acetone oxime alkyl carbonates - 58200X/31
STAU 20.01.75 STAUFFER CHEMICAL CO B05 C03 D22 H01 (D15) =GB 1542-832
1,3-Dichloro-acetone oxime alkyl carbonates - 58200X/31
*STBR 14.09.76 STANDARD BRANDS INC D16 E13 (D17) *US 4111-750
Conversion of liquefied starch to glucose and fructose - 25689B/13
*STEI- 08.09.77 STEINER S S INC D16 *DT 2833-588
Hop treatment and humulone stabilisation for brewing - 24160B/13
*STEP 08.03.76 STEPAN CHEMICAL CO D25 E12 (E34) *US 4111-853
Particulate surfactant compsn. for synthetic detergent formulations - 25735B/13
STER 15.09.77 STERLING DRUG INC D22 J01 (D15) =GB 2004-198
Purifying odorous waste gases, esp. from water treatment - 20017B/11
STIL 09.09.77 STIERLEN-MAQUET D22 =DT 2740-738
Disinfecting hospital operating theatres and other rooms - 22368B/12
*STKA- 23.07.77 ST KAGAKU KOGYO KK D25 E17 *J5 4023-792
Laundry thickening agent for preventing clogging of spray nozzle - 24869B/13
SUMO 21.12.67 SUMITOMO CHEMICAL KK D23 =NL -159-655
Fatty acid amides from alipahtic acids or - 68029R/38
SUMO 10.03.77 SUMITOMO CHEMICAL KK B04 D16 =FR 2395-275
Antithrombotic and antitumour-potentiator urokinase purificn. - 67330A/38
*SWAN- 07.05.75 SWAN VALLEY FOODS A92 D13 *FR 2394-982
Treating potatoes for dry storage in flexible containers - 24242B/13

*TAKE 20.07.77 TAKEDA CHEMICAL IND KK A97 D15 (A14 A25) *J5 4022-953
Metal ion-contg. waste water treatment - 24625B/13
*TAKS 28.07.77 TAKASAGO PERFUMERY KK D23 E15 *J5 4024-856
1-Methyl:cyclohexenyl 2-methyl-1-penten-3-ol - 25045B/13

TAKS 28.07.77 TAKASAGO PERFUMERY KK D23 E15 =J5 4024-862
Substd. norbornene and norbornane cpds. - 12307B/07
TATL 08.01.76 TATE & LYLE LTD B03 D13 E13 =GB 1543-167
Sweetening compsns. contg. chlorinated saccharose derivs. - 32845Y/19
TECH- 28.05.77 TECHNOPACK EWALD HA D12 =DS 2724-394
Individual clip separating machine - 88029A/49
TEEP 28.09.77 TEE PAK INC A97 D12 =BE -870-722
Internally coated cellulose sausage casings - 13989B/07
• TEKH= 07.04.75 TEKHRYBPROM B07 D14 J08 *SU -606-058
Heat-sensitive materials sublimation dryer - 25420B/13
TENC 29.11.74 TENNECO CHEMICALS I A96 B05 C03 D22 (B03 C02) =OE 7509-067
Iodine and tert. amine oxide compsns - 31928X/18
TERP/ 09.09.77 TERPLAN G D13 =DT 2740-749
Preventing formation of harmful substances in molten cheeses - 04123B/03
TERP/ 09.09.77 TERPLAN G D13 =NL 7809-196
Preventing formation of harmful substances in molten cheeses - 04123B/03
TEXC 29.11.68 TEXACO DEV CORP D15 H01 =J7 9004-548
Process for treating biological sewage sludge to yield - 27829R/17
TEXC 22.12.73 DEUTSCHE TEXACO AG B07 D13 H08 (D16 D21) =CA 1050-913
Purification of slack wax - 46376W/28
TEXC 12.09.77 TEXACO DEV CORP A97 D25 E16 (A25) =DT 2835-984
Surface active agents prepd. from specified alkanol - 20043B/11
TEXC 12.09.77 TEXACO DEV CORP A97 D25 E16 (A25) =NL 7808-198
Surface active agents prepd. from specified alkanol - 20043B/11
THOM/ 27.06.74 THOMAS F A D15 J01 =CA 1051-057
Ultrafiltration appts with spirally wound modules - 01701X/01
TIVE- 14.09.77 TIVET DEVELOPMENTS D12 =DT 2839-772
Moulding sausages etc. with coherent skin-like surfaces - 22039B/12
TIVE- 14.09.77 TIVET DEV LTD D12 =NL 7809-321
Moulding sausages etc. with coherent skin-like surfaces - 22039B/12
• TKEN 20.07.77 TAKENAKA KOMUTEN KK D15 J01 L02 *J5 4021-959
Treating sludge contg. organic substances - 24392B/13
• TOKE 20.07.77 TOKYO SHIBAURA ELEC LTD D15 *J5 4022-950
Waste water treatment - 24623B/13
TOMS- 17.10.73 TOMS FOODS LTD D13 =CA 1050-816
Potato snack products mfr - 29072W/18
TOPP 21.06.77 TOPPAN PRINTING KK D13 E37. =FR 2394-988
Foodstuff freshness keeping agent - 02461B/02
• TORA 25.07.77 TORAY INDS INC D15 *J5 4024-456
Treating polluted water rich in BOD content - 24991B/13
• TOZI- 12.09.77 TOHO ZINC CO LTD D15 *NL 7809-229
Reducing COD of effluent water - 25184B/13
• TSPO= 19.07.76 TASHK POLY A91 D22 (D15) *SU -605-812
Water-soluble polyelectrolyte used as flocculant in hydrometallurgy - 25312B/13

• UBEI 25.07.77 UBE INDUSTRIES KK B05 D23 E14 *J5 4024-842
Hydroxy-benzaldehyde cpds. - 25039B/13
• UBEI 27.07.77 UBE INDUSTRIES KK D15 *J5 4024-272
Drying organic sludge - 24960B/13
• UBEI 27.07.77 UBE INDUSTRIES KK D15 *J5 4024-457
Organic sludge liquefaction process - 24992B/13
UGIN 28.08.73 UGINE KUHLMANN D25 E34 =J7 9004-359
Atomised sodium percarbonate prepn - 77580V/45
• ULIQ= 12.07.76 UKR LIQ SPIRITS IND D16 *SU -605-828
Rectified alcohol prodn. plant - 25328B/13
• UMEA= 09.08.76 UKR MEAT DAIRY IND D12 *SU -605-590
Meat brining appts. - 25201B/13
• UMEA= 15.09.76 UKR MEAT DAIRY IND D13 *SU -605-582
Milk protein curd dewatering appts. - 25194B/13
UNDE- 19.07.77 UNDERBERG-HANDELS A D16 =J5 4023-197
Prepn. of bubbling, sparkling and champagne type wines - 84154A/47
UNIC 05.03.69 UNION CARBIDE CORP A92 D12 =NL -159-565
Tubular skin for packing foodstuffs eg - 64975R/36
UNIC 11.04.72 UNION CARBIDE CORP D12 =OE 7702-437
End closure - 66569U/44
UNIC 29.07.74 UNION CARBIDE CORP A96 D22 F07 =OE 7505-091
Absorbent hydrogels coated with fibres - 60116W/36
UNIL 21.03.68 UNILEVER NV D13 E19 =DS 1914-056
Prepn of esters of delta hydroxy carboxylic acids and - 11883R/08
UNIL 28.08.68 UNILEVER NV D13 E31 J04 =NL -159-599
Preparation of a nickel on silica catalyst used in the - 14282R/09
UNIL 18.10.72 UNILEVER NV D23 =SU -606-552
Edible oils with increased polyunsaturated acid content - 34031V/18
UNIL 04.03.75 UNILEVER LTD D13 (D23) =GB 1542-864
Plastic fat prod for magarine derived from palm oil - 70472X/38
UNIL 18.04.75 UNILEVER NV D25 E19 (E37) =DS 2616-350
Powdered spray-dried detergent compns - 81222X/44
UNIL 24.10.75 LEVER BROTHERS CO D25 E24 (E13) =US 4112-226
Triazine derivs. removal from stilbenic fluorescent agents - 31318Y/18
UNIL 03.11.75 LEVER BROTHERS CO D25 E19 =US 4111-826
Bleaching auxiliary compsns. - 33143Y/19
UNIL 18.06.76 UNILEVER NV D13 (D16) =NL -159-567
Cheese by membrane filtration of milk then fermenting concentrate - 90017Y/51
• UNIL 05.10.77 UNILEVER NV D24 *OE 7708-396
Liq. soap - B/13
• UNMA- 04.10.74 UNITED MARITIME FIS D13 (D12) *CA 1049-837
Stable food flavours and colours prodn. - 24022B/13
UPJO 06.09.77 UPJOHN CO B03 D22 E13 F09 =BE -870-263
Antibacterial deoxy-neamine derivs. and precursors - 22298B/12
UPJO 19.09.77 UPJOHN CO B04 C03 D16 (D22) =GB 2004-271
Antibiotic 354 and its salts and derivs. - 09910B/05
USBO 20.06.77 US BORAX & CHEM CORP A97 D22 E19 (A25 D25) =FR 2395-035
Antimicrobial cleaning compsn. for bathroom hard surfaces - 83908A/46
• USDA 03.06.77 US SEC OF AGRICULTURE C03 D13 *US 4111-803
Removing protein from acid whey and tannery effluent - 25718B/13
USST 08.07.76 US STEEL CORP D15 E35 H09 J01 (E36) =US 4111-759
Acid gas and ammonia separation from aq. solns. - 06691A/04
• UYLE- 20.11.74 UNIV LEEDS IND SERV B06 C03 D13 *GB 1542-838
Treating cows to prevent milk fever - 24293B/13
• UYNE- 07.07.75 UNIV OF NEBRASKA D13 *US 4111-927
Extracting edible protein from Phaseolus spp. beans - 25762B/13

VERE 25.04.75 VER PAPIERW SCHICKEDANZ A96 D22 =OE 7600-927
Protective polymer film prepn. - 85187X/46
VERE 27.08.76 VER PAPIERW SCHICKEDANZ A96 D22 (A11) =OE 7704-942
Absorbent cellulose-sodium CMC fibres - 00084A/01
VERF- 24.03.76 VERFAHRENS UTZINGER D15 M13 =OE 7701-503
Detoxifying waste water contg. nitrite and/or cyanide - 70990Y/40
VITA- 20.02.76 VITATECT CORP D16 J04 #CA 1050-781
Detecting biological cells in fluid sample - 18635X/10
VONK- 03.04.75 VONKS KAASMAATSCHAP D13 =OE 7602-331
Packing of melted cheese - 77565X/42
• VOTE= 25.02.75 VORON TECHNOL INST D16 *SU -605-825
Malt drying kiln - 25325B/13

• WEIS/ 09.09.77 WEISS A D22 *DT 2740-747
Hunting trophy boiling device - 24084B/13
• WELC- 13.09.77 WELCH C FOODS INC B07 D13 E24 (B04 D21) *DT 2839-502
Anthocyanin pigment recovery from plant materials - 24208B/13
WELC- 13.09.77 WELCH FOODS INC B07 D13 E24 (B04 D21) =NL 7809-319
Anthocyanin pigment recovery from plant materials - 24208B/13
WENG- 15.07.77 WENGER MFG D13 (D12) =BR 7804-567
Meat analogue formed by extruding vegetable protein - 74221A/41
• WIEL- 14.09.77 FA TH WIELAND D21 M26 *DT 2741-277
Copper-free gold dental alloy - 24110B/13
WILK 27.02.75 WILKINSON SWORD LTD A97 D21 E16 (A25 E13) =US 4111-827
Aerosol foams esp. for shaving - 49204Y/28
WILL/ 05.10.72 WILLEMSEN W H D13 =NL -159-564
Potato paste prepn machine - 31111V/17
WINC- 04.04.75 WINCANTON ENG LTD D13 =GB 1542-844
Production of blocks of natural cheese - 63492X/34
WITC 05.05.71 WITCO CHEMICAL CORP A97 D25 E34 (A11) =NL -159-711
Phosphate-free built detergent compns - 69718T/44
WOLF- 26.04.77 WOLFF E MASCH U EIS D15 =DS 2718-420
Bar screen rake mechanism - 80318A/45
WORL- 23.06.77 WORLD POTATO CORP D13 =FR 2394-987
Cooked fruit and vegetables with firm texture - 01878B/02
• WORL- 21.11.77 WORLD POTATO CORP D13 *BE -872-136
Precooked potato prods. - 24002B/13

• YAMA/ 23.07.77 YAMAGUCHI M D13 *J5 4023-140
Extn. of egg-shell membrane protein used for heavy metal remov
24712B/13
YAMA/ 09.08.77 YAMAMURA Y A96 B04 D16 =DK 7803-525
Antitumour compsn. - 14567B/08
YARD- 29.04.74 YARDNEY CO A96 D22 F07 (A28) =CA 1049-872
Orthopaedic device having plastic sheet member - 66934W/40
• YAWH 22.07.77 NIPPON STEEL CHEM KK C04 D15 E36 J01 (E35) *J
4023-070
Hydrogen sulphide removal from acidic liquor contg. ammoni
sulphate - 24668B/13

ZAID 22.07.77 ZH BISEIBUTSU KAGAKU KEN B04 D16 =J5 4024-845
Amastatine A1, A2, A3, B1, B2 aminopeptidase A inhibitors - 55160A/
ZARN- 18.11.77 GEBR ZARNACK GMBH D15 =BE -872-108
Drain water biological cleaning equipment - 58889A/33

9054-F BD
BE -662-862 Q00
FR 1605-287 V40
NL 6505-658 Q01
GB 1084-431 Q01
FM ---4-566 Q01
CH -433-162 Q01
DS 1642-654 B13+

5254-F BD
NL 6611-260 Q00
CA -835-350 R09
DT 1617-621 S10
ZA 6604-810 Q01
CH -475-355 Q01
BE -685-270 Q01
GB 1140-766 Q01
FR 1509-944 Q01
FM ---5-807 Q01
EI 6600-885 Q01
AU 6609-190 Q01
J7 7038-089 Y42
NL -159-585 B13

2400-F BCD
NL 6716-196 Q00
GB 1200-906 R31
CH -509-771 S37
US 3869-539 W11
FR 1558-980 Q01
NL -159-586 B13

1056-F BCDE
DT 1518-347 Q00
DS 1518-347 B13+

6509-Q AD
NL 6716-408 Q00
GB 1203-940 R35
GB 1203-939 R35
CA -866-548 S12
CA -866-550 S12
J7 1036-200 S42
CH -512-197 S44
CH -516-285 T08
FR 1546-092 Q01
DS 1632-151 A42
NL -159-571 B13

0685-R D
DT 1929-193 R01
FR 2010-764 R20
ZA 6903-923 S09
J7 1018-317 S20
CA -888-138 S51
GB 1261-087 T03
CH -528-590 T50
DS 1929-193 B13

9916-R D
FR 2005-439 R07
OE 7000-438 W23
NL -159-627 B13

1597-R ABDE
NL 6912-116 R08
BE -737-594 R08
FR 2015-823 R36
CA -865-179 S10
CH -517-783 T13
GB 1282-771 T30
J7 2042-247 T43
DS 1793-203 V07
DT 1793-778 V42
DS 1793-778 Y11
NL -159-674 B13

1883-R DE
FR 2004-412 R08
DT 1914-056 R34
ZA 6901-963 R44
CH -507-895 S32
GB 1252-444 S43
US 3622-605 S50
NL -157-589 A35
DS 1914-056 B13

3618-R BCD
NL 6912-331 R09+
BE -737-575 R09
DT 1940-388 R09
FR 2015-913 R35
ZA 6905-965 S16
GB 1244-530 S34
DL --82-338 S36
CH -511-238 S41
CA -890-937 T05
CH -526-553 T42

US 3717-655 U10
US 3839-574 V41+
SF 7501-886 W44+
J7 5039-664 X04+
J7 6000-115 X05+
DS 1940-388 Y38
CS 7407-401 A05+
CS 6905-725 A05+
CS 7407-400 A05+
SU -557-755 A30+
NL -159-662 B13+

14282-R DEJ
BE -738-125 R09
NL 6912-970 R10
DT 1943-362 R10
FR 2016-520 R36
ZA 6906-106 S19
CA -888-704 T01
GB 1273-743 T19
J7 5008-715 W18
DS 1943-362 X34
NL -159-599 B13

17600-R CD
GB 1185-104 R11
DS 1692-451 X32
NL -159-636 B13

22397-R DJ
NL 6900-960 R14
DT 1906-529 R33
FR 2018-795 R41
US 3583-908 S24
CA -882-400 S40
GB 1268-421 T13
J7 2014-441 T18
NL -158-763 B02
DS 1906-529 B13

27829-R DH
US 3507-788 R17
FR 2024-520 R49
CA -882-675 S41
GB 1267-950 T12
J7 9004-548 B13

45019-R DHJ
BE -743-504 R25+
DT 1964-208 R28
CH -510-792 S41
US 3635-342 T08
GB 1276-570 T22
CH -530-072 U04
DT 1964-208 V02
US 3800-951 V15+
CA -948-120 V24+
SU -458-136 W49
NL -159-744 B13+

55390-R BD
BE -745-430 R31+
NL 7001-658 R33
DT 2004-686 R36
FR 2034-522 S07
ZA 7000-433 S19
J7 1028-834 S33
DL --84-448 S50
J7 2003-158 T05
GB 1303-842 U04
GB 1303-843 U04
CA -919-607 U06
DT 2065-297 U18
US 3761-588 U40
DS 2004-686 V12+
SU -420-187 W25
CH -563-454 W30
DS 2065-297 W43
CH -575-466 X25
CS 7000-799 Y06+
NL -159-715 B13+

64975-R AD
BE -746-922 R36
NL 7003-174 R37
DT 2010-106 R49
FR 2037-690 S11
US 3639-130 T10
GB 1267-871 T12
CA -913-519 T46
NL -159-565 B13

68029-R D
DL --74-261 R38+
DT 1903-920 R50
NL -159-655 B13+

74120-R AD
BE -748-582 R40
DT 2016-595 R42
DT 2026-431 R48
FR 2100-580 T26
CH -524-367 T37
GB 1301-373 T52
GB 1301-374 T52
CA -925-250 U19
CA -925-249 U19
CA -925-247 U19
DS 2016-595 B13

82568-R DJ
ZA 6901-074 R44
CH -508-941 S32
DS 1907-486 B13

88395-R ADF
BE -751-185 R47
NL 7007-859 R48
DT 2025-452 S05
FR 2043-767 S17
ZA 7002-931 T02
US 3634-022 T07
GB 1321-331 U26
CH -547-908 V20
CA -958-336 V50
DS 2025-452 B13

11368-S ADF
NL 7011-148 S06
DT 2037-813 S08
FR 2055-680 S32
US 3630-205 T05
ZA 7005-280 T14
GB 1305-420 U05
CA -968-244 W23
J7 8014-649 A24
DS 2037-813 B13

15069-S BD
NL 7011-769 S08
ZA 7005-481 S22
DT 1940-816 S24
FR 2056-563 S33
DT 1940-816 T02
GB 1276-230 T22
CH -534-357 U22
US 3778-350 U51
J7 9004-280 B13

58991-S DE
CH -509-402 S37
J7 1040-951 S49
DS 1792-204 Y42
NL -159-710 B13

66325-S BD
DL --84-005 S42
DT 2041-965 T11
NL 7013-857 T14
CA -898-719 T19
FR 2105-603 T30
GB 1318-917 U22
SU -351-374 U38
DS 2041-965 B13+

41255-T DE
DT 2160-409 T26
NL 7116-832 T26
FR 2117-522 T45
US 3758-409 U39
J7 4026-688 V32
GB 1378-649 V52
DS 2160-409 Y42
NL -159-709 B13

52377-T D
DT 2202-445 T33
FR 2122-689 T51
GB 1383-432 W07
DS 2202-445 Y43
SU -606-553 B13

69718-T ADE
CA -912-396 T44
BE -783-013 T46
NL 7206-108 T47
DT 2218-763 T48
FR 2135-261 U09
IL --39-267 W33
NL -159-711 B13

80539-T D
DT 2225-216 T51
FR 2138-997 U12
US 3794-171 V10

GB 1388-469 W13
DS 2225-216 B13

05779-U ADE
NL 7209-718 U05
DT 2234-476 U06
BE -786-218 U07
FR 2165-965 U43
FR 2174-473 U51
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89781-V D
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12643-W D
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CA 1050-978 B13+

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18635-X DJ
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CA 1050-781 B13+

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19036-X DM
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CA 1049-838 B13

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CA 1049-836 B13

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CH -608-965 B12+
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41760-X D
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58200-X BCDH
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BR 7608-379 A01+
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CH -604-523 A41
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CA 1050-808 B13+

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OE 7700-093 B13

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NL 7702-464 Y39+
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76739-Y D
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79262-Y DE
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US 4111-768 B13+

25703-B D
US 4111-774 B13

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25718-B CD
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25720-B D
US 4111-808 B13+

25722-B DH
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* 153	25844B	A81D22F04P3
* 154	25845B	A82D22F09P7
=167	49719A	D22F09P2 + P7
* 177	25856B	A96D22G03P7
=185	20710X	A91B04D16J04 + P7
* 220	25878B	A11D13K04
* 222	25879B	A11D13
* 223	25880B	D16
=226	31318Y	D25E24
=229	05779U	A96D21E24
* 238	25884B	B07D13E17

P 7900

=121	16009B	D13
=125	72063A	D11P6
=129	20214B	A88D15
=133	22497B	C03D13P1
=145	22267B	D22P3
* 150	25900B	D15

WEEK B14
23 MAY 79
25901B - 27846B

CENTRAL PATENTS INDEX

CLASSIFIED ALERTING BULLETIN

Section D:

FOOD
DETERGENTS

ABSTRACTS

INDEXES

- II - PATENTEE
- V - BASIC NUMBER
- VII - PATENT NUMBER

COUNTRY	PUB DATE(S)	NUMBER RANGE
BELGIUM		
-Delayed	27 MAR - 2 APR 79	870,776 - 870,952
-Non Delayed	16 MAR 79	872,242 - 872,452
BRAZIL	20 MAR 79	7,704,566 - 7,806,989
CANADA	27 MAR 79	1,051,151 - 1,051,600
CZECHOSLOVAKIA	31 JAN 79	6,703,526 - 7,804,442
DENMARK	12 MAR 79	7,703,622 - 7,803,680
E. GERMANY	3 + 10 + 17 + 24 + 31 JAN 79	133,388 - 134,032
W. GERMANY		
-DAS	29 MAR 79	1,480,704 - 2,840,996
-OLS	29 MAR 79	2,721,221 - 2,842,564
EUROPE	4 APR 79	01,201 - 01,378
FRANCE*	26 JAN 79 (BOPI 2 MAR 79)	2,395,688 - 2,396,494
UNITED KINGDOM	4 APR 79	1,543,281 - 1,543,810
		2,004,451 - 2,004,720
JAPAN		
-Unexamined	—	47,028,026 - 53,056,500
	26 FEB - 1 MAR 79	54,025,201 - 54,027,700
-Examined	8 MAR - 14 MAR 79	79,004,561 - 79,005,240
NETHERLANDS	19 MAR - 25 MAR 79	7,710,099 - 7,809,594
NORWAY	12 MAR 79	7,702,326 - 7,900,240
PORTUGAL	14 MAR 79	64,469 - 67,860
SOVIET UNION	—	606,754 - 607,982
SWEDEN**	19 MAR 79	7,709,329 - 7,809,004
UNITED STATES		
-Reissues	20 MAR 79	Re29,936 - Re29,943
-Patents	20 MAR 79	4,144,592 - 4,145,761
SOUTH AFRICA	FEBRUARY 79	7,701,446 - 7,804,468

*Printed patents actually published late February - mid March, 1979

**Includes numbered Basics from Week B5

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Arrangement of Abstracts

See Appendix I for definition of 'Major' and 'Minor' Countries.

'MAJOR' COUNTRIES – An alerting abstract of every basic and examined equivalent document is provided except for equivalents from Canada, East Germany and Switzerland. The abstracts are arranged in CPI class order and within any one of the 135 classes are in country and patent number order.

'MINOR' COUNTRIES – Basic headings are included in sequence with the entries from the 'Major' countries.

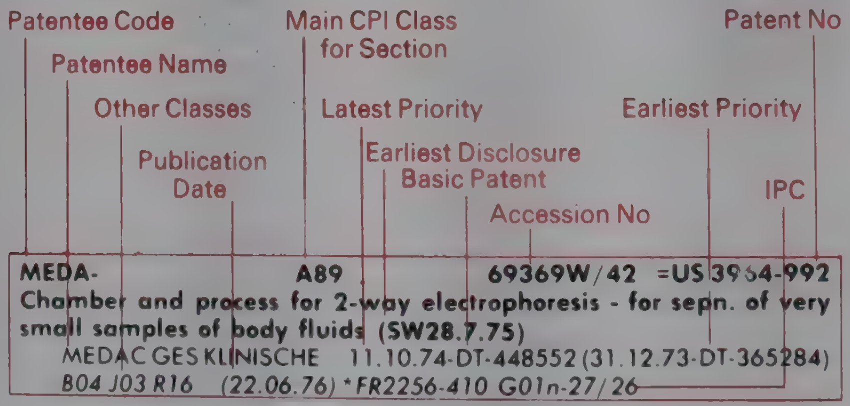
CPI Section Headings

See inside cover for further details.

A	Polymer Chemistry
A+	Polymer Applns.
AE	Polymer & General Chemistry
B	Pharmaceuticals
C	Agricultural Chemistry
D	Food, Disinfectants, Detergents
E	General Chemistry
E+	General Chemistry Applns.
F	Textiles, Paper, Cellulose
G	Printing, Coating, Photographic Chemistry
H	Petroleum
J	Chemical Engineering
K	Nucleonics, Explosives, Protection
L	Refractories, Ceramics
M	Metallurgy

Typical Abstract Heading

See CPI/WPI Instruction Manual No. 1A for explanation of the various flagged descriptors.


Patentee Code
Main CPI Class for Section
Patent No
Patentee Name
Other Classes
Latest Priority
Earliest Priority
Publication Date
Earliest Disclosure Basic Patent
IPC
Accession No

MEDA- A89 69369W/42 =US 3964-992
Chamber and process for 2-way electrophoresis - for sepn. of very small samples of body fluids (SW28.7.75)
MEDAC GES KLINISCHE 11.10.74-DT-448552 (31.12.73-DT-365284)
*B04 J03 R16 (22.06.76) *FR2256-410 G01n-27/26*

Copies of Specifications may be ordered from our PATENTS SUPPLY DIVISION.

D1: FOOD; FERMENTATION

D11 : BAKING

BURG- ★ D11 26011B/14 ★DL-133-394
Oil spray tunnel for dough - with contact operated spray nozzles and screens forming chambers
VEB BURGER KNACKEW 29.09.77-DL-201260
(03.01.79) A21d-08/08

A fine mist of oil is sprayed on lumps of dough as they move on a belt conveyor through a spray tunnel. Cloth screens subdivide the tunnel into several chambers. On contact with a switch, the lumps are exposed to allround oil mist from flat jet nozzles.

This results in savings in oil consumption and prevents the egress of oil mist from the tunnel. 29.9.77 as 201260 (12pp39)

TSCH/ ★ D11 26164B/14 ★DL-133-891
Sliced bread packaging - with extra heat treatment of sealed package after hot slicing and packing
TSCHEUSCHNER H D 27.09.77-DL-201216
(31.01.79) A21d-15/04

Sliced bread in airtight polyethylene packages is sliced when hot (50-70 °C) and packed without letting the temp. dropping below 40 °C. A brief heat treatment for 10-20 min. at outside temps. of 120 °C and core temps. of 60-80 °C follows before the packages are cooled to 35° and inserted in dispatch containers.

This results in bread which remains saleable for 14-30 days and required no time-consuming cooling period or power-consuming heat sterilization. No chemical preservation agents are needed. 27.9.77 as 201216 (5pp39)

PENN D11 07614S/04 =DS 2034-922
Di (3,3,6-trimethyl cyclo hexyl) peroxydicar - bonates as polymerisation initiators
PENNWALT CORP 15.07.69-US-841998
*A18 E15 G02 (A51) (29.03.79) *NL7010-424 +C07c-179/14 C08f-04/36*

Di-(cis-3, 3, 5-trimethyl-cyclohexyl) peroxydicarbonate (I) and a solid isomeric mixt. contg. ⩾ 70% (I) is claimed.

These cis isomers are far more stable than their trans isomers, are storage-stable, std. hydrocarbons-sol. and are not impact-sensitive. They are useful as (co)polymsn. initiators and curing agents and as gen. oxidants and dryers (for linseed, tung, soy bean oils etc.). 14.7.70 as 034922 (4pp922)

HEBE- D11 54314X/29 =DS 2448-902
Flame fired baking oven for waffles - in which air for combustion cools the housing and is preheated in the chimney stack
HEBENSTREIT GMBH 15.10.74-DT-448902
*(29.03.79) *DT2448-902 A21b-01/28*

Oven for baking waffles by means of baking clamps moved continuously by endless chains through a heating zone with at least one battery of burners, makes more efficient use of the fuel and the heat generated, whilst putting less smoke into the atmos.

The housing forming the heating zone acts as a heat exchanger and has double walls between which there are chambers with inlets through which the fresh air for feeding the burners passes. 15.10.74 as 448902 (5pp1045)

NIOF ★ D11 26861B/14 ★J5 4026-345
Rice-contg. bread prodn. - from flour, rice powder and natural protein decomposition prod.
NIPPON OILS & FATS KK 28.07.77-JA-089755
(27.02.79) A21d-13

The method comprises preparing the bread dough mainly of flour and rice powder and combining the decomposition product of natural protein of mol. weight 1000-10000.

The aggregating property of the dough is increased [illegible] is decreased. Thus undesirable effects of the rice powder in the bread dough can be settled and the problems encountered by preparing rice-combined bread, can be obviated. Excellent bread can be prepd. with high efficiency.

As the decomposition product of natural protein, polypeptide of mol. wt. 1000-10000 can be used favourably and it can be prepared by hydrolysing animal protein such as collagen, egg white, milk protein, etc. or vegetable protein such as soy bean protein, wheat protein, etc. with acid or enzyme. 28.7.77 as 089755 (4pp5).

KIFO= ★ D11 27397B/14 ★SU-607-183
Bread baking oven humidity and temperature automatic regulator - uses switching and time relays, parameters sensors and commutators
KIEV FOOD IND TECH 06.06.72-SU-793854
R26 (27.04.78) G05b-11/32

Multipositional relay-pulse automatic regulator is used to control humidity and temp. of bread baking ovens and uses programmer, commutators, relay amplifier, time relays parameter sensors and actuating mechanisms.

Wider range of functional possibilities is ensured by connecting the relay-time unit to the second and third commutators and to the actuating mechanisms.

The inputs of the two time relays via the commutators are joined to the regulated parameter sensors which reduces pulsation and keep the temperature within (2 °C) of the norm for a period of 105 min.
Kalenichenko, G.F., Ivanchenko, G.F., Piven, E.N. Bul 18/15.5.78. 6.6.72. as 793854 (2pp847)

HANS/ D11 64599Y/36 =US 4144-615
Appts. for cleaning bakery bun pans - includes suction hood with blowing device for removing material loosened by brushes
HANSON D R 26.06.75-US-590404 (09.08.74-US-496105)
*P43 +P28 (20.03.79) *US4044-420 B08b-09/08 +A47l-15/38*

A pan cleaning appts. includes a frame, a device for moving the pan along the frame, a brush reciprocatably mounted on the frame to engage the pan as it is moved, and a vacuum hood to be superposed over the pan after the pan has been cleaned by the brush. The hood is supported on the frame by a sub-frame pivotable to raise the hood. A stop member stops excessive movement of the sub-frame towards the pans. The brush is pref. mounted on the frame by a pivot shaft.

Different sized pans are effectively cleaned. The parent patent (64599Y) uses a blowing device rather than a suction device to remove loose material. 20.7.77 as 817435 Div. ex. 4044420 C.i.p. 3999238 (+26.6.75-US-590404) (10pp1376)

FONT/ D11 02015A/02 =US 4145-143
Mixing foundry sand to obtain specific properties - where vol. of mixt. is used to control addn. of water and swelling agents
FONTAINE A M (MAGO-) 01.07.76-LU-075276
*J02 M22 P53 R16 +P64 R26 (20.03.79) *BE-856-180 B28c-07/14*

Prodn. of foundry sand mixes in which sand is combined with water bentonite and/or carbon by monitoring continuously or intermittently the volume changes occurring in the mixture and using these results to control the rate at which the volume changing additive(s) are introduced.

The arrangement provides a simple method for ensuring that moulding mixtures of consistant quality are obtd. 29.6.77 as 811043 (5pp397)

D12: MEAT; FISH PROCESSING

PALM/ ★ D12 B/14 ★BR 7705-499
Fish drying process - by first blowing in air of controlled humidity, then storing fish in sealed chamber, then repeating first step
PALMA S M P 18.08.77-BR-005499
(20.03.79) A23b-04/04

HLAV/ ★ D12 B/14 ★CS 7802-326
System for automatic singeing of pigs
HLAVINKA J 10.04.78-CS-002326
(31.01.79) A22c-17

ZAND/ ★ D12 26028B/14 ★DL -133-427
Carcass transporter for abattoirs - with articulated carrier and suction cups
ZANDER D 20.10.77-DL-201607
Q38 (03.01.79) A22b-05 B66c-01/02

A transport device for quadrupeds or parts of them in abattoirs, e.g. to deposit them in scalding boilers, is fitted with suction cups which are directly applied to the part. The carrier to which the cups are fitted is shaped to suit the contours or is articulated.

Process saves manual labour for the transport. The cups can be adapted to suit different animals or parts of them. 20.10.77 as 201607 (8pp39)

MOHN/ ★ D12 26054B/14 ★DL -133-514
On-board fish meal preparation plant - with cutters and shredders for large fish by/passed by small fish
MOHNKE H 01.11.77-DL-201784
(10.01.79) A22c-25

A method of processing fish of all sizes on board fishing vessels to fish meal includes a rotary cutter which cuts up fish but is bypassed by small fish. A following mincing shredder with its worm conveyor feeder can also be bypassed before the fish reach the meal processor.

This saves the separate manual handling of large fish which are occasionally caught with the large quantities of smaller fish. They need not be thrown overboard and their albumins are not wasted. 1.11.77 as 201784 (7pp39)

SCHR/ ★ D12 26095B/14 ★DL -133-629
Synthetic viscose sausage casings - coated on both sides with animal protein to allow curing with fungus cultures
SCHREINERT F 22.10.77-DL-201619
A97 (17.01.79) A22c-13

Synthetic sausage casings are prepd. by applying a coating of animal protein to both sides of a viscose fabric by spraying or rolling, and partially substituting the wall thickness of the protein by viscose fabric.

The skins have a high water uptake capacity, so that osmotic pressure equalisation is maintained during treatment with fungi during maturation. The skins are esp. useful for ripening of meat prods. with cultures of particular fungi. The viscose fabric support layer has good elasticity and gives good protection against over-extension on filling. The two-sided protein coating gives good adhesion on the inside and allows growth of the fungus culture on the outside. The skin allows good breathing of the contents and is permeable to the mycelium of the fungus culture. 22.10.77 as 201619 (8pp513)

SCHR/ ★ D12 26096B/14 ★DL -133-630
Synthetic sausage skins prodn. from animal protein - using acetic acid treated collagen, formed into soln. with sodium aluminate and plasticised with aluminium enriched or sulphated oil
SCHREINERT F 20.10.77-DL-201620
(17.01.79) A22c-13

Synthetic sausage skins are made from animals protein using acetic acid. Acid aluminium sulphate or ammonium aluminium sulphate-12-hydrate is reacted with NaOH to form Na aluminate. Non-esterified, aluminium-enriched or sulphate plasticizers are added and the skins are made by extraction, with or without fibres.

The skins are esp. useful in the meat processing industry. The process allows acetic acid treated animal protein such as collagen to be processed into skins with reduced losses of acetic acid during processing and drying, thus giving higher yields and efficiency. The formation of the complex salts allows the use of conc. solns. which reduces the time necessary in the coagulation bath and obviates the need to use hardening baths. 20.10.77 as 201620 (10pp513)

SIEL/ ★ D12 26097B/14 ★DL -133-631
Mechanised flesh stripping for bones - by freezing, sepg. crushing and stripping
SIELAFF H 19.07.77-DL-200158
(17.01.79) A22c-17/04

The mechanised flesh stripping of bones in abattoirs begin with a freezing operation, followed by the removal of useless elements such as pigs teeth sets. The bones are then sepd. into parts requiring to pass a bone crusher and are finally charged into the flesh stripping machine.

Process increases the amt. of recovered from each animal but requires very little additional power or manual labour. 19.7.77 as 200158 (7pp39)

WRUC/ ★ D12 26130B/14 ★DL -133-753
Fish processing line transfer device - with discs on return pulley entering parallel slots on conveyor troughs
WRUCK S 11.11.77-DL-202011
(24.01.79) A22c-25/08

A transfer device for fish processing lines consists of a conveyor on which trays circulate between endless chains. The fishes lie sideways in recessed troughs which have several longitudinal slots. At the discharge pulleys, revolving discs penetrate into these slots and lift the fish clear of the trough.

The device ensures that the fish can be lifted evenly ou of the trough and are transferred in the right position to the next chute or conveyor. It is also suitable for similar requirements in the food and vegetable industry. 11.11.77 as 202011 (7pp39)

REIN/ ★ D12 26165B/14 ★DL -133-89
Cooked meat producing machine - with tubes on revolving dru periphery filled and discharged above hot fluid level
REINHOLD M 22.11.77-DL-202175
(31.01.79) A22c-18

Appts. for the forming and production of cooked meat is drum which dips into a heated liquid as it rotates. It carries on its circumference rectangular tubes which are filled with minced meat before immersion and emptied by a pusher ram after emergence on to a conveyor belt.

Arrangement saves much manual labour and removes any risk of contamination by germ carriers. The intensive heat transfer reduces the power requirement and shortens the treatment time. The tubes can be easily exchanged for the other shapes. Used for the prodn. of cooked meat, vegetable and pastry. 22.11.77 as 202175 (9pp39)

NMHB ★ D12 26212B/14 ★DS 2833-0
Fish side scale removing cutter - with conveyor and ventral guide plates
NORDISCHER MASCHINE 28.07.78-DT-833097
(29.03.79) A22c-25/02

Mechanical removal of the lateral shield scales of fish, e.g. of the species carangidae, is effected using ventral fillet cuts on both sides of the ventral fins to cut the fish up to the backbone. These cuts are used to guide th fish and the lateral shield scales are cut off as the fish being transported by its bone structure.

Process prevents undue tearing of useful parts of the fish and is suitable even when the fish are of floppy consistency. 28.7.78 as 833097 (5pp39)

SAUM- ★ D12 26482B/14 ★FR 2395-707

Slicing smoked salmon - using fully automated machine with synchronised feeding and slicing action

SAUMON P C 29.06.77-FR-019930

(02.03.79) A22c-25/18

A fillet of smoked salmon is laid upon a support plate which is inclined quite steeply to the horizontal. The longitudinal axis of the fillet lies in a vertical plane and the support plate complete with fillet is reciprocated vertically. The lower end of the fillet overhangs the support plate so that an upstroke of the plate brings the overhang across the cutting edge of a rotary blade. The slice thus detached is delivered by gravity on to a horizontal collecting table.

Before the next upstroke, the fillet is allowed to slide down the support plate to present a new overhang for slicing. The extent of the new overhang is pref. limited by a stop plate just below the rotary blade. The upstroke pref. carries the slice over the top of the stop plate to drop onto the collecting table. Support plate reciprocation is pref. synchronised with fillet feed release for fully automatic operation.

The machine offers high output of slices for commercial distribution. The quality of prod. is at least equal to manual slicing, but the cost is greatly reduced. 29.6.77 as 019930 (19pp448)

GREC ★ D12 26869B/14 ★J5 4026-370

Liquid medicinal food - comprises animal or vegetable protein component digested with hydrochloric acid-pepsin, sugar, emulsified oil and fibrous material

GREEN CROSS CORP 28.07.77-JA-089792

(D13) (27.02.79) A23l-01/34

The medicinal food is composed of (a) 6-8 w/v% of the proteinous component from animal or vegetable foods digested with hydrochloric acid-pepsin, (b) 16-20 w/v% of sugar mixt.-contg. mono-, di-, oligo- and poly-saccharide, (c) 3-5 w/v% of emulsified oil and (d) 0.1-1.0 w/v% of fibrous material.

The food is refrigerated and preserved for application it is heat-melted and can be injected directly in the stomach or the intestine of sick persons with tube through nose. Further the food can be prepared and served germ-freely. The protein is digested with hydrochloric acid-pepsin so that the proportion of proteinous nitrogen on total nitrogen is 40-60%. In sugar mixture promotes absorption and prevents diarrhoea. 28.7.77 as 089792 (3pp5).

See Also

D15 J5 4026961 D15 J5 4027260

D13: OTHER FOODSTUFFS

BALS/ ★ D13 25941B/14 ★BE-872-242

Aq. bath for removing surface contamination from foodstuffs - contains surfactant, humectant, sequestrant, anti dehydrating agent, buffer and inorganic salts

BALSANO A 01.12.77-IT-002938

(16.03.79) A23l A23p

Foodstuffs are dipped in an aq. bath contg. surfactants, humectants, dispersing agents, sequestrants, anti-dehydrating agents, buffers, and inorganic salts, then carefully rinsed with pure water. The pref. compsn. of the bath is: 5 wt.% Tween (RTM), 32% $NaHCO_3$, 5% propylene glycol, 5% sodium hexametaphosphate, 4% urea, 5% citric acid, 30% sodium silicate and 16% Na_2SO_4 w.r.t. solid materials.

The bath removes chemical and microbial impurities from the exterior surfaces of the foodstuffs, thus contributing to their quality and conservation. 23.11.78 as 872242 (7pp1331).

GENO ★ D13 25987B/14 ★BE-872-379

chewing gum prepn. - using conc. saccharose glucose syrup and gum base in specified proportions

GEN FOODS FRANCE 30.11.77-FR-036099

(16.03.79) A23g

The process comprises mixing the gum base, usually contg. colourant, flavouring and/or plasticiser, with a conc. syrup consisting of saccharose and glucose. The glucose is pref. a commercial product comprising a mixture of glucose, maltose, maltobiose, and tetrose opt. with higher glucose polymers.

A particular embodiment comprises 10-30% of gum-base and a saccharose/glucose ratio of form 45:55 to 85:15, the water being 2-12%.

The process is easier than normal methods and enables a new type having a smooth texture close to that of a soft chewing paste (sweet which disappears during the course of mastication). 29.11.78 as 872379 (6pp597).

KRFT ★ D13 25998B/14 ★BE-872-434

Cheese-making process using concentrate of protein fat and salts - with milk protein protease enzyme hydrolysate

KRAFT INC 30.11.77-US-856016

(16.03.79) A23c

Prodn. of cheese and analogous prods. comprises preparing a non-hydrolysed protein-fat-salts compsn. which is [illegible] sugars and in which the protein and the salts are capable of forming a stable matrix for the fat. A portion of milk protein is treated witha protease to hydrolyse the protein to develop cpds. and precursors giving flavour to the cheese. The hydrolysed protein is mixed with the protein-fat-salts compsn. whilst it is in a practically non-hydrolysed state.

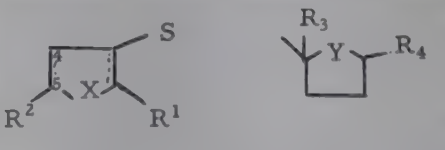
Process enables comparatively rapid mfr. of cheese, esp. hard cheese in higher yield than traditional processes also enabling better control of the process and a great variety of flavour and texture. 30.11.78 as 872434 (38pp).

POLA ★ D13 26007B/14 ★CA 1051-441

Heterocyclic thioether(s) useful as flavouring agents - imparting meat-like taste

POLAK'S FRUTAL WORKS INC 21.01.75-CA-218343

E13 (27.03.79) A23l-01/22 C07d-307/02 C07d-333/34



Sulphur-contg. cpds. of formula (I) are new (where the X-contg. ring is cyclopentane, $\Delta^{2,3}$-cyclopentene, tetrahydrofuran, 4, 5-dihydrofuran, furan, tetrahydrothiophene, 4, 5-dihydrothiophene or thiophene, Y is O or S, and R^{1-4} are H or 1-3C alkyl).

(I) are olfactory and gustatory flavouring agents which are useful for enhancing the meat flavour of meat (-contg) products and for imparting a meat flavour to non-meat foods. They are used in the foods at dosages of 0.01-10 ppm. 21.1.75 as 218343 (31pp914)

KUSY/ ★ D13 B/14 ★CS 7600-585

Sub-zero cooling of agricultural produce

KUSY S 30.01.76-CS-000585

(31.01.79) A23b-04/08

INLE- ★ D13 B/14 ★CS 7701-027

Vegetable hydrolysate neutralisation

INST IND LEMNULUI 16.02.77-CS-001027

(31.01.79) A23k-01/12

INLE- ★ D13 B/14 ★CS 7701-028

Vegetable hydrolysate neutralisation

INST IND LEMNULUI 16.02.77-CS-001028

(31.01.79) A23k-01/12

D 13: OTHER FOODSTUFFS -p. 4

DOHN/ ★ D13 B/14 ★CS 7701-645
Phosphorus-urea concentrates for feeding ruminants
DOHNALEK R 11.03.77-CS-001645
C03 (31.01.79) A23k-01/22

TARA/ ★ D13 B/14 ★CS 7703-150
Non-alcoholic malt liquor prodn.
TARANT J 13.05.77-CS-003150
(31.01.79) A23l-02

SUKO/ ★ D13 B/14 ★CS 7703-740
Ultra-pasteurisation of fruit juice - and also other liquid products
SUKOVATY J 02.06.77-CS-003740
(31.01.79) A23l-02/16

MOST/ ★ D13 B/14 ★CS 7704-352
Grain preservation
MOSTECKY J 30.06.77-CS-004352
(31.01.79) A01n-21

ANDR/ ★ D13 B/14 ★CS 7706-985
Device for halving apricots
ANDRASIK J 27.10.77-CS-006985
(31.01.79) A23n-04/04

VELW ★ D13 26012B/14 ★DL-133-395
Wax dispersions for preserving fruit etc. - contg. a mixt. of emulsifiable oxidised polyethylene and alcohol modified oxidised polyethylene wax
VEB LEUNA-WERK W ULBRICH 10.10.77-DL-201416
A97 (A17) (03.01.79) A23b-07/16

Wax compsns. for improving the storage properties of agricultural produce are comprised of an aq. dispersion of the wax contg. dispersing agents, fungicides and opt. growth control agents. The wax used is a 5:1 to 1:4 mixt. of (a) an emulsifyable oxidised polyethylene with an av. molecular wt. of 500-5000 and (b) an alcohol-modified oxidised polyethylene wax having an acid value of 8-18 mg KOH/g wax before esterification.

The dispersions can be applied to fruit and vegetable produce such as apples, oranges, lemons, melons, pears, radishes, potatoes, garlick, etc., to improve their keeping properties. The compsns. are effective at low levels of application per kg fruit and dry rapidly to a high gloss. 10.10.77 as 201416 (9pp513)

MILD D13 44453U/32 =DS 2241-236
Low-fat butter prodn - by converting fat-in water emulsion into water-in fat emulsion
INST MILCHFORSCH DER DDR (MIL-) 17.01.72-DL-160369
*(29.03.79) *DT2241-236 A23d-03/02*

Spreadable fats having a reduced fat content, esp. dairy fats, are produced from fat-in-water emulsions without using an emulsifier and retaining a buttery taste by adjusting a molten and/or aqs. phase emulsified cream emulsion (opt. contg. other animal and/or vegetable fats) having a fat solids of 35-65% to a temp. above which it becomes clear and then shock-cooling it to $\leqslant$25°C in the absence of air and mechanically working it so that a phase change to in water-in-fat emulsion occurs. 22.8.72 as 241236 (3pp)

HOFF/ D13 18188U/13 =DS 2244-692
Imitation meat - of good taste, from vegetable protein
HOFFMAN H A (HOF /) 17.01.72-US-218117
*(29.03.79) *BE-788-541 A23j-03*

A vegetable proteinaceous prod. resembling meat is produced by heating a vegetable protein contg. carbohydrate and water under a pressure of $\geqslant$126.5 Kg/cm^2 so as to form hard, densified and largely molten lumps which are then leached and hydrated with water at $\geqslant$66°C and then dried.

The prod. is a tasty material (e.g. of soy origin) whose rehydration has been accomplished without adding any oil. 12.9.72 as 244692 (8pp922)

UNIL D13 48941U/35 =DS 2304-073
Black tea prodn - preceded by treatment of unfermented tea with tannase
UNILEVER NV 31.01.72-US-222231
*(29.03.79) *DT2304-073 A23f-03*

An instantly soluble powder of black tea is produced by forming an aqs. tea extract in a slurry of comminated green tea leaves in water, converting the tea solids in the extract into black tea by adding natural tea enzymes eithe before or after removal of the aqs. tea extract from the slurry and finally, drying the converted tea extract.

By treating the aqs. tea extract with tannase at a temp and pH at which the latter is active before the former's conversion, the formation of 'tea cream' during cooling o the black tea extract formed is much reduced. 27.1.73 as 304073 (10pp922)

BUHL D13 21375V/12 =DS 2342-84
Fodder cake cooling tower - with modular tower sections and a cooling
BUHLER GEBR AG 24.08.72-CH-012577
*C03 +Q75 Q76 (29.03.79) *DT2342-842 A23k-01/20 F26*
09/06

A cascade-type shaft cooler for freshly pressed animal fodder cubes of high moisture content, temp. and stickin ess, has in the lower part of the shaft, an air inlet with side wall openings leading to an inverted Vee across the short side of the rectangular shaft section. Two more a inlets near the shaft top in the shorter side walls lead to downward inclined guide plates. The air outlets are two inverted Vees at a level above the top air inlets.

This produces intensively cooled cubes and is free fr the risk of clogging and bridge forming. 24.8.73 as 342842 (9pp39)

NEST D13 31085V/17 =DS 2348-0
Instant drink powder agglomeration - by streams of satd steam a air coaxial to powder stream
SOC PROD NESTLE SA 17.10.72-CH-015185
*+P42 (29.03.79) *DT2348-033 B01j-02/16*

Large quantities of a powdered substance are agglomera under highly effective but delicate handling so that the q -ity of the prod. does not suffer from overheating by th flow of steam and of a gaseous medium, the temp. of wh ch is kept below that of the steam.

The steam and the gaseous medium are fed for at lea the first part of their path coaxially around the flow of prod. The steam flow converges whilst the gaseous me ium is guided for the first part of its path between the f of the prod. and the steam. 24.9.73 as 348033 (7pp1045

BADI D13 04345A/03 =DS 2629-
Feedstuff based on brewer's yeast - contains an organic acid, propionic acid and is esp. suitable for pigs (NL 3.1.78)
BASF AG 30.06.76-DT-629268
*C03 (29.03.79) *DT2629-268 A23k-01/06*

New fodder additive for monogastrics comprises beer iments with 8-18 or 23-25 wt.% solids content and 0.5- wt.% HCOOH, MeCOOH, EtCOOH and/or CH_2=CHCOO

The prods. are easily prepd. and provide a cheap s ce of nutritious components. 30.6.76 as 629268 (5pp0

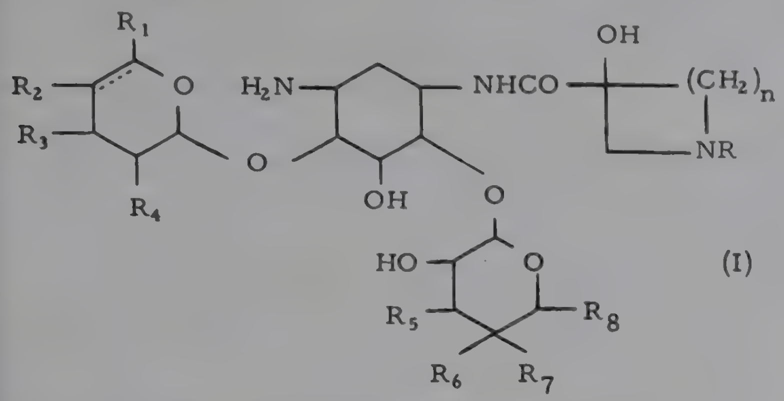
KIRC/ ★ D13 26334B/14 ★DT 2743
Fuel, oil, fat and single cell protein recovery - from plants, al fungi and bacteria, by fermentation, e.g. with Bacillus Delbruec
KIRCHGASSNER E 28.09.77-DT-743618
C03 H09 (D16) (29.03.79) C10g-03

Raw materials for fuel-, oil-, fat- and single cell pro recovery, comprise cellulose-, sugar- and starch-co plants, including chlorophyll- contg. plants, plant was materials, seeds, fruit and fermentation prods., and algae. Bacterial protein, fungus protein and yeasts c also be used.

In a pref. process, fuels, petroleum, H_2 and CH_4 a prepd. by (a) using plant derivs. contg.$\geqslant$30% chloroph contg. plants, balance, in equal ratio, cellulose-, fat sugar- and starch-contg. materials, fungi or bacteria protein; (b) adding 20-30% protein- and haemoglobin s stances or waste; (c) adding 2-3% excreta, oestrogen- urine or similar synthesis hormone prods.; (d) ferme ing with Bacillus Delbruecki; (e) fermenting substrate aerobically or anaerobically, at body temp. or higher and fractionally distilling; (f) opt. adding clear-, foul waste water sludge; (g) shock heating fermentation su ate, e.g. to 70-80°C, to sterilise CH_4 bacteria, and to obtain CH_4 and/or H_2 in a given ratio. Fermentatio be replaced by hydrogenation. 28.9.77 as 743618 (1

SHIO ★ D13 26439B/14 ★EP ---1-280
1-Heterocyclyl-carbonyl-amino-glycoside cpds. - useful as broad spectrum antibacterials
SHIONOGI KK 22.09.77-JA-114176 (19.09.77-JA-112840)
B03 C02 E13 (D22) (04.04.79) A61k-31/70 C07h-15/22
D/S: E (BE, CH, DT, FR, GB, NL).

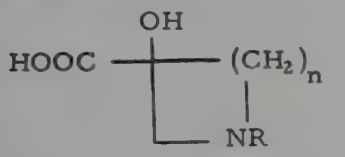
(A) Glycosides of formula (I) and their salts are new:



(I)

(R is H, lower alkyl, aralkyl or aralkoxycarbonyl;
n is 1 or 3;
R_1 is CH_2NH_2, CH_2OH, $MeCHNH_2$ or $MeCH(NHMe)$;
R_2, R_3 and R_6 are H or OH;
R_4 is OH or NH_2;
R_5 is NH_2 or MeNH;
R_7 is OH or Me;
R_8 is H, CH_2OH or carbamoyloxymethyl;
and the broken bond is optional). .

(B) Acids of formula (II) and their reactive derivs. are new:



(II)

(R and n are as defined above).

Broad-spectrum antibacterials with an improved spectrum of activity and potency compared with the parent cpds. (i.e. in which the 1-amino gp. is not acylated). Useful as therapeutic agents in man and animals and as disinfectants, feedstuffs additives etc. Dose: 0.01-10 g/kg daily orally.

18.9.78 as 100925 (45pp1248).
ISR: ——

PROC ★ D13 26453B/14 ★EP ---1-309
Meat aroma precursor compsn. - contg. sources of hydrogen sulphide and di:methyl sulphide with edible protein
PROCTER & GAMBLE CO 21.09.77-US-835126
E19 (04.04.79) A23l-01/23
D/S: E (BE, DT, FR, GB, NL).

A meat aroma precursor compsn. comprises a H_2S precursor (I), a $(CH_3)_2S$ precursor (II) and an edible protein, the amts. being sufficient to generate a meat aroma on heating in an aq. environment. (I) is pref. glutathione or cysteine or their edible salts or edible protein contg. -SH and cystine. (II) is pref. an edible salt or deriv. of: S-methyl methionine, S-methyl-4-methylthiobutyric acid, S-methyl-methyl cysteine, S-methyl-3-methylthiopropionic acid, or S-methyl-methyl thioacetic acid.

Compsns. is more shelf-stable than H_2S or $(CH_3)_2S$ impregnated foodstuffs and on cooking gives a beef-like aroma synergistically superior to either component, under home-cooking conditions. Compsn. is useful with e.g. vegetable protein based meat analogues.

13.9.78 as 200188 (21pp949).
ISR: FR2222030; US3681088; US3394015; US3940500; GB1069104; FR2141538; FR2178924; FR2205280.

DIEP- ★ D13 26483B/14 ★FR 2395-709
Mfr. of instant flour flakes for baby food, soups, etc. - with higher moisture content retained by chilling after precooking
DIEPAL 27.06.77-FR-020707
(02.03.79) A23l-01/16
A roller dryer is used to dry a precooked, aq. paste of flour, the dried prod. being transferred via a screw conveyer to a grinding mill. The film of precooked paste doctored from the roller dryer drum is immediately deplastified by the thermal shock of being brought into contact with a cold surface.

Pref. the moisture content of the paste leaving the dryer drum is between 6% and 12% depending upon the sugar content of the formula. The final prod. retains a similar moisture content.

A final moisture content of 6-12% instead of 0.5-6.0% means that drying energy is reduced, the possibility of thermal damage to proteins and vitamins is reduced and the homogenity is improved. 27.6.77 as 020707 (9pp448)

ARNO/ ★ D13 26484B/14 ★FR 2395-712
Pollen based drink - is prepd. by treating pollen with physiologically acceptable solvent, e.g. water and adding flavourings
ARNOLD G A G 30.06.77-FR-022821
(02.03.79) A23l-02
Drink is prepd. by treating pollen with a physiologically acceptable solvent. E.g. 1-100 g pollen are treated with 1 l. H_2O. Pref. 1-50 vol. % of a flavouring agent, e.g. fruit juice or perfumed sugar syrup is added.

In an example 250g pollen is treated with 5 l. cold H_2O for $\nless$ 24 hrs. It is then filtered and flavourings, e.g. grapefruit juice, coffee, grenadine or lemon syrup, added. 30.6.77 as 022821 (3pp903)

TSUB D13 30918Y/18 =GB 1543-353
Multhiomycin prepn. by culture of Streptomyces 8446-CC1 - with sulphur contg. aminoacid and use as growth promoter for animals, birds, fish, molluscs and crustacea
KUMIAI CHEM IND KK 28.10.75-JA-128910
*B04 C03 (D16) (04.04.79) *BE-847-684 A61k-35/70*
The growth of animals, birds, fish and shellfish is promoted by administering multhiomycin (I). Pref. (I) is administered in feed or drinking water in an amt. of 0.1-500 ppm. Specifically, a growth-promoting compsn. comprises (I) and a carrier selected from feedstuffs, wetting agents and inert solids. The compsn. is pref. free of the culture medium in which (I) was propagated.

Pref. compsn. contains 0.5 ppm to 10% by wt. of (I). (I) pref. has a particle size of 1-100u. Growth rate, feed efficiency, egglaying rate and/or fertilisation rate can be improved by admin. of (I). 26.10.76. as 034709 (7pp927)

AMCY D13 33426A/19 =GB 1543-360
Growth stimulating feed additive contg. nitrovine - microencapsulated in a protective colloid to reduce loss of activity during processing
AMERICAN CYANAMID CO 02.11.76-GB-045593
*B03 C02 (04.04.79) *BE-860-421 +A61k-09/50*
A nitrovin feed additive compsn. consists of solid particulate 1,5-bis(5-nitro-2-furyl)-1,4-pentadien-3-one amidinohydrazone hydrochloride microencapsulated in an edible, hydrophilic, film-forming colloid which permits ingestion. Pref. colloid is gelatin. Pref. wt. ratio of gelatin to nitrovin si 10-30% gelatin to 90-70% nitrovin.

Specifically, the compsn. is used together with a mash mixt. of animal feed ingredients in an amt. sufficient to provide 5-100 ppm by wt. of nitrovin. The compsn. may further comprise a carrier, pref. $CaCO_3$ powder with a non-dusting additive.

Nitrovin is a growth stimulant for young domestic animals. It exhibits improved stability in the form of the new compsn. 2.11.77. (5pp927)

BOSC D13 ✓ 88927X/48 =GB 1543-382
High quality soft caramel (toffee) mfr. - has consistent quality ensured by thorough mixing and accurately controlled heat treatment
BOSCH R GMBH 06.05.75-DT-520049
*(04.04.79) *DT2520-049 +B01f-03/12 B01f-07/26*
Appts. for the thermal treatment of boiled sugar containing confectionery comprises a heated conical vessel

with a discharge pump mounted at the bottom outlet; pref. this pump is a vertical screw driven by a shaft along the axis of the vessel. Material for treatment is supplied to the top of the vessel and is distributed by a rotating disc with radial slots mounted horizontally and immersed in the mass.

Uniform thermal treatment of the mass is provided. 6.5.76. as 018654 (3pp1364)

MOEB/ D13 20878A/11 =GB 1543-463

Water-soluble extract from protein material esp. whey - by heterolysis with yeast and lactic acid bacteria

MOEBUS O 08.10.76-DT-645480 (25.08.76-DT-638163)

*(D16) (04.04.79) *NL7709-398 A23j-01/18 C12d-13/06 +C12c-01*

Water sol-protein-rich extract is prepd. by simultaneously culturing an autolysing yeast and lactic acid bacteria on a protein-and carbohydrate-contg. raw material. The yeast at least partially breaks down the proteins in the raw material and the bacteria at least partially breaks down the carbohydrates to form lactic acid.

Pref. the bacteria are thermophilic yoghur bacteria. Pref. the yeast has been grown on whey or is of the species Saccharomyces cerevisiae which has been grown on molasses or cereal mash. Pref. the raw material is whey.

The extract has a high nutritional value and a low carbohydrate content and is useful as an additive to foodstuffs. 25.8.77. as 035760 (+14.9.76-DT-641270) (9pp918)

LIOT- D13 28783A/16 =GB 1543-512

Preserving liquid egg prod. with salt, sugar, or both - with removal of dissolved oxygen to specified level

LIOT SA 15.10.76-LU-076012

*+Q31 (04.04.79) *BE-859-734 A23b-05*

A liq. egg prod. is preserved by (a) adding homogeneously either $\geqslant$5 wt.% salt or $\geqslant$30 wt.% sugar (based on the wt. of the prod.) or both salt and sugar, in amts. such that the osmotic pressure of the resulting mixt. is $\geqslant$20 atmos., to a (non-)conc. liq. egg prod., (b) removing dissolved gases until the oxygen content is $<$3 ppm, stages (a) and (b) being carried out in either order, (c) opt. heating the prod. at below the coagulation temp. and (d) opt. placing the prod. in an air-tight container under reduced pressure or in the presence of a gas which is neutral to foodstuffs except CO_2), the temp. never exceeding the coagulation temp.

The egg prods. (meringues, ice-cream, mayonnaises etc.) exhibit no protein denaturation and organoleptic properties are not changed after several months. 14.10.77. as 042879 (16pp992)

UNIL ★ D13 26540B/14 ★GB 1543-553

Palm based fat prods. - contg. co-randomised blend of a palmitic fat with a non-palmitic vegetable oil

UNILEVER LTD 04.03.75-GB-008939

(04.04.79) A23d-03 A23d-05

Fat prod. consists of a co-randomised blend of 68-80% wt. of a palmitic fat (I), and 32-20% by wt. of a non-palmitic vegetable oil (II). Although the fat prod. has dilatation values at 35° which can be well over 100, its organoleptic properties are much better than would be expected. The fat prod. is useful in the prepn. of shortenings and margarines, etc. esp. emulsified food spreads.

Prod. pref. contains 68-75% by wt. (I) (contg. $>$20% by wt. palmitic acid), and 32-25 % by wt. of (II). (I) is suitably palm oil, esp. Malasian palm oil of a relatively low palmitic acid content. (II) is suitably groundnut, safflower, or sunflower oil, etc., pref. soyabean oil. 3.3.76. (3pp478)

ULVE/ D13 34800Y/20 =GB 1543-632

Foodstuff treatment tank - with rotating hollow shaft for charging and discharging and corrugated radial partition

ULVESTAD O P 03.11.75-NO-003667

*C03 +P12 Q35 (04.04.79) *DT2650-052 +B65g-03/08*

Appts. for heat treating pumpable materials such as food or fodder comprises a cylindrical vessel in which a radial wall is mounted to rotate on an axial shaft in tight contact with the cylindrical wall and the flat vessel ends. The axial shaft consists of an inner and outer conduit which serve to supply and discharge material to be treate

The radial wall is made with a wave structure in the radial direction with alternate chutes and ribs extending into the central drive shaft; on one side of the wall the outer conduit communicates with the bottom of each chu while on the other side the central conduit communicates with the bottom of each chute. Components of the materia being treated remain at rest relative to the radial wall.

Uniform thermal treatment of the mass is provided. 3.11.76. as 045776 (5pp1364)

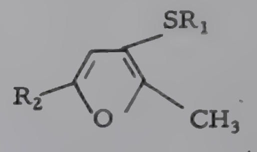
INFL D13 68138X/36 =GB 1543-65

3-Furyl alkyl sulphide cpds. - useful flavour agents giving mea flavour

INT FLAVORS & FRAGR INC 11.12.75-US-639754 (19.02.75-US 551150)

*C02 E13 (04.04.79) *NL7601-172 A23l-01/23 C07d-307/64*

Novel 3-furyl alkyl sulphides are of formula (I) where



(I)

R_1 is 1-5C alkyl and R_2 is H or CH_3.

(I) are used for altering, modifying or enhancing the swee meat flavour of a foodstuff, esp. cpds. where R_2 is H and R_1 is n-propyl or isoamyl. Used in meats, soups, gravies, convenience foods, dog and cat foods etc. Food flavour compsns. contain 2ppm-90 wt.% (I). 18.2.76. as 006320 (12pp963)

MORP ★ D13 26847B/14 ★J5 4026-32

Aminoacid compsn. for treating hepatic encephalopathy - contain l-leucine, l-methionine, l-lysine, l arginine, l-serine, l-tryptopha etc.

MORISHITA PHARM KK 28.07.77-JA-091709

B05 (27.02.79) A61k-09/08

Amino acid fluid supplementation contains L-isoleucin (800 - 1,200 mg/dl); L-leucine (1,300 - 1,600); L-lysine (200 - 500); L-phenylalanine (0 - 100); L-methionine (0 - 200); L-threonine (50 - 250); L-tryptophan (0 - 50); L-valine (800 - 1,200); L-alanine (100 - 300); L-arginine (800 - 1,100); glycine (0 - 300); L-histidine (300 - 500); L-proline (100 - 300); L-serine (100 - 300); L-tyrosine (0 - 50); and L-cysteine (0 - 50)/total, 4,550 - 8,000.

The fluid supplementation is applied as nutrition supplementation to the patient of hepatic encephalopathy which is caused by increase of nitrogen compounds (amin acids, amines, ammonia) depending on decrease of amino acid metabolising capacity in the liver. The compsn. may be administered to the patient via peripheral or central vein together with other fluid supplementation such as electrolyte, glucose or fat emulsion, or vitamins or minerals. 28.7.77 as 091709 (4pp52).

LIOC ★ D13 26858B/14 ★J5 4026-33

Saccharin substitute for oral compsn. e.g. dentifrice - comprise anethole and glycyrrhizic acid salt

LION DENTIFRICE KK 28.07.77-JA-090800

B05 E19 (27.02.79) A61k-07/16

The compsn. has excellent taste and flavour. In prior art compsn. for oral use such as dentifrice, artificial sweeteners such as saccharin, sodium cyclamate, etc. have been used to mask the foreign taste and odour caused fro abrasive, activator, perfume and other additives.

In this invention by using anethole alone or mixt. of anethole and cinnamic aldehyde and/or methylsalicylate as the perfume and glycyrrhizic acid salt as the sweetener together, they show the synergic effect and problems encountered by using them separately, canbe obviated. 28.7.77 as 090800 (7pp5).

SUGY ★ D13 26862B/14 ★J5 4026-34

Protein extn. from defatted soybean - using aq. soln. of mono- or d saccharide, giving high yields at high or low temps.

SUGIYAMA SANGYO KAG 27.07.77-JA-090043

(27.02.79) A23j-01/14

Soybean protein can be extracted efficiently with high yield from defatted soy bean extracted at low or high tem without fall in quality.

Proteins in defatted soy bean are denatured with heat during the extn. and its water-soluble protein content is much lower than that of the soybean. The saccharides are e.g. glucose, fructose, mannose, xylose, maltose, lactose, etc., in an amt. of 1-20 w/w% of the defatted soybean in the form of the aq. 0.02-1 w/w% soln.. 27.7.77 as 090043 (2pp5).

KANE ★ D13 26863B/14 ★J5 4026-350

Seasoned instant fried bean curd prepn. - by combining sugar alcohol and coagulated bean curd, frying, treating with water, impregnating with seasoning soln. etc.

KANEBO KK 26.07.77-JA-090777
(27.02.79) A23l-01/20

Process comprises (a) combining sugar alcohol with coagulating bean curd; (b) frying; (c) treating with hot water to impregnate water and to extract oil; (d) impregnating with seasoning soln.. (e) press-moulding it to remove excessive seasoning soln. and to regulate its form; and (f) drying.

Prod. is storage stable and can be easily restored with hot water to seasoned fried bean cured excellent in texture and taste and flavour without dissolving out of the seasoning solution. Thus it can be used as an ingredient for instant noodles. 26.7.77 as 090777 (4pp5).

KIMU/ ★ D13 26864B/14 ★J5 4026-353

Konjak food contg. vitamin(s) and other nutrients - produced by stirring the mixt. to paste and heat treating to ferment and coagulate

KIMURA K 28.07.77-JA-090826
(D16) (27.02.79) A23l-01/21

The method is to prepare the 'konjak' food containing vitamin A, vitamin Bl, vitamin B2, pantothenic acid, nicotinic acid amide, glutamic acid, glycoside, folic acid, peptide, ester, mineral, etc. by processing refined 'konjak' powder, and comprises (1) combining yeast or enzyme to 'konjak' powder, (2) if necessary, adding seasoning to the mixture, (3) stirring the mixture to paste and (4) heat-treating it properly for ferminting and coagulating.

The solution containing yeast and enzyme is used for preparing 'konjak' food instead of water and 'konjak' food excellent in preservative property and nutritive value can be prepared inexpensively without using additives. The major component of 'konjak' powder, 'konjak' mannan is hydrolysed with enzyme to hexose, alcohol, amine, etc. and delicious 'konjak' food can be obtained. 28.7.77 as 090826 (4pp5).

LOTT ★ D13 26865B/14 ★J5 4026-363

Refrigerated confectionery contg. ice cake - and gelatinous alcohol-contg. sauce which gels on cooling and is obtd. by mixing sugar syrup, polysaccharide, stabiliser and alcohol

LOTTE KK 27.07.77-JA-089983
(27.02.79) A23g-09

The refrigerated confectionery is the combined confectionery composed of the gelatinous alcohol-contg. sauce which is not gelled while it is hot and is gelled by cooling, and ice cake. The gelatinous alcohol-contg. sauce is obtd. by mixing (a) sugar syrup of Bx 40-70, (b) polysaccharide of tamarind seed, (c) $\geqslant 1$ stabiliser selected from the extract of the algae belonging to Gigartinales, gelatin, locust bean gum, gua seed gum, etc and (d) 7-17 w/w% of alcohol.

The sol. sauce can be gelled by cooling it or contacting it with ice cakes and is not frozen to form ice pieces due to freezing point depression through alcohol. The sauce has the freezing point at (-30)-(-35)°C and can keep transparent state under gelled state. It can be put in the vessel with ice cake and gives the flavorous taste and the refreshing feeling specific to alcohol. 27.7.77 as 089983 (2pp5).

YAMS ★ D13 26866B/14 ★J5 4026-366

Extracting sweet substance from Periandra plants - by using water-contg. hydrophilic organic solvent

YAMASA SHOYU KK (HORI-) 27.07.77-JA-089234
B04 (27.02.79) A23l-01/22 C07g-17

Method comprises extracting the underground part of plants belonging to Periandra or the sweet substance obtd. from it (e.g. dry plant body or its powder) with hydrous hydrophilic organic solvent (water content <15%).

Though the sweet substance in Periandra has not been identified, it is quite different from stevioside, glycyrrhizin, etc.. Intensity of its sweetness is almost same as stevioside. The inventor has found that the sweet substance shows large solubility in hydrous hydrophilic organic solvent under acidic condition of pH <3 pref. pH 1-2.5, that the bitter substance is extracted from the Periandra plant together with the sweet substance and that the sweet substance can be sepd. from the bitter substance by neutralising the extract to pH >5 and recovering the ppte. 27.7.77 as 089234 (4pp5).

YAMS ★ D13 26867B/14 ★J5 4026-367

Refining aq. extract of Periandra plant roots - by precipitating the sweet substance by adjusting pH to below 3

YAMASA SHOYU KK (HORI-) 27.07.77-JA-089235
B04 (27.02.79) A23l-01/22 C07g-17

Method comprises forming an aq. soln. contg. a sweet substance, by extracting the roots of the plant of Periandra (e.g. Periandra mediterranea and Periandra dulcis) with water, and precipitating the sweet substance by adjusting the pH to < 3.

The sweet substance of Periandra shows a large solubility in water and mixed solvents of water and a hydrophilic organic solvent (water content >15%) under slightly acidic to alkaline conditions. By adjusting the pH to <3, the sweet substance and various acid-insoluble substance can be co-pptd. and the refined sweet substance can be obtd. by dispersing the ppte. in water, neutralising it to dissolve the ppte. and refining the soln.

Typically the soln. is treated with an ion exchange resin, molecular sieve, adsorbent, etc. or after concentrating it, the concentrate is mixed with a hydrophilic organic solvent to make the water content < 15% to form the ppte. of the sweet substance. If necessary, the refined soln. of the sweet substance is further treated toobtain solid sweet substance by spray-drying, vacuum-drying, freeze-drying, etc.. 27.7.77 as 089235 (3pp5).

YAMS ★ D13 26868B/14 ★J5 4026-368

Sweet extract prepn. from Periandra plant - by extracting sweet substance from root of plant and treating with ion exchange resin or adsorbent

YAMASA SHOYU KK (HORI-) 27.07.77-JA-089236
B04 (27.02.79) A23l-01/22 C07g-17

Method comprises extracting the sweet substance from the root part of a plant of the Periandra species (e.g. Periandra mediterranea and Periandra dulcis) and treating the extract with ion exchange resin or adsorbent to separate the sweet substance from impurities including bitter substance .

Pref. ion exchange resin is a weakly basic anion exchanger or DEAE crosslinked dextran, active carbon, synthetic resin adsorbent, activated alumina, zeolite, etc. The sweet substance is pref. adsorbed on the ion exchanger under acidic conditions and an alkaline soln. is used as the eluting agent.

The sweet substance in Periandra has not been identified, but it is quite different from stevioside, glycyrrhizic acid, etc.. Its sweetness is descent and refreshing and the intensity of its sweetness is almost the same as stevioside. It is sol. in water and a mixt. of water and hydrophilic organic solvent from slightly acidic to alkaline and is also sol. in hydrous hydrophilic organic solvent (water content < 15%) at pH < 3. 27.7.77 as 089236 (5pp).

YOSH/ ★ D13 26870B/14 ★J5 4026-371

Deodorising garlic - by mixing with magnesium oxide

YOSHIKAWA Y 28.07.77-JA-091219
(27.02.79) A23l-01/34

The method comprises combining same or excess MgO with garlic powder. The laxative activity of MgO can be utilised effectively. Thus nutritive and healthy food can be obtd..

The active MgO used is obtd. by burning metallic Mg, $Mg(OH)_2$, $MgCO_3$, etc. at >1500°C. 28.7.77 as 091219 (2pp).

SUMB D13 64052X/34 =J7 9004-746

Edible amylose compsn. - contg. low molecular plasticiser and hydrophilic high polymer

SUMITOMO BAKELITE KK 28.12.74-JA-149221

*A97 (09.03.79) *J51077-651 C08l-03/12*

The compsn. contains amylose (amylose content > 50%). 5.150 pts. wt. of an edible low molecular plasticiser(per dry anylose) (e.g. water, propylene glycol, glycerin, sorbitol, maltitol, etc.) and 5-100 pts. wt. of a hydrophilic edible high polymer (per dry amylose) (e.g. protein-ous substances such as casein, sodium casein, gelatin, etc., polysachharide derivs. such as sodium cellulose glycollate, sodium starch glycollate, etc., edible yeasts, such as beer yeast, baker's yeast, etc. and the protein obtd. there-from, sodium alginate, etc.).

The compsn. withstands physical force at the time of extrusion moulding at high temps., jet moulding, etc. The prods. obtd. from the compsn. exhibit satisfactory flexibility in dryness and do not undergo bleeding under high humidity. 28.12.74 as 149221 C081 3/12, 3/06, (9.3.79) SUMITOMO BAKELITE KK (3pp) (J51077651)

KAWS D13 13536Y/08 =J7 9004-935

Hydated alkali metal malate prepn. - by neutralising the acid with alkali metal (hydr oxide soln. in alcohol contg. appropriate amt. of water

KAWASAKI KASEI CHEM 24.06.75-JA-076518

*E12 (12.03.79) *J52003-019 C07c-59/12*

The reaction is carried out at pH 7-9.5 in alcohol soln. contg. 1-20% of water.

When 3-5% of water is used, hydrated alkali metal malate contg. 1/2 H_2O is obtd. When above 7% of water is used. hydrated alkali metal malate contg. one H_2O is obtained.

The uniform slurry of the hydrated alkali metal malate is obtd. using a conventional stirrer and can be transferred by a pump. The crystals are easily sepd. 24.6.75 as 076518 C07c 59/12 (12.3.79) KAWASAKI KASEI CHEM (3pp) (J52003019)

TOOM/ ★ D13 27402B/14 ★SU -607-567

Centrifugal extruder for chopped vegetables - breaks up cells using set tangential velocity and impacting rigid reflector

TOOMEL KH A 13.07.76-SU-404302

(25.04.78) A23j-01/14

Efficient disintegration of plant cells is ensured by centrifuge extrusion using a tangential velocity of 91-400 m/sec. followed by breaking up the stock with the extruded material impinging a rid reflector.

The drive cntrains the working implement in the form of an annular chamber, and then the auger feed is turned on by loading it with cut green vegetables. The auger loads the annular chamber where blades direct the material towards the nozzles for ejection through the calibrated orifices. The plants are used to produce protein concentrate.

Toomel, Kh.A., Pork, R.P., Melder, T.F. Bul. 19/25.5..78. 13.7.76. as 404302 (2pp89)

CANN= ★ D13 27403B/14 ★SU -607-568

Non alcoholic liquor used in canning industry - is based on grape and cherry juice and contains protein hydrolysate and allyl phenoxy-acetate flavouring

CANNING VEGETABLE 23.08.76-SU-398875

(25.04.78) A23l-02

A non-alcoholic beverage, used in the canning industry, contains grape and cherry juices with sugar. Its biological properties are enhanced and its organoleptic characteristics are improved by using the following compsn. (wt. %): cherry juice 9.0-10.0, sugar 5.0-10.0, protein hydrolysate (autolysin) 1.5-1.7, NaCl 0.1-0.2, maltol 0.005-0.02 allyl phenoxyacetate 0.2×10^{-5}-8.2×10^{-5}, remainder grape juice.

Kuznetsova, L.I., Dzhenkova, A.G., Belikov, V.M. et al. Bul. 19/25.5.78. 23.8.76. as 398875 (2pp835)

ONLI- ★ D13 27621B/14 ★US 4144-804

Controlling butterfat content in reconstituted milk - by measuring optical transparency of milk and automatically adjusting valve accordingly

ON-LINE INSTRUMENTA 12.10.76-US-731467

R16 R26 (20.03.79) A23c-09 G01n-33/06 G05d-11/02

Milk processing system includes a separator where heat treated milk is divided into high-fat and a low-fat streams A portion of the high-fat stream is removed under the control of a digitally activated modulator valve. The remainder of the high-fat stream is combined with the low fat stream in a homogenizer and discharged as a prod.

The butterfat content of this milk prod. blend is determined by a cell which generates an analog signal corresponding to the butterfat content. This analog signal is converted to a digital signal and compared with a stored preset value in a comparator which produces a digital error signal to control the modulating valve of the high-fa stream.

Appts. adjusts the butterfat content of milk. Pref. the measuring cell is periodically and automatically recalibrated. 12.10.76 as 731467 (9pp295)

✓

CACH/ ★ D13 27622B/14 ★US 4144-80

Nut huller and sheller with rotating blades - attached radially t rotating shaft in two groups

CACHO M M 10.01.78-US-868320

(20.03.79) A23n-05

A nut huller and/or sheller comprises a cylindrical container having an upper inlet and a lower outlet. A vertica shaft is rotatable concentrically within the container. Radial blades are attached to the shaft and terminate just short of the cylinder walls. The blades are divided into upper gp. attached to the upper end of the shaft in helix o one direction, and a lower group of blades attached to the lower end of the shaft in a helix of the opposite direction. There are approximately equal numbers of blades in the upper and lower groups.

The appts. is partic. designed to remove both the hul and shell of almonds. The appts. is more hygenic than pr viously used equipment and also removes both the hull an shell in a single operation. 10.1.78 as 868320 (6pp295)

BUBI/ ★ . D13 27625B/14 ★US 4144-8

Biologically closed, physically open system for rearing game fis through which sterilised sea water is constantly flowed to carry nutrient and carry out toxic waste

BUBIEN J K 08.04.77-US-786016

C03 P14 (20.03.79) A01k-61

Process comprises (i) providing a supply of larval fish, (ii) maintaining the larval fish in a container in a biologi cally closed, physically open system, (iii) growing a su ly of food within the system by mixing nutrients and plar ton in sterilised, filtered seawater to form a culture me dium, (iv) providing a homogeneous, continuous supply food to the larval fish by an upflow of the culture mediu in the container, (v) continuously removing toxic waste from the system, and (vi) maintaining the larval fish in system until they develop into viable juvenile fish.

Because the system is biologically closed, the fish e are not susceptible to bacterial, fungal or parasitic atta and because it is physically open, excreted toxic materi can be continuously removed. The system is for rearir deep water game fish such as marlin and tuna. 8.4.77 786016 (8pp914)

UNIO D13 84684Y/48 =US 4145-

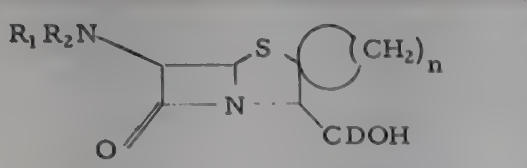
Antibacterial (6)-substd. amino-spiro-cycloalkane penicillins useful against Gram-negative and -positive bacteria and as f additives

UCB SA 25.05.76-GB-021624

*B02 C02 (20.03.79) *BE-854-947 C07d-499/44*

New 6'-amino-spiro[cycloalkane-1, 2'-penam]-3'-carbo lic acid cpds. are of formula (I) and their salts.

In (I) n is 3-

(I) 

R_1 is H, and R_2 is 2-phenylacetyl, 2,6-dimethoxybenzoyl, 2-amino-2-phenylacetyl, 5-methyl-3-phenyl-4-isoxazolecarbonyl or 2-carboxy-2-phenylacetyl, or R_1 and R_2 together are (hexahydro-1H-azepin-1-yl)-methylene.

The acids and their salts are useful as antibacterials. 24.5.77 as 800083 (13pp910)

COOR- ★ D13 27731B/14 ★US 4145-349
Saccharin prepn. in high yield and purity - including salting out ortho-sulpho-benzoic acid intermediate and chlorinating with small excess of thionyl chloride
COMMERCIAL ORGANIC 19.12.77-US-862220
B03 E13 (20.03.79) C07d-277/64

Prepn. of saccharine comprises (i) sulphonating o-chlorobenzoic acid with Na_2SO_3 in aq. soln. in the presence of a Cu salt, (ii) recovering from the soln. and drying the resultant o-sulphobenzoic acid as an alkali metal salt, (iii) dehydrating the salt to provide o-sulphobenzoic acid endo-anhydride, (iv) reacting this with MeOH, (V) treating the resultant o-sulphobenzoic acid methyl ester with thionyl chloride (as chlorinating agent) in the presence of a catalytic amt. of tert. amide to provide methoxycarbonylbenzene-o-sulphonyl chloride, and (vi) reacting this with NH_4OH followed by acidification.

The improvement comprises salting out the whole of the o-sulphobenzoic acid from the soln. of its salt in the form of potassium-o-carboxybenzene sulphonate by the addn. of HCl and KCl; removing the inorganic salt formed during dehydration of the K salt prior to the chlorination step; and using $\not>$ 2-fold excess of the chlorinating agent.

The process enables the saccharine to be produced in high yield and minimises the possibility of it being contaminated by any known carcinogens. The process does not require the use of a large excess of chlorinating agent. 19.12.77 as 862220 (4pp914)

NOVE- D13 56102X/30 #US 4145-446
Urea and fatty acid addn. prod for animal feeds - by spray drying urea-fatty acid mixt. in air stream
NOVENYOLAJIPARI MOS (BUDA) 11.03.75-HU-NO0188 (26.02.76-US-661498)
*C03 (20.03.79) *BE-839-034 A23k-01/22*

Prodn. of a urea-fatty acid adduct comprising discrete solid particles suitable for adjusting urea and fatty acid contents of ruminating animals is described. Process comprises preparing a soln. or melt from urea with 0-45% water at 60-140°C; reacting this with a fatty acid at 60-140°C or a mixt. of liq. fatty acid and neutral fat melted at 35-105°C in wt. ratio of urea (calculated as pure urea) to fatty acid of 40:60-60:40 in a reactor for 2.5-10 seconds; and then spraying the mixt. into a spraying space where the sprayed particles remain in an air stream until they crystallise and settle.

The prod. is free from fillers and is obtd. in dry non-agglomerating form. 2.5.77 as 792561 (9pp945)

WEIN/ ★ D13 27766B/14 ★US 4145-447
Chew resistant animal food prod. - prepd. by compacting moist food at high pressure and then baking
WEINRICH B W 22.03.73-US-343835
C03 (20.03.79) A23k-01/17

A hard, unitised, self-contained, compact, chew-resistant animal food product is prepd. by (i) compacting an animal food which contains $\geqslant$7.5 wt.% of water (based on dry material) and which is free-flowing prior to compacting, the compacting being carried out at $\geqslant$100 psi; and (ii) baking the compacted wt. prod. at $\geqslant$200°F for $\geqslant$0.5 hr. to give a prod. contg. $\geqslant$5.5 wt.% water and having a density of $\geqslant 0.5$ oz/in^3.

The product is e.g. a dog food which can be bone-shaped, etc. It has an extended chew life and is beneficial for exercising the teeth and gums of the animal. 22.3.73 as 343835 (5pp914)

QUAK ★ D13 27767B/14 ★US 4145-448
Protein fortified marshmallow bar - contg. heat-treated fat coated cereal material
QUAKER OATS CO 12.01.78-US-868902 (02.08.76-US-710480)
(20.03.79) A23g-03

Marshmallow compsn. consists of marshmallow low in reducing sugars to which is added before it sets, a cereal m material contg. starch and at least 30 wt.% protein. The cereal is first heated sufficiently to gelatinise the starch and denature the protein, without reducing the nutritional value, and is then coated with fat. 12.1.78 as 868902 (6pp955)

HART- ★ D13 27768B/14 ★US 4145-450
Controlling butterfat content in milk - in response to measurement of sound velocity in milk at two temperatures
HARTEL CORP 22.06.76-US-698782
(20.03.79) A23c-09

The butterfat content of a stream of milk is controlled by adjusting the quantity of cream removed. The butterfat content in the remainder of the milk is determined by forming two substreams of milk which are fed to similar measuring stations. Each station measures the velocity at which a sound wave propogates through the milk. The stations include heaters set to different temp. e.g. 45°C and 65°C.

From these measurements of the velocity of sound at the two known temps. the butterfat concn. can be computed and compared with a preset value. An error signal is generated and used to control the amt. of cream removed from the milk. The appts. adjusts the butterfat concn. of milk to a predetermined value. The appts. operates continuously and discharges milk from the measuring stations back into the milk prod. conduit. 22.6.76 as 698782 (6pp295)

KRFT D13 61931A/35 =US 4145-451
Salad dressing protection against yeasts and moulds - by combination of acetic acid and phosphoric acid without chemical preservative
KRAFT INC 27.04.77-US-791173
*(20.03.79) *BE-866-200 A23l-01/24*

A preserved food compsn. comprises a food and 0-60 wt.% edible oil, 30-96 wt.% moisture, 0-30 wt.% sweetener as sucrose equiv., balance food solids, and a preserving system contg. 0.05-1.8 wt.% acetic acid w.r.t. total moistur content, of the food and 0.1-1.5 wt.% phosphoric acid.

Amt. of phosphoric acid is based on amt. of moisture, sweetener and acetic acid such that the food compsn. is preserved against microbiological spoilage in the absence of chemical preservatives. Pref. compsn. contains 0.2 wt.% phosphoric acid and $\geqslant$0.1 wt.% acetic acid w.r.t. moisture content and 40-80% moisture.

Esp. used in the preservation of salad dressing, mayonnaise and condiments. Compsn. contains a reduced amt. of acetic acid. 27.4.77 as 791173 (6pp931)

DECI- D13 19730A/11 =US 4145-45
Machine for pneumatically conveying finely milled cheese particle - first extrudes and chops the particles to prevent agglomeration
DEC INT INC 15.11.76-US-741662 (10.12.75-US-639356)
*P13 Q35 (20.03.79) *BE-860-544 B29f-03 +A23c-19*

Cheese is conveyed by grinding the cheese, extruding the cheese through holes in a die plate, cutting the extruded cheese to form particles using rotating blades, contacting the particles with a second set of blades rotating in a diff. plane to the first to suspend the particles, and vertically flowing air to entrain and convey the particles.

Pref. the blades of the two sets of blades are aligned and rotated in the same direction. An auger pref. forces the cheese through the holes in the die plate. 23.11.77 as 854080 Div. ex. 4078874 (+15.11.76-US-741662) (7pp1376)

LIPT- D13 25249A/14 =US 4145-45
Ice cream compsn. contg. caroub and/or tara gum - with othe specified stabilisers servable at minus twenty degrees Celsius
LIPTON T J INC (UNIL) 27.05.77-GB-022532 (06.10.76-GB 041602)
*(20.03.79) *BE-859-322 A23g-09/02*

D 13: OTHER FOODSTUFFS -p.10

A hardened ice cream compsn. contains freezing point depressants so that its long C at -20°C is $<$2,8, and is stabilised with $\geqslant$1 locust bean gum and/or tara gum stabiliser and $\geqslant$1 xanthan gum, agar-agar and/or kappa-carrageenan stabiliser.

Pref. $\leqslant$ 50 wt.% of the first stabiliser is replaced by guar gum and the total remaining $>$0.07 wt.% of ice cream. Pref. the ice cream mix. is aerated and frozen, then hardened at $<$ -20°C. Amt. of stabilisers in the mix. is such that the viscosity prior to aeration and freezing $\nless$ 4 poise at 20 sec^{-1} at 5°C.

Use of stabilisers ensures that ice cream prod. does not have melt-down and stand-up effects caused by rapid melting and phase separation. 5.10.77 as 839637 (+25.5.77-GB-022069)(7pp931)

See Also

D12 J5 4026370 .
D16 DT 2741940
D16 J5 4027517
D16 US 4145445
D15 DL 133786
D16 GB 1543491
D16 J7 9004960
D16 US 4145455
D16 DS 2055028
D16 J5 4026391
D16 US 4145254
D23 US 4145354

D14: FOODSTUFF MACHINERY

VLEN- ★ D14 25986B/14 ★BE -872-377
Tractor mounted cutter box for blocks of ensilaged material - handles grass and other fibrous material with blades operated by power take/off
MASCH VAN LENGERICH 30.07.71-DT-138186
P12 (16.03.79) A01f A23n

Mechanical cutter and transporter for blocks comprises a tractor mounted frame with horizontal toothed rake fitted to the frame to be driven into the material. Above the rake, the frame carries a silage cutter which is displaceable on the frame and is driven by the power take-off of the tractor.

The silage cutter can be moved vertically up and down the frame and takes the form of a rectangular box section. At least two of the adjacent lower edges of the box section have downward facing cutting tools driven from the power take-off.

Each cutting tool pref. comprises two powered cutting blades reciprocating in opposition. The box section can be moved vertically down to meet the horizontal rake and releasably locked in this relationship.

The frame fits on to the standard three-point linkage of modern, agricultural tractors and is driven from the power take-off. The design is sufficiently robust to cut large, parallelipiped blocks from compact, fibrous, ensilaged material such as grass and beetroot leaves. 29.11.78 as 872377 (13pp448).

GUIL/ ★ D14 26526B/14 ★FR 2396-248
Cryogenic immersion freezing plant partic. for food prods. - recycles liq. carbon di:oxide by recompressing exhaust gas
GUILLER J 30.06.77-FR-020178
Q75 (02.03.79) A23l-03/36 F25d-03/10 F25d-17/02 F25d-25/04

Air lock valves are employed as prod. entry and exit for a pressure vessel in which the prod. is immersed in liq. CO_2 under a head space of gaseous CO_2 at a pressure above atmospheric. An elevator is used to lift the prod. from the liq. and deliver it to the exit. Excess gas from the head space is exhausted to a compressor which delivers it to a condenser reservoir from which liq. CO_2 is returned to the pressure vessel.

The air locks are pref. of the rotary or spaced shutter types. The exit pref. comprises two air lock valves in succession with an intermediate decompression space from which gas is pumped back to the headspace. Pressure inside the vessel is pref. about 6 bars and the compressor delivers at a pressure of about 12 bars.

Used for rapid deep freezing of prods. esp. food prods. on an industrial scale. The installation can handle food prods. as complete items, reduced to small pieces or as particles. In partic. particles which previously tended to agglomerate are now frozen as clean, individual particles The installation is inexpensive to buy and economic to operate because the CO_2 is recycled. 30.6.77 as 020178 (12pp448)

TOXW ★ D14 26860B/14 ★J5 4026-342
Sterilisation of food e.g. boiled fish paste - by treating wit sensitiser e.g. sodium citrate and irradiating with UV light
TOYO INK MFG KK 28.07.77-JA-089785
A97 (A11 A17) (27.02.79) A23l-03/28

The method is effected by treating food with sensitiser and irradiating with UV-ray. The sensitiser is Na citrate Na succinate, Na malate, propyleneglycol, capric acid monoglyceride, sucrose fatty acid ester of HLB 16-17 or hydrogen peroxide. The sensitiser layer is formed on the film such as cellophane, polyethylene, etc, which ca transmit UV-ray and foods are packaged with the film so that the sensitiser layer is contacted with the foods.

By applying sensitiser and UV-ray together synergis t sterilising can be attained. Boiled fish paste, 'konjak', bean curd, meat foods, perishable foods, etc. can be sterilised by the simple process. 28.7.77 as 089785 (3pp

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GRIS/ ★ D14 27381B/14 ★SU -607-1
Slurry proportionator with storage tank - has feeding measuri flask, capped with air contg. bell, air pressure being used to eje measured samples
GRISHIN P M 02.08.74-SU-050710
J04 R13 (22.04.78) G01f-13

Slurry proportionator, for various foods, technical liqui and suspensions, consists of a delivery container, linked by a pressure pipeline, with measuring container placed at a lower level with cut-off inlet and outlet valves. Reliability is increased and construction is improved by making the upper part of the measuring container so that it is closed off by a removable air-contg. bell-shaped contain Grishin, P.M. Bul. 18/15.5.78. 2.8.74. as 050710 (2pp 29)

D15: WATER TREATMENT

SOAF- ★ D15 25943B/14 ★BE -872-256
Activated sludge treatment plant for waste water - has aeration tank in modular longitudinal sections for variable capacity
SOAF SA 24.11.77-FR-035367
(16.03.79) C02c

The plant comprises an aeration tank operating in conjunction with a separate settling tank. The aeration tank is now made up of a number of modular, longitudinal sections, the two outermost sections having closed ends Several of the sections are fitted with motorised aerato Each section is pref. made in synthetic plastic material partic. a polyester moulding. Pref. also, each section stiffened by corrugating the wall of the section. Stiffene bars can also be fitted inside the tank.

Each section is pref. formed as a base trough with a flange-fitting, removable cover. Each cover pref. has eration apertures and an access way which can be fitted vith a drive unit for an aerating rotor, e.g. turbine.

An aeration tank for an activated sludge plant installation to purify waste water. The tank partic. moulded in lastic, is of inexpensive construction. The capacity of he aeration process can be matched with changing requirements simply by altering the number of modular ections. 24.11.78 as 872256 (11pp448).

TUR/ ★ D15 B/14 ★CS 7600-912
Detoxification of concentrated cyanide waste
STURCH M 12.02.76-CS-000912
(31.01.79) C02c-05/02

VESE/ ★ D15 B/14 ★CS 7607-634
Connection for neutralisation and detoxification station reactor
VESELY S 25.11.76-CS-007634
(31.01.79) C02c-05

VELW ★ D15 26075B/14 ★DL -133-562
xtraction of sulphonate(s) from aq. solns. - using phenol cpds. in resence of methylene blue active cpds. also removes methylene lue-inactive cpds.
VEB LEUNA-WERK W ULBRICH 08.11.77-DL-201940
E19 (D25) (10.01.79) C02c-05/02 C07c-139/14 C07c-143/02

Sulphonates are extracted from aqs. soln. with polar org. solvents. The extraction yield is improved w.r.t. the methylene blue inactive components (I) of the aqs. soln. if the extraction is carried out with phenols in the presence of methylene blue active components (II).

The process is used to reduce pollution from the effluent in alkane sulphonate detergent prodn. Previous processes (e.g. JA 73056579 and DL 121779) removed (II) selectively. In this process. > 80% (I) is removed. 8.11.77 as 201940 (6pp922)

BRAC/ ★ D15 26134B/14 ★DL -133-786
Continuous treatment of manure - in a four-stage process yielding a biomass and odourless effluent of low COD and BOD
BRACHER P 07.11.77-DL-201910
C03 (C04 D13) (24.01.79) C02c-01/06 C02c-05/10

A continuous aerobic treating process for manure is given in which mechanically purified, undiluted manure (BOD > 6000 mg O_2/l) is converted by the process described in DL 110029 in a first stage to form a biomass and the balance of the degradable manure constituents treated by an activated sludge process in a second stage so as to ppte. phosphates and convert N cpds. by microbial nitrification. The nitrified and clarified manure is then microbially denitrified in a third stage and, in a fourth stage adsorbed and/or flocculated.

Capital investment is less. The manure may be used as a fertiliser and the biomass, which contains vitamins and proteins, be further worked up to feedstuffs and/or soil improvers. The odour of the manure and the effluent is reduced since ⩽ 85%, pref. 70% of the organics present are recovered as the biomass. 7.11.77 as 201910 (15pp922)

BECK/ ★ D15 26135B/14 ★DL -133-787
Safe disposal of sludge from water purifcn. - by spraying into coke cooling plant
BECKER V 16.11.77-DL-202102
H09 (24.01.79) C02c-03

A method is disclosed for safely disposing of the sludge from biological waste water purifying plant. The sludge is sprayed into coke oven cooling towers where, in the presence of air and at the temps. extant, the sludge's organic constituents are decomposed with the solid residues depositing on the coke surface and the gaseous products removed with the steam formed.

The method combines pollution-free disposal of the sludge with a method of cooling the coke and reducing its anti-ignition. The deposits formed on the coke increase its calorific value. 16.11.77 as 202102 (6pp922)

ALBE/ ★ D15 26136B/14 ★DL -133-788
Working up lignin-contg. materials to reactive intermediates - by oxidn. at raised temps. and pressure in the presence of nitrogenous cpds.
ALBER W 02.12.77-DL-202355
C04 F09 J01 (D16) (24.01.79) C05f-07/02

Lignin (-contg.) materials (from paper mfg. effluents) are worked up by vigorously mixing them in the aqs. phase with an oxidant in the presence of an N cpd. (e.g. NH_3) at ⩽150 atmos. and ⩽ 240°C opt. in the presence of catalysts to form reactive inters.

The products may be used as fertilisers, soil conditioners, nutrients for microbiological processes, binders, ion exchangers (esp. for water purification) or organic semiconductors. This reactive inter is produced with minimal plant requirements. 2.12.77 as 202355 (8pp922)

METT D15 76964R/42 =DS 2017-041
Removal of heavy metals from effluent
M & T CHEMICALS INC 14.04.69-US-816055
*E37 J01 (29.03.79) *DT2017-041 C02c-05/02*

Gelatinous, floccular pptes. of hydrated heavy metal oxides are sepd. from effluents in the presence of suspended, finely-divided heavy, solid sepn. aids (I) and removed as sludges.

(I) is used in a wt. ratio of 0.7-4.5:1 (1:1) to the metal present and has a sp. gr. of > 3.5. Suitable (I) include Ba chromate, phosphate and sulphate, Al_2O_3, Cr_2O_3, Fe_2O_3, $PbCO_3$, $Pb(CrO_4)$, MnO_2, CrF_3 and/or CoO and > 5% of its particles have a dia. of > 5 μ. 9.4.70 as 017041 (4pp)

EFAE- D15 09462V/06 =DS 2232-510
Effluent treatment plant - for removal of oil or emulsions
EFA ENTWICKLUNGS 03.07.72-DT-232510
*(29.03.79) *DT2232-510 C02c-05*

To carry out an improved process for the clarifying of effluents contg. oil and emulsions, in which iron chloride is used for the prodn. of an iron hydroxide sludge, and a quantity of old oil is added firth to the effluents, the control, dosing and delivery pumping equipment is compacted to the smallest possible size on a portable carriage.

Different installations of collecting, chemical storage, flocculation and sludge tanks, etc. can thus be served easily. 3.7.72 as 232510 (7pp1045)

BERO- ★ D15 26268B/14 ★DT 2742-161
Waste effluent heat recovery - with buffer chamber storing fresh influent during recovery cycle
BERO-ENERGIE BERATU 19.09.77-DT-742161
Q74 (29.03.79) C02c-01/26 F24j-03/04

A heat recovery system from domestic and industrial waste effluents uses a pit which is divided into three sections. A preclarification and settling section is divded by a slow sand filter and a steel partition from a storage chamber with a heat exchanger. An overflow leads to the third section, a buffer tank which is sepd. from the other two by an insulating partition.

During a heat recovery cycle, fresh influent is held in the buffer tank for the next cycle and is not allowed to reheat the already cooled waste of the present cycle. 19.9.77 as 742161 (9pp39)

REPP/ ★ D15 26331B/14 ★DT 2743-580
Storm sewage bar screen - with downward inclined bars for self cleaning action
REPPERT H 28.09.77-DT-743580 (00.00.76-DT-634984)
Q42 (29.03.79) E03f-05/14

The Parent Patent described a bar screen for storm sewage relief channels. This has now been improved by ensuring an automatic clearance of matter retained by the bar screen, without requiring any maintenance.

The bar screen is downward inclined in the direction of flow of the storm sewage and terminates in a V-shaped collection chamber. A discharge pipe at its apex carries away any matter, retained by the bar screen, by the velocity of flow. The inlet end of the bar screen is fitted with an overflow and fluid, free from suspended matter, which passes the screen flows over the collection chamber and into a drainage duct at a lower level. 28.9.77 as 743580 Add to 2634984 (5pp39)

STEM ★ D15 26332B/14 ★DT 2743-608
Exchanger resin regeneration - by separate treatment of anion and cation resins segregated by ascending stream
STEINMULLER L & C GMBH 28.09.77-DT-743608
J01 (29.03.79) B01d-15/06 B01j-01/09 C02b-01/76

In a regeneration system for the spent anion and cation exchanger resins of a mixed bed filter, the spent resin is transferred into a tank with a mixed resin bed where an ascending water flow separates anion and cation resins. Anion resin and mixed resin are in turn transferred into other tanks. After separate regeneration of the anion and cation resin both are merged and returned to the filter tank.

This makes it possible to carry out an external regeneration of spent anion and cation exchanger resins of a mixed bed filter free from partial quantities of the mixed zone resins. 28.9.77 as 743608 (15pp39)

HITA ★ D15 26366B/14 ★DT 2838-677
Radioactive waste disposal control - by prediction of expected waste yield and controlling number of thickeners
HITACHI KK 09.09.77-JA-107813
K07 (29.03.79) C02c-05 G21f-09/06

The number of operational radioactive waste disposal units e.g. of a nuclear reactor of the boiling water type, is controlled by predicting the amount of waste fluid produced during a given period. The required minimum number of disposal units is calculated on the bases of this prediction and adjusted accordingly.

This facilitates the management of waste disposal, reduces the operating costs of the thickeners and prevents corrosion or crust formation in the thickeners. 5.9.78 as 838677 (30pp39)

DALE/ ★ D15 26470B/14 ★EP ---1-345
Removing salts from aq. soln. - using polyether adsorbed on active carbon
DALE J 19.09.77-NO-003215
A97 (A25) (04.04.79) B01d-15/08 C01b-31/08 C02b-01/14
D/S: E(BE, CH, DT, FR, GB, NL, SW)

Complete, partial or selective removal of salt(s) from aq. soln. is effected by contacting the soln. with active C which is impregnated with a cyclic or linear polyether (I). The ether and salt(s) are eluted successively from the carbon. The active C is impregnated by contact with an aq. soln. of (I).

Pref. an aq. soln. of a mixt. of salts is passed through a column of impregnated C so that the salts are adsorbed to different extents. Pref. (I) is recovered by elution with nonpolar or slightly polar, water-immiscible organic solvent, and the salt(s) then recovered by elution with water.

Adsorbing (I) on active C means that less (I) is required. Process is useful for desalination and purificn. of drinking water from ground water sources since nitrates are firmly retained. Active C is already used for removing organic contaminants from drinking water. Sewage and waste water may also be treated to recover larger amts. of nitrates. Analytical and chromatographic uses are also possible.
14.9.78. as 300384 (15pp949).
ISR: US3996161; FR2251525; FR2080451; US3970691.

SODE- ★ D15 26524B/14 ★FR 2396-181
Controlled pressure air displacement for discharging liq. reservoir - has liq. level detector in balance chamber to operate air compressor
SODETE 29.06.77-FR-020428
Q56 R26 (02.03.79) C02b-01 F04b-01/06 G05d-16/20

The method used partic. for a reservoir where liq. is continually introduced and gas is injected into the head space to displace liq. no longer required in the reservoir, comprises keeping a limited zone of the liq. surface in the reservoir at atmos. pressure. The level of liq. in that zone provides a signal to switch on and off the injection of gas to the reservoir head space.

The zone is pref. bounded by a partition extending down from the top of the reservoir to an immersed level below the lowest limit to which the liq. may fall. Incoming liq. for treatment is pref. delivered into the compartment bounded by the partition. Pref. a liq. level detector insid the compartment is used to switch on and off an air compressor providing gas for injection to the reservoir head space. Pressurised gas displacement of liq. from a reservoir, partic. a reservoir used in the treatment of waste water. Head space pressure can be controlled by switching on and off the compressor rather than blowing off compressed gas to the atmos. via a pressure relief valve.
29.6.77 as 020428 (9pp448)

VROL D15 66940Y/38 =GB 1543-28
Disposal of industrial effluent contg. salts and organic matter arising partic. from mfg. weedkiller and insecticides
VON ROLL AG 17.05.76-CH-006144
*C03 Q73 (04.04.79) *BE-854-670 +F23g-05*

Process for the hygienic elimination of sewage with salt-contg. organic substances, comprises conc. by evapn. in a combustion chamber, where the organic substances are burned and the aggregate state of the salts modified. The combustion chamber is of the ''uncooled'' type and requires the replacement of relatively small heat-losses. A waste heat boiler eliminates severe boiler tube corrosion and contamination. The temp. of the combustion chamber is above the salt m.pt. and thus thermally stabl organic cpds. can be reliably oxidised.

A process involving lower operating costs than conventional systems is provided. 28.4.77. as 017861 (6pp1364)

INTT ★ D15 26534B/14 ★GB 1543-3
Detector for measuring amt. of oil in water - uses two laser infrare sources and an infrared detector
STANDARD TELEP CABL 25.11.75-GB-048354
H03 J04 R16 (04.04.79) G01n-21/26

An oil-in-water detector for measuring oil pollution leve in water includes twolaser IR sources each operable at a different wavelength between 8000 Å and 9500 Å. The lasers are operable alternately and an IR detector receiv radiation from the sources through the water. The detector is responsive to IR absorption of the light from the lasers due to C-H overtone stretching frequencies of 8000 Å - 9500 Å, the absorption corresp. to the oil conte in the water. The lasers are GaAl arsenide or GaAl phosphite types.

The lasers and detector are pref. coupled to the wate stream via quartz or Si windows, or, for remote operati via fibre optic systems.

Device permits continuous and instantaneous monitori of a moving stream, e.g. an oil tanker water ballast discharge system. 16.11.76.(3pp314)

STER D15 84376X/45 =GB 1543-
Installation for effluent oxidation with wet air - regulated by vary heat extraction from reactor products
STERLING DRUG INC 21.04.75-US-569942
*F09 (04.04.79) *NL7604-244 C02c-05/04*

Wet air oxidn. appts. suitable for use when treating sewage sludge, comprises a preheater through which liquor and air enter the reactor; the outlet stream passe through a heat-exchanger to the first preheater and ther to a separator where gas and liq. phases are sepd. Fro the separator gas or steam is passed through the heat-exchanger to an expander generator which recovers mechanical energy. Heated material from the reactor i thus cooled against gas passing to the generator before entering the separator. A system controlled by the amt of heat removed from the oxidised prods. is provided.
20.4.76. as 015995 (8pp1364)

MIFI D15 81526X/44 =GB 1543
Microporous membrane filter - with tubular laminated body flow from inside to outside
MILLIPORE CORP 04.04.75-US-565094
*A88 J01 (D22) (04.04.79) *DT2614-336 +B01d-29/14*

Tubular microporous filtration element comprises at least two layers both of which are permeable and the inner is the fragile microporous membrane; pref. the are three layers with the innermost acting as a suppor layer as does the outermost. The layers are formed from a helically wound web with the margins of each la being formed from paper of high wet strength which ar bonded together by adhesive.

Robust microporus filtration materials which can withstand rough handling without rupture are provided. 4.4.75. as 011793 (12pp1364)

REDU- D15 77622X/42 =GB 1543-411

Purificn of waste water polluted with synthetic detergent - partic effluent from washing machines by emulsification flocculation and sepn

REDUX CORPORATION (KLEE-) 16.06.75-US-587426

*+P41 (04.04.79) *BE-842-408 C02c-05/02*

Waste water contg. a synthetic detergent is purified by adding a water-insol. surfactant to the waste water to combine with the detergent and give an emulsion. The combined surfactant and synthetic detergent is then sepd. from the water. The surfactant is pref. a Gp II metal sulphonate. 1.6.76. as 022678 (6pp910)

CIBA D15 00007Y/01 =GB 1543-416

Purificn. of industrial waste water contg. organic impurities - by contacting with adsorbent polymer material in solvated gel state

CIBA GEIGY AG 17.06.75-CH-007846

*A88 F06 (04.04.79) *BE-843-000 C02c-05/02*

Aq. industrial effluent is purified by contacting the effluent with a polymer adsorption material in the form of a solvated gel. The solvated gel is either pre-formed or formed in situ by contacting the effluent with a polymer soln.

The effluent may be waste liquors from the textile, fibre, paper, or leather industry or from the mfr. of dyes or fluorescent brighteners. 16.6.76. as 024969 (13pp910)

USRU D15 06048Y/04 =GB 1543-434

Absorbing weakly acidic organic cpds. from aq. solns. - using particles of unfoamed polyurethane as absorbing agent

UNIROYAL LTD 08.07.75-CA-231051

*A97 E19 J01 (A25) (04.04.79) *DT2628-483 C02c-05/02 +C07c-51/02 C07c-79/54*

A weak organic acid partic. a phenol (deriv.) or a carboxylic acid, which has a pKa of 3-11, is extracted from its aq. soln. by contacting the soln. with granules of unblown polyurethane resin for sufficient time to permit absorption of a large amt. of the cpd. from the soln. by the resin granules.

The method is suitable for the treatment of phenolic industrial waste waters. 5.7.76. as 027813 (6pp910)

FMCC D15 21824A/12 =GB 1543-464

Aq. waste material treatment using activated sludge process - comprises treating with oxygen and disinfecting with oxygen and ozone

FMC CORP 02.09.76-US-719835

*(04.04.79) *DT2738-812 C02b-01/40*

Activated sludge treatment of aq. waste material with a BOD_5 of between 60 and 300 ppm which contains pathogenic agents sufficient to create an ozone disinfection demand in the effluent of at least 4 ppm; the effluent is further oxygenated and disinfected with oxygen and ozone.

Method does not require the removal of nitrogen and CO_2 from the ozone off gas returned to the generator. Oxygen gas is saved without an undue increase in the pumping capacity required to diffuse the oxygen-enriched gas into the biological oxidation tank. 31.8.77. as 036370 (29pp1364)

AIRP D15 55841Y/32 =GB 1543-528

Activated sludge treatment ok phosphate-contg. aq. effluent - with prim. anaerobic stage and sec. aerobic stage to prevent formation of thread-like microorganisms

AIR PRODUCTS & CHEM INC 12.04.76-US-676266

*(04.04.79) *BE-853-318 C02c-01/06*

BOD of waste water is reduced by maintaining a mixt. of water to be treated and recycled activated sludge under anaerobic conditions which are free of NO^-_x and at a conc. of dissolved oxygen <0.7 ppm to produce microorganisms capable of absorbing BOD. The BOD in this liquor is oxidised and the supernatant liq. sepd. from the sludge which is recycled. Oxidn. is effected by maintaining a dissolved oxygen content of $\geqslant 1$ ppm.

in sec. clarification is produced. 17.3.77. as 011407 (13pp1364)

UNIX D15 87105Y/49 =GB 1543-532

Waste water treatment

UNISEARCH LTD 15.04.76-AU-005620

*(04.04.79) *J52126-948 +C02b-01/20*

Process for treating aq. effluent which contains grease emulsified with a non-ionic detergent consists of agitating the effluent at or near its boiling point in the presence of acid. Agitation is continued until substantial flocculation or destabilisation of the emulsion occurs. The flocculant grease is then sepd. Pref. the flocculated grease is sepd. by adding a combustible fuel of density different to the medium to effect sepn. by gravity or centrifuging followed by recovery as a sludge.

Sepn. of dispersed oil phase in which droplet density approaches that of the aq. phase is provided. 24.3.77. as 012508 (5pp1364)

CNSF D15 88073X/47 =GB 1543-590

Biologically safe drinking water by treatment with silver ions - in high concn. followed by lowering silver concn. to legal limits, killing bacteria and some viruses

CONSOLIDATED FOODS CORP 29.04.75-US-572758

*A97 E32 (04.04.79) *NL7602-358 C02b-03/10*

Natural water is disinfected by (i) replacing $Cl^{\ominus}$ ions in (part of) the water by anions which do not inhibit the bactericidal effect of Ag ions so as to maintain the natural ionic balance, (ii) introducing Ag ions at >50 µg Ag per litre, (iii) allowing the Ag to act bactericidally and (iv) reducing the Ag concn. to <50 µg per litre.

Pref. (iii) is for a period of time sufficient for the Ag ions to act as a viricide. Pref. (i) is by passing the water through a bed of $Cl^{\ominus}$-removing anionic exchange resin. 20.2.76. as 004702 (10pp974)

MECA- D15 38731A/22 =GB 1543-670

Mechanical biological sewage treatment drum - with shaft ends resting on open roller pairs for easy removal

MECAFINA SA 08.10.76-CH-012774

*(04.04.79) *DT2710-071 +B01f-07/04*

Plant for the biological purificn. of waste water comprises an horizontal trough in which a cylinder is partly immersed and rotated about its longitudinal axis. The cylinder is made up of a series of axially spaced concentric vanes which are perpendicular to the axis; these vanes are partially immersed in the waste water.

A shaft projects from the cylinder and the vanes and is carried at each end by a pair of bearing rollers so that it can be lifted upwards freely for removal of the cylinder. Dismounting of the unit for maintenance and repair is facilitated. 23.9.77. as 039732 (10pp1364)

CSIR ★ D15 26565B/14 ★GB 2004-535

Clarifying water by contacting with mineral or clay coagulant - with addn. of polyelectrolyte after contact and before sepn. of coagulant adsorbent

COMMONWEALTH SCIENT ORG 22.09.77-AU-001779

A97 (A14) (04.04.79) C02b-01/20

Water is clarified by contacting it with a coagulant adsorbent comprising finely divided mineral or clay material of particle size <10µ and having a thin hydroxylated surface layer with positive zeta potential at the adsorption pH. The improvement comprises adding a polyelectrolyte to the water after contact and before sepn. of the coagulant adsorbent from the water.

Pref. polyelectrolyte is of the cationic type selected from polyamide (esp. polyacrylamide), polyamine, polyethyleneimine or natural cationic polymeric flocculant. Alum or another coagulant is pref. also added to the water. 22.9.78. as 037839 (4pp966)

EBAI ★ D15 26617B/14 ★J5 4025-268

Coagulation of waste sludge contg. organic cpds. - by adding alkali reagent to control pH, calcium chloride and anionic and/or nonionic coagulant

EBARA INFILCO KK 29.07.77-JA-091014

(26.02.79) B01d-21/ B01j-01 C02c-03*

A method for coagulation of waste sludge (I) contg. org-to (I) the control pH to >10, (2) adding calcium chloride (III), corresp. to the amount of (II), to (I) and (3) adding an anionic and/or nonionic coagulant (IV) to (I).

Pref. the amount of (III) calculated as $CaCl_2.2H_2O$, is 1/3 - 3/4 times that of (II). Pref. step (3) is carried out after step (2) and after step (3), (I) should be agitated slowly. Pref. after completion of the coagulation of the organic cpds., the solid is sepd. and dehydrated. (I) are e.g. industrial waste sludge, waste sludge of activated sludge treatment etc.. Pref. (II) is NaOH, slaked lime or KOH.

(I) is coagulated by addition of small amount of (IV), which is nontoxic and has not previously been known as an effective coagulant of organic cpds.. 29.7.77 as 091014 (13pp42).

JAOR ★ D15 26620B/14 ★J5 4025-272

Single column ion exchange appts. for treatment of liquids - comprising a central liquid feeder between upper and lower ion exchange resin beds

JAPAN ORGANO KK 28.07.77-JA-089815

A91 J01 (26.02.79) B01j-01/06

Appts. for ion exchange of a liq. such as waste water comprises a single column packed with ion exchange resin fillers and provided with liq. collectors such as straighteners in upper and lower sections and a liq. feeder such as distributor in a middle section. Ion exchange resin beds having the same height are formed in upper and lower spaces relative to the liq. feeder, which feeds both beds with the liq. at the same flow rate simultaneously such that an up-flow of liquid is supplied to the upper bed and a down-flow to the lower bed.

The arrangement doubles the treating capacity without increasing installation space requirements. 28.7.77 as 089815 (4pp).

KOBM ★ D15 26624B/14 ★J5 4025-279

Tubular membrane separator for waste water treatment - is cleaned by passing cleaning balls through the separator

KOBE STEEL KK 27.07.77-JA-090762

J01 (26.02.79) B01d-13

A method for cleaning a membrane assembled in a tubular membrane separator for treating dirty and waste waters, using cleaning balls. The object is to avoid clogging of the membrane with dust, thus allowing the separator to be operated continuously for a long time.

The novelty is that a filter is disposed in a cleaning ball passage located behind the separator but in front of structures having narrower passage such as control valves and flow meters. The flow direction of the cleaning balls may be fixed at all times or reversed to the separator. The filter may consist of a straightener having a filter element with approx. 20 to 40 mesh. 27.7.77 as 090762 (4pp26).

MITR ★ D15 26745B/14 ★J5 4026-059

Treating waste washing water - by passing through oil separator sand filter and adsorption carbonate tower

MITSUBISHI RAYON KK 28.07.77-JA-090562

A88 J01 (27.02.79) C02c-05

Waste washing water e.g. resulted from the washing of a car or mould, or from defatting in the pretreatment of coating, cooling appts. etc. is purified and circulated for reuse.

Process comprises (a) passing the water through an oil separator to separate oil component by flotation; (b) passing through a sand filter to remove suspended solids, e.g. earth and sand etc., and (c) passing through an adsorbing tower packed with fine composite material (I). (I) comprises inorganic granules e.g. (hydr)oxides or salts of Mg, Zn, Pb, Fe, Co, Ni and Cu etc., activated charcoal, bone charcoal, coal, silica etc, and an organic polymer, e.g. co- or homo-polymers of styrene, MMA, ethyl acrylate, ethylene , propylene, acrylonitrile, vinyl acetate, butadiene etc., polyurethane, polysulphone, polycarbonate etc..

Usage of washing water is reduced and the amt. of a surfactant to be added during washing is reduced. 28.7.77 as 090562 (4pp34).

DAIZ ★ D15 26746B/14 ★J5 4026-060

Treatment of soln. contg. organic reductant e.g. hydrazine - by adding e.g. hydrogen peroxide and contacting with oxygen in the presence of a metal or metal salt

DAIDO TOKUSHOKO KK 29.07.77-JA-091691

E19 (27.02.79) C02c-05/04

Organic reducing substances, e.g. hydrazine, formic acid, oxalic acid etc. are rapidly and smoothly removed by oxidn. decomposition from its soln. contg. by adding H_2O_2 or a H_2O_2-generating substance, e.g. NaS_2O_8 $(NH_4)_2S_2O_8$, $K_2S_2O_8$ and Na perborate, etc., and subsequently contacting it with an O_2(-contg.) gas in the presence of a metal, e.g. Fe, Co, Ni etc., or its salt, oxide or hydroxide.

Hydrazine is in contact with O_2 generated from H_2O_2 or the H_2O_2-generating substance, and decomposed by oxidn. into N_2 and H_2O. When the metal is used in form of hydroxide or salt, it is deposited as oxide in contact with O_2 and a portion of the oxide, e.g. Fe oxide causes hydrazine to decompose. 29.7.77 as 091691 (3pp34).

TAKI- ★ D15 26812B/14 ★J5 4026-28

Treating waste liq. of high BOD - by concentrating using rotatin
disc assembly for liq. evapn. and then sepg. water and solids

TAKIRON KK 01.08.77-JA-092735

(27.02.79) C02c-05

Discs are attached at desired intervals to a rotary shaft to form a rotary disc block. One or more rotary disc blocks are disposed in a tank for treating a waste liquid of BOD >2000 ppm. Approximately half the rotary discs are exposed over the waste liquid.

Air is blown from a fan to the upper parts of the rota
discs so that the water of the waste liquid is evaporated
to obtain the waste liquid of higher concn. The waste
liquid is introduced into a separator to separate the wate
and the solid components. The solid components are bur
ed up or solidified. 1.8.77 as 092735 (3pp35).

MITC ★ D15 26814B/14 ★J5 4026-2

Polysulphone semipermeable membrane prodn. - by casti
polysulphone soln. in aprotic solvent and polyethylene glycol o
support and dipping into water bath

MITSUI PETROCHEM IND KK 01.08.77-JA-091377

A88 J01 (A28 D16) (27.02.79) B01d-13

After casting polysulphone soln. onto a support body, th
cast polysulphone soln. is dipped into a solidifying bath.
mixt. of a protic polar solvent and polyethylene glycol o
a mol.wt. >800 (1000 - 15000) is used as the solvent
for the polysulphone solution, and water is used in the
solidifying bath. The temperature is kept at 0 - 80°C an
the cast polysulphone is dipped for approx. 30 sec. to
5 min.

This method manufactures the semipermeable membrane which is storable either in water or in the air and applicable as microfilter and ultrafiltration membrane, membrane for removing bacteria present in draught bee
and refreshing drinkings, bacteria and dust present in toilet articles, and dust and bacteria present in the air, and membrane for treating service water and waste water. 1.8.77 as 091377 (4pp).

CHLO- ★ D15 27017B/14 ★J5 4026-

Treatment of waste liquor produced in washing of boiler -
treating with chlorine di:oxide and then with active carbon,
after pptn. of iron hydroxide and neutralisation

CHLORINE ENGINEERS (HODO) 03.08.77-JA-092558

(28.02.79) C02c-05/04

Method comprises washing an inner wall of a boiler wi
an aq. acidic soln. contg. amine and/or its deriv., tre
ing the resulting waste soln. with chlorine dioxide, an
then treating it with active carbon. The aq. acidic
soln. is hydrochloric acid or citric acid, and the amin
(deriv.) is alkyl amine or ethylene diamine tetracetate
If necessary, before treatment of the waste soln. with
chlorine dioxide, alkali is added to the waste soln. to
precipitate iron ions as iron hydroxide and, then, acid
is added to neutralise the PH. During treatment of the
waste soln. with chlorine dioxide, chlorine may be ad

In an example, a boiler was washed with an aq. hyd
chloric acid soln. contg. alkyl amine used as an antis

c agent to by-products a waste washing soln. NaOH was dded to the waste soln. to ppte Fe^{++} as iron hydroxide. he pptd. hydroxide was filtered out from the soln. to btain a filtrate. The filtrate was adjusted with hydrochloic acid to about pH 7, treated with chlorine dioxide, nd passed through a tower packed with active carbon. .8.77 as 092558 (5pp51).

OHS ★ D15 27019B/14 ★J5 4026-961
ehydrating sludge formed from slaughterhouse waste blood water by mixing the sludge with active sludge obtd. in treatment of other laughterhouse effluents, adding aggregating agent and ehydrating
TOHO RAYON LTD 03.08.77-JA-093145
(D12) (28.02.79) B01j-01 C02c-03

Method comprises heating the waste blood water at 50 - 100°C to obtain a waste blood sludge, mixing this sludge with an active sludge by-produced in treatment of various waste waters exhausted from the slaughterhouse to obtain a mixed sludge, adding an aggregating agent to the mixed sludge, and then dehydrating the resulting mixt..

In an example, waste blood water exhausted from a slaughterhouse was heated at 85°C for 10 min. to obtain a waste blood sludge of 1.7% sludge concentration. The BOD of the waste blood water was 21,000 ppm. The waste blood sludge was mixed with an active sludge of 1.0% sludge concentration to obtain a mixed sludge. 0.25 % of a polymer type aggregating agent was added to the mixed sludge. The resulting mixt. was filtered with a nylon net of 80 mesh, and pressed under high pressure to obtain dehydrated filter cake. 3.8.77 as 093145 (3pp).

ORA ★ D15 27062B/14 ★J5 4027-018
ibrous adsorbent used e.g. for water purificn. - prepd. from water nsol. inorganic powder and water insol. hydrophilic polymer
TORAY INDS INC 29.07.77-JA-090271
A94 F01 (A14) (01.03.79) D01f-01/10

The adsorbent is composed of (a) 50 - 93 wt.% of water-insol. inorganic powder having adsorption activity and (b) 50 - 7 wt.% of water-insol. and hydrophilic polymer, and contg 0.4 - 4 pts. (per 1 pt. of the inorganic powder) of combined water.

The adsorbent is used for removal of impurities from water, etc. The adsorbent combines sufficiently large contact area (essential to higher adsorption rates) with improved mechanical strength. In an example, a soln. of 100 pts.wt. of acrylic copolymer (acrylonitrile 96.2% + methyl acrylate 3.8%), 300 pts.wt. of natural zeolite, and 933 pts.wt. of DMSO contained in a dope tank was supplied to a nozzle. 50 wt.% aq. DMSO soln. held in a coagulating liquor tank was also forwarded to the nozzle by compressed N_2. The nozzle has a circular slit for the dope and a smaller orifice for the coagulating liquor, and the resulting filament has macaroni-shaped structure. 29.7.77 as 090271 (13pp173).

MITR ★ D15 27063B/14 ★J5 4027-019
Oil absorbent material for waste water treatment - made from an aggregation of fibrillated fibre prepd. by dispersing oil adsorbent fibre in air and applying shearing force
MITSUBISHI RAYON KK 28.07.77-JA-090561
A94 F01 J01 (01.03.79) D01d-01 D01f-06

The material is made from an aggregation of fibrilated fibre which in turn is prepd. by (1) dispersing oil-absorbing fibre in air and (2) applying shearing force to the said dispersion to form fine fibrils on the surface of the fibre particles.

The oil-absorbent material (in the form of loose fibre aggregation, mat, sheet, etc.) is used for filtering waste water to remove suspended oily solids. The fibrilated fibre particles have greater surface area and improved filtration capacity.

In an example 20 d, 12 mm polypropylene staples were dispersed in water to prepare 5 g/ltr slurry. The slurry was stirred and filtered with a 60 mesh stainless steel screen to obtain the aggregation of fibrilated polypropylene staples. 60 g of the fibre aggregation was packed in a column. Filtration of a model water sample containing 100 ppm of dispersed oil with the column gave of the oil. 28.7.77 as 090561 (3pp173).

KURS ★ D15 27069B/14 ★J5 4027-025
PVA-based hollow filament membrane prodn. - by spinning soln. through circular slit with introduction of gas to coagulate inner wall
KURARAY KK 01.08.77-JA-092839
A14 F01 J01 (A32) (01.03.79) D01d-05/24 D01f-06/14

Method comprises extruding the spinning soln. through a circular slit, wherein gas contg. gaseous coagulating material for the PVA-based filament (e.g., NH_3 gas, acetone vapour, etc.) is introduced into the interior of the tubular filament to effect coagulation of the wall of the hollow filament.

The process gives a hollow filament having improved uniformity of wall thickness and completely circular cross-section. Because of the very high water permeability, the resulting PVA-based hollow filament is useful in ultrafiltration, reverse osmosis, etc.. 1.8.77 as 092839 (4pp173).

NITA- ★ D15 27118B/14 ★J5 4027-255
Treating high BOD waste water from food processing - by aerating under fluidised state in presence of coal or activated charcoal to which microorganisms are adhered
NIPPON TANSUI KOGYO 30.07.77-JA-091647
(01.03.79) C02c-01/06

A waste water having very high BOD content, i.e. 300 to 30,000 ppm e.g. discharged from beans paste-producing factory, Miso (soybean paste)-producing plant and marine products-processing factory etc. is purified to lower its BOD content while suppressing largely generation of surplus sludge without any dilution with H_2O.

Method comprises aerating under fluidised state the waste water in an aeration vessel while fluidising coal (except peat, bituminius coal having carbon >than 84% and anthracite) or activated charcoal, having the granular distribution as follows, a fraction of granular size of 2 to 5 mm being > 80% and a fraction having difference in granular size of 0 to 0.5 mm being < 70%. The fluidised coal or activated charcoal was adhered with microorganisms, e.g. alc.-fermentation bacteria etc..

The amt. of coal to be used is 5 to 25 kg/m^3 in the aeration vessel, and the higher the BOD concn. of the waste water to be treated, the higher the content of the coal or activated charcoal having greater granular size. 30.7.77 as 091647 (6pp34).

ASAG ★ D15 27119B/14 ★J5 4027-256
Nitrogenous components sepn. from effluent - by contacting with e.g. porous attapulgite contg. microorganisms, in organic reducing matter, and contacting with oxygen
ASAHI GLASS KK 02.08.77-JA-092214
E36 (01.03.79) C02c-01/02

Nitrogen components, e.g. nitric acid, nitrous acid, nitrogen oxides, etc., are removed from effluent by contacting it with a porous material of apparent specific gravity 0.5 - 2, pref. 0.6 - 1.8, ave. grain size 0.1 - 3, pref. 0.15 - 2 mm and ave. pore dia. 0.008 - 1, pref. 0.01 - 0.5 μ, e.g. attapulgite, etc., on which have been propagated microorganisms, in the presence of organic reducing matter, e.g. MeOH etc., to reduce the nitrogen components into N_2, and contacting the treated effluent with O_2 or air to oxidise the remaining organic matter.

The contact between the porous material and the effluent is pref. carried out in the fluidised state, but may also be carried out in a fixed bed. The porous material is pref. calcined at 400 - 1,200°C for 0.5 - 3 hrs. prior to use. 2.8.77 as 092214 (6pp34).

HIEJ ★ D15 27121B/14 ★J5 4027-258
Treating waste liquor from domestic refuse - by oxidising a fraction contg. lower boiling COD components using a catalyst
HITACHI PLANT ENG CONST 01.08.77-JA-092871
Q73 (01.03.79) C02c-05 F23g-07/04

In treating a waste liquor resulted in dewatering of domestic wastes by means of a filter press by subjecting it to evaporation or distillation to separate into a fraction (I) contg. lower boiling COD components and a fraction (II) contg. higher boiling COD components, fraction (I) is contacted with O_2 or air at 200 - 400°C in the presence of an oxidising catalyst, e.g. Fe and Co etc. carried on silica and alumina etc., so that the COD components contained therein, e.g. ammoniacal nitrogen and other organic matters etc. are converted by oxidation into nitrogen oxides (or HNO_3), organic acids, CO_2 and H_2O etc.

The COD components of the fraction are removed without any use of adsorber. 1.8.77 as 092871 (3pp34).

DENK ★ D15 27122B/14 ★J5 4027-259
Waste water treatment - using double polar electrolysing appts.
TDK ELECTRONICS KK 02.08.77-JA-092884
J03 (01.03.79) C02c-05/12

In the purification of waste water e.g. industrial or domestic waste water, by the use of a double polar electrolysing appts. in which electroconductive granules, e.g. ferrite are filled between a pair of main electrodes, the improvement comprises (i) providing separately a separating region (A) and an electrolysing region (B); (ii) treating waste water subjected to coagulation treatment at the sepg. region with a detonating gas (sic)-contg. water sent from the electrolysing region to form scum which is discharged by flotation to the outside, and (iii) sending a portion of an aq. phase sepd. from the scum to the electrolysing region where is formed by electrolysis a detonating gas which is mixed with remaining water and sent to the sepg. region as the detonating gas-contg. water.

Contamination of the electrodes is decreased, and electrolysing efficiency is improved. Maintainance and control are simplified since washing treatment is facilitated. 2.8.77 as 092884 (3pp34).

TOHS ★ D15 27123B/14 ★J5 4027-260
Treating blood-contg. waste water from slaughterhouse - by allowing the water to stand and heating to coagulate the dissolved blood
TOHO RAYON LTD 03.08.77-JA-093146
(D12) (01.03.79) C02c-05

Waste water has its BODand COD values lowered (removability : > 90%) by standing for a few hrs. at 10 - 50°C, and subsequently heating at 50 - 100°C to coagulate the dissolved blood component as millet- or red bean-like solids which are then easily and effectively sepd. from the water by settling, flotation or filtration, etc..

The water thus treated has very low nitrogen content and is effectively discoloured, so it can be run-off without any contamination. The wasted solids (sludge) are dewatered and dried, and used as feed or fertiliser. 3.8.77 as 093146 (3pp34).

KUBI D15 22416A/12 =J7 9004-701
Desulphurising device for deodorising gases for digesting tanks - comprising heat-exchanger in desulphurising column, with active material surrounding the exchanger and a water spray above
KUBOTA KK 28.04.76-JA-048832
*E36 J01 (09.03.79) *J52131-976 B01d-53/34*

A heat exchanger is disposed in a desulphurising column having a gas inlet at the top end. A gas passage is formed around the heat exchanger, and beds are positioned in the gas passage in contact with the heat exchanger and filled with a scrubbing liq. sprayed through nozzle above the beds.

Arrangement is for removal of H_2S and SO_2 produced in digesting tanks for raw sewage. Device prevents degradation of the desulphurising agent, freezing of the scrubbing agent and liq. 28.4.76 as 048832 B01d 53/34 (9.3.79) KUBOTA KK (3pp) (J52131976)

MITO ★ D15 27215B/14 ★J7 9004-905
Flash evaporator for brine - in which last stage flash chamber is sepd. into two sections, one of which is used for degassing
MITSUBISHI HEAVY IND KK 13.05.68-JA-032009
E36 J01 (12.03.79) B01d-03/06

The flash evaporator comprises a number of evapn-condesn. stages where water is vaporised from a brine to successibely increase the concn. of the brine as it passes through the successively lower pressure stages.

The last stage flash chamber is sepd. into two sections by a vertically extending partition wall, and the newly supplied brine is first introduced into one section of the last stage for degassing purposes and thereafter to the other section from where the brine is conveyed to the condenser in the other stages.

As the brine passes through the successive stage condenser coils, i.e., through the increasingly higher pres
-ure stages, it becomes preheated sufficientiy for subse
quent flash evaporation. 13.5.68 as 032009 B01d 3/06 (12.3.79) MITSUBISHI HEAVY IND KK (4pp47)

RITP D15 78421T/49 =J7 9004-9
Desalting condensate - using ion exchange resin
SYBRON CORP 22.02.71-US-117516
*(12.03.79) *J47021-378 +B01j-01/06 C02b-01/64*

Horizontal appts. for desalting condensate consists of a
cylindrical tank contg. a water-permeable underdrain
near the bottom of the container, ion-exchange resin be
supported by the underdrain, a new resins inlet, a raw
condensate inlet, and means for removing used resin
from the tank. 8.2.72 as 013356 (clg.22.2.71-US-117516)
C02b 1/64,B01j 1/06(12.3.79) SYBRON CORP (8pp)(J470213

OMUK- ★ D15 27216B/14 ★J7 9004-9
**Device for drinking water prodn. - comprises cathode and ano
chambers sepd. by a porous wall, and one contg. a float to gi
stable pH**
OMUKO KK 29.02.72-JA-020866
J03 (12.03.79) A23l-01 B01k-01

The device comprises a tank partitioned with porous
walls into a cathode and anode chambers, either of whic
contains a float to provide stable pH of the water.

The obtd. water has a high alkali ion concn. within
safe limits. 29.2.72 as 020866 B01k1/00 A231 1/00 (12.
OMUKO KK (7pp26) (J48089550)

DAIG/ D15 83790Y/47 =J7 9005-
**Solidifying agent for heavy oil sludge, pulp waste sludge et
produced by adding a gelation-accelerating crystal based
sodium chloride to cement**
DAIGO F 05.04.76-JA-037988
*F09 H05 L02 (14.03.79) *J52121-957 C02c-03*

The agent is produced by adding as a gelatin-accelerati
agent crystal to a cement. The crystal is produced by
adding a satd. aq. NaCl soln. to a reactant soln. prepd
by reacting $\geqslant$2 of NaOH, boric acid or borax, KCl, Fe
oxide and Al_2O_3, with a compsn. comprising NaOH, ani
al or plant oil and fat, H_2O and a talc. The agent solid
the sludge quickly.

In an example, 35wt.% of NaOH, 10 wt.% of animal
plant oil and fat, 15 wr.% of a talc. 5wt.% of Al_2O_3, 5w
of boric acid, 15wt.% of KCl, 15wt.% of Fe oxide were
mixed together, after which 20 wt.% of H_2O was added
-owed by heating at a low temp. to give a uniform yello
coloured soln. to which is then added aq. satd. NaCl s
Water was evaporated-off to give a crystal, i.e. a gela
-accelerating agent. 5.4.76 as 037988 C02c 3/00 (14.3
DAIGO F (3pp) (J52121957)

HYUG- D15 32648A/18 =J7 9005
**Lowering COD of aq. effluent contg. phenol(s) - by adjusting pH
temp. and adding alkali(ne earth) metal permanganate
agitation**
HYUGA SEIRENSHO KK 02.09.76-JA-105256
*E14 (14.03.79) *J53030-163 C02c-05/04*

Aq. effluent contg. phenols and other COD component
subjected to a purification treatment to decompose sin
taneously the phenols and other COD components in a
gle step.

Process comprises adjusting that pH to >6 and the
temp. to <30 (40 to 80)°C, and then adding alkali(ne e
metal permanganate in amt. of 0.7 to 0.9 equivalent
against the COD, followed by agitation.

Phenols are decomposed at 100% and COD compone
90%, without any dissolution of the Mn component, wh
is recovered almost completely as MnO_2. 2.9.76 as 1
C02c5/04 (14.3.79) HYUGA SEIRENSHO KK (4pp)
(J53030163)

VGEE/ ★ D15 27238B/14 ★NL 771
**Ground or surface water distillation - using pump to reduce sy
pressure and solar collector for heat with auxiliary heat sourc
electrical control system**
VAN GEEST C H J 19.09.77-NL-010273
(21.03.79) B01d-01 B01d-03 C02b-01/04

Ground or surface water is distilled using an evaporator, a condensor, a distilled water reservoir and a pump for drawing a vacuum in the condensor and eavaporator. The raw water enters the cooling side of the condensor passes to the evaporator and thence into the hot side of the condensor. It is then passed via the suction pump to the reservoir. The evaporator consists of two alternative heat sources one of which is a solar energy collector, the second being a heater of the conventional type which makes up the energy defficiency required to evaporate the water after it has passed through the solar collector.

Pref. the auxiliary heat source is on a separate closed circuit, the heat passing from the heating fluid to the raw water via a calorifier type heat exchanger. This system incorporates an electrical control system for regulating the heat input of the auxiliary heater in accordance with the availability of solar heat and also the level in the calorifier/evaporator.

The use of the vacuum pump and solar energy collector minimises the energy required for distn. 19.9.77 as 010273 (9pp1370)

KSPO= ★ D15 27259B/14 ★SU -606-818

Removing fluorine from natural water by rapid electrolysis - at soluble duralumin electrodes to eliminate rise in electrode voltage and soln. temp.

KISH POLY 10.10.72-SU-836510
E36 J03 (20.04.78) C02b-01/82

The degree of defluorination of natural water can be increased and the time taken for the process reduced from several hr. to less than 15 min. if the electrolysis treatment is carried out at duralumin electrodes instead of aluminium, using a current density of 23-25 m./cm^2. The hydrogen given off during electrolysis floats the flakes formed on the surface of the electrodes on which the fluorine is deposited, and sepn. of the foam occurs continuously The modified process prevents a rise in electrode voltage of 10-15 times, and also prevents a rise of temp. of the treated water to 70°C, which occurred with aluminium electrodes and reduced the stability of electrolysis. Prisyazhnyuk, B.L., and Prisyazhnyuk, A.S. Bul. 18/15.5.78. 10.10.72. as 836510(2pp815)

AGAF/ ★ D15 27260B/14 ★SU -606-819

Magnetic treatment apparatus for liquids - with diamagnetic body contg. magnetic discs with holes, and external solenoid

AGAFONOVA G S 03.03.76-SU-330199
J01 P41 (11.04.78) B03c-01 C02b-09

Apparatus for magnetic treatment of liquids, e.g. water, during the enrichment of useful minerals, consists of a diamagnetic body, with electromagnet placed outside it, and a guiding device located inside it. The range of the controlled gradient of magnetic fields is widened and magnetic treatment is made more effective, by making the guiding device as a shaft with a rotary drive. This is fitted with magnetic discs with holes and diagmagnetic spacers between the discs.

Agafonov, G.S., Bruk, O.B., Bukholdina, V.M. et al. Bul 18/15.5.78. 3.3.76. as 330199(2pp29)

UFPL= ★ D15 27261B/14 ★SU -606-820

Rapid removal of hypochlorite from waste water - by boiling in presence of alkali without prodn. of toxic sodium chlorate

UFA PLANT PROTECT 26.12.72-SU-863374
E34 (11.04.78) C01b-11/06 C02c-05

The degree of detoxification of waste water contg. hypochlorite can be increased and the time takenfor the process halved if the water is boiled in presence of a 35-40% soln. of sodium hydroxide. The process prevents formation of the toxic by-product sodium chlorate, which was formed previously on heating the water in presence of alkali to 60-100°C. The hypochlorite is decomposed in 1.5-2 hr., compared to the previous 3.5-4.0 hr. and the water produced contains no active chlorine, and thus requires no additional purification.

Boitsov, B.N. Bul. 18/15.5.78. 26.12.72. as 863374 (2pp 815)

USOL= ★ D15 27262B/14 ★SU -606-821

Removal of polymers and surfactants from waste water - by treatment with mixed prodn. wastes of alkali metal chlorate and chloride followed by alkali metal hydroxide and carbonate

USOLKA CHEM COMBINE 10.03.75-SU-110658
A35 (A14) (24.04.78) C02c-05/02

High degree of purificn. of water from polymers and surfactants can be attained if the treatment is carried out in two stages, the first using a mixt. of calcium chlorate, calcium chloride and sodium chloride in the ratio 40-45, 65-70 and 9-12 g./l. and the second using a mixt. of potassium hydroxide and carbonate in the ratio 300-400 and 75-98 g/l. Polymers are completely removed and surfactants removed to extent of 90-95%, so that transparency is increased to ~100 cm., compared to no change in transparency when using sulphuric acid as the purifying agent, which removed only 20-40% of the polymer and almost no surfactants. The treatment agents could be obtained from prodn. wastes which further reduces the cost of the process. Polektova, V.T., Poluektov, I.V., Velesik, M.I. et al. Bul. 19/15.5.78. 10.3.75. as 110658 (2pp815)

AUCO= ★ D15 27263B/14 ★SU -606-822

Rapid and inexpensive removal of lignin from waste water - obtd. in sulphate cellulose prodn. by treatment with aluminium sulphate and filtration through acid modified keramzite

AS UKR COLLOID CHEM 14.09.76-SU-403766
E33 F09 (24.04.78) C02c-05/06

Lignin is removed from waste water by treatment with aluminium sulphate to reduce the colour index, followed by settling and filtration of the liquor through keramzite. The throughput on the filter can be increased and the cost of the process reduced, as a result of increasing the filtration capacity and reducing the consumption of wash water, if the keramzite is modified with hydrochloric acid. Yaroshevskaya, N.V., Kulskii, L.A., Nakorchevskaya, V.F. et al. Bul. 18/15.5.78. 14.9.76. as 403766 (2pp815)

ICIL D15 07991T/05 =SU -607-555

Aerobic fermentation - partic for prodn of edible protein from hydrocarbons or oxygenated hydrocarbons

IMPERIAL CHEM INDS LTD 21.07.70-GB-035285
*H04 (20.04.78) *BE-770-300 +C12d-01/10*

In the aerobic fermentation of a circulating medium, air and/or oxygen is dissolved at a point of high hydrostatic pressure and CO_2 discharged at one of low pressure. The process is used esp. for prodn. of proteins using hydrocarbons or methanol etc. as carbon source. Advantages include increased fermentation rate, as both oxygen uptake and CO_2 discharge rates are increased.

The circulation rate of the liquid is controlled in a fermenter with two compartments rising and descending passages - by the rate of admission of air and/or oxygen to the descending passage. Excess heat is removed continuously by passing the medium through a heat exchanger. Gibson, M.R., Resler, F.C., Smith, S.R.L. Bul. 18/15.5.78. 21.7.71. as 683403 (3pp)

PEST= ★ D15 27486B/14 ★SU -607-783

Detoxification of aq. waste contg. thiram fungicide - by treatment with calcium hydroxide, useful in chemical industry and agriculture

PESTICIDES POLYMERS 22.10.75-SU-184386
E16 (26.04.78) C02c-05/02

Waste water contaminated with tetramethylthiuram disulphide (I) is detoxicated by treatment with calcium hydroxide at room temp. for 3.5-4.5 hrs. The method is useful in chemical ind. and agriculture where cpd. (I) is mfrd. or used as fungicide for seeds. It removes 99.9% of (I) in a form of soln. or suspension at very low cost and at high rate.

Razvaga, R.I., Evreev, V.N., Melnichenko, L.A. et al. Bul. 19/25.5.78. 22.10.75. as 184386 (2pp938)

MOPO= ★ D15 27487B/14 ★SU -607-784

Sulphur contg. sodium salts extraction from effluents - by burning at high temp. and converting any sodium sulphate formed into sodium sulphide

MOSC POWER INST 30.12.75-SU-305388
J01 (26.04.78) C02c-05/04

Extraction of sulphur-contg. salts of sodium from effluents which contain organic and mineral sulphur cpds. involves high temp. treatment in a reactor with a reducing medium. Sodium sulphide and gaseous products of incomplete combustion are produced. The latter are burned in a reactor with an oxidising medium.

The degree of extraction is increased by carrying out the complete burning in the presence of caustic soda. The sodium sulphate produced is reduced to sodium sulphide. The latter is separated and the products of complete combustion are wet cleaned with return of the concentrated sodium sulphate soln. to the reactor with the oxidising medium.

Shurygin, A.P., Chernenko, N.A., Chichkov, V.V. et al. Bul. 19/25.5.78. 30.12.75. as 305388 (3pp29)

KORE/ ★ D15 27488B/14 ★SU -607-785
Removal of surfactants from waste water - by treatment with ozone at pH 12 in presence of anti-foaming agent
KORENKOV V N 09.01.76-SU-311113
A97 E36 (26.04.78) C02c-05/04

Surfactants are removed from waste water by ozone treatment in the presence of an alkali hydroxide to adjust the soln. to pH 12, and the degree of purificn. can be increased if the water is treated with an antifoaming agent such as a nitropolysiloxane emulsion, in an amt. of 0.2-0 25 ml. per g. of surfactant, prior to ozonation. The antifoaming additive prevents excessive foaming, which occurred previously, and prevented treatment of water with more than 20 mg./l. of surface active cpds.

Korenkov, V.N., Korolev, A.A., Nevskaya, N.B. et al Bul. 19/25.5.78. 9.1.76. as 311113 (2pp815)

CEPA ★ D15 27489B/14 ★SU -607-786
Purificn. of aq. waste from cellulose sulphate prodn. - by froth flotation using aluminium sulphate and water-soluble methylcellulose to prevent secondary contamination
CELLULOSE PAPER IND RES 01.08.76-SU-391155
A97 F09 (A11) (26.04.78) C02c-05/06

More effective purificn. of waste water from cellulose-sulphate industry without secondary contamination isbased on froth flotation using 1:3 $Al_2(SO_4)_3$: water-soluble methylcellulose mixt. The coagulant (1% $Al_2(SO_4)_3$ soln.) is added first with stirring for 3 mins. before adding foaming-adsorber (methylcellulose polymer) and stirring for 2 mins. The introduction of air for 10 mins. gives foam contg. impurities, e.g. lignin.

Semenov, V.P., Krunchak, M.M., Legina, N.I. Bul. 19/25.5.78 1.8.76 as 391155 (4pp114)

ANTI- ★ D15 B/14 ★SW 7709-496
Stepless controlled effluent water flow to a treatment unit - using a compartmented tank between a pump and the unit
ANTICIMEXBOLAGEN AB 24.08.77-SW-009496
(19.03.79) C02c-01

Tank to achieve a stepless controlled flow of effluent water to a treatment unit where the tank is positioned between a pump and the unit is described.

The water is fed to a central chamber in the tank and can overflow weirs into the two outer tank compartments. The treatment unit is fed from one other compartment while the outer compartment recycles water to upstream of the pump. The flow to the unit is kept steady, while the recycle flow varies. 24.8.77 as 009496 (-pp1183)

HORN/ ★ D15 B/14 ★SW 7709-508
Purificn. of water contg. heavy metal salts - comprising pptn. using a reagent contg. phosphorus
HORN F F 24.08.77-SW-009508
M25 (19.03.79) C02c-05 C22b-07

Treatment of H_2O contg. soluble salts of heavy metals (I) comprises using a P - contg. reagent to ppte. the elements.

(I) is Cu, Ag, Au, Pt, Pd, Ir, Os, U, Se, Te, As, Sb or Cd. 24.8.78 as 009508 (-pp903).

SUND/ ★ D15 B/14 ★SW 7709-551
Treatment of effluent liquor - by stabilisation with respect to its pH value
SUNDBERG H M 25.08.77-SW-009551
(19.03.79) C05f-03/06

Method and equipment for the treatment of waste material where the liquid in its container is stabilized with respect to its pH value, are described. 15.8.77 as 009551 (-pp1183)

KLEI- D15 00922W/01 =US 4144-807
Dewatering of sludge after pretreatment - by pressing between two per-forated bands moving round drums
KLEIN A KG 03.07.73-DT-333680
*+P71 (20.03.79) *NL7407-831 B30b-09/24*

Sludge cakes are dewatered in a device including two rotary dewatering drums disposed side-by-side and rotatable in opposite directions; two parallel spaced filter bands guided around part of the circumferential well of the two drums for conveying sludge cakes between; the drum walls being water permeable; and rolls for pressing the filter bands against the drums. The cakes are partially dewatered upstream of the drums by straining and the filter bands using guide rolls.

The filter bands pref. envelope the drums by at least 180°. Efficient dewatering in minimal space. 16.3.77 as 778251 (10pp1376)

SYNT ★ D15 27626B/14 ★US 4144-841
Aeration and filtration appts. for aquaria - using vertical tube into which water and air flow
SYNTEX (USA) INC 22.12.76-US-753021 (15.09.75-US-613372)
P14 (20.03.79) A01k-63

Filtration and aeration appts. comprises an elongate tube closed at its lower end and open at its upper end. Passages extend through the wall of the tube at its lower end.

Air is supplied to the interior of the tube at or slightly below the lowermost of the passages in a direction parallel to the length of the tube and in an upward direction. The air is supplied through a tube which extends into a chamber having apertures which allow the air to escape in a direction opposite to the direction in which the air is delivered to the chamber through the air supply tube.

Appts. filters, aerates and purifies liquid used in home or commercial aquaria. It is simple yet is able to maintain a high rate of circulation through it. 22.12.76 as 753021 (10pp295)

SASA- D15 59448Y/34 =US 4145-24
Transportable double-action vaporiser for distilling sea water - ha steam injecting second stage vapour into first stage
SASAKURA ENG CO 20.04.76-JA-U49639
*J01 (20.03.79) *BE-853-754 B01d-01/26*

A double-effect evaporator has two zones, each of which includes a spray at an upper portion of a casing, horizont heat exchange tubes below the spray extending between inlet and outlet headers, a liquid collector at the casing bottom. The tubes in the first zone extend perpendicularly to those of the second zone.

A steam injector external of the zones adjacent the sec ond zone has a suction port which opens into the evapn. chamber of the second zone and a discharge port which opens into the inlet header of the first zone. The steam e -ctor pref. includes a diffuser. 13.4.77 as 787163 (4pp1376)

NENG ★ D15 27695B/14 ★US 4145-27
Sepn. of regeneratable lime sludge - from settling tank wi combustion of sludges in separate furnaces
NICHOLS ENG & RES 07.02.77-US-766193
(20.03.79) C02c-01/24 C02c-03

Sewage treatment plant includes several sludge treatmen stations with settling tanks. Sludge is delivered from of the settling tanks to a sludge furnace. Lime mud pptd by lime in the tanks is delivered to a centrifuge which di charges a semi-solid prod. rich in regenerable lime slu that can be reburned to lime.

The semi-solid prod. is passed to a lime furnace. T centrifuge also produces a centrate stream which is uns table for regeneration into lime. The centrate stream i introduced to a spray dryer which also has a hot gas inle and outlet. A portion of the hot exhaust gases from the sludge furnace are passed to the hot gas inlet of the spra dryer. The centrate stream which is discharged from t spray dryer outlet is delivered to the sludge inlet feed li of the sludge furnace.

System is used to dispose of a non-regenerable sludg epd. by centrifuging from a regenerable lime sludge. .2.77 as 766193 (6pp295)

URE- D15 55424A/31 = US 4145-279

losed circle domestic waste water recycling - by digester, filter, ion xchange bed and ultraviolet steriliser

PURE CYCLE CORP 24.01.77-US-762103

*(20.03.79) *DT2802-725 C02b-01/40 + C02c-01/04*

closed water recycling system for producing potable wa-er includes a waste water buffer, a filtration unit for rem-ving virus, bacteria and organic molecules, a digestor etween the buffer and filter for exposing the water to air, demineraliser for removing organics, colour and inorg-nic salts, a cistern for storing treated water, a monitor or monitoring the operation of the system, and a micropro cessor responsive to the monitor output for controlling water flow and back-flushing of the system.

The demineraliser pref. includes two diff. resins which re acid regenerant and base regenerant having different S. G's. 24.1.77 as 762103 (8pp1376)

MONS ★ D15 27696B/14 ★US 4145-281

Removal of chromium and zinc ions from waters - by treatment with weakly basic anion exchange resin, then weakly acidic cation exchange resin

MONSANTO CO 20.12.76-US-752334

M14 (20.03.79) C02b-01/42

Selective removal of chromate, Cr and Zn ions from H_2O contg. total dissolved solids as total hardness of 100-1500 ppm (as $CaCO_3$) consists of the treatment of the H_2O with a weakly basic anion exchange resin (I) (SO_4 or Cl orm), then with a weakly acidic cation exchange resin (II) Na form).

Method effectively controls Cr^{6+} as well as Zn and Cr^{3+} evels in industrial waters, etc. partic. cooling tower blowdown where Cr and Zn cpds. are used as corrosion inhibitors. In addn., the resins used are resistant to oxidn. and fouling. 20.12.76 as 752334 (6pp478)

ANDC- D15 56779A/32 = US 4145-282

Removing fluoride from waste water by adding calcium and phosphate - and precipitating germs of fluor:apatite or calcium fluoride

ANDCO IND INC 24.01.77-US-761685

*(20.03.79) *BE-863-227 C02b-01/20*

A continuous process for purifying water contg. fluoride comprises continuously adding calcium compsn. to a stream of water to provide ≥ 5 moles of available calcium per mole fluoride; and continously adding phosphate compsn. to the stream to pH 6-11.5 after addn.

Simultaneously with the phosphate addition, a seeding compsn. is slurried contg. fluoroapatite, calcium fluoride and their mixts.; and a ppte. is permitted to form contg. all fluoride present. Pref. sufficient phosphate compsn. is added to provide ≥ 3 mole of available phosphate per mole fluoride.

Used esp. for reducing fluoride content of waste water from mfr. of phosphates, fluoborates, fluorides, fluorine and fluorosilicate. 24.1.77 as 761685 (7pp931)

FARH D15 44075A/25 = US 4145-283

Purifying aq. liquor from caustic fusion of arylsulphonic acids - by oxidising with oxygen or oxygen-contg. gas at high temp. under pressure

HOECHST AG 16.12.76-DT-657011

*E14 (20.03.79) *BE-861-944 C02c-05/04*

Waste water obtd. during the prepn. of a hydroxy aromatic by caustic alkaline melt of aryl sulphonic acid or aryl sulphonate to form a molten prod. is purified by dissolving the molten prod. in water or aq. saline soln. The strongly alkaline liquor obtd. is neutralised with SO_2 or H_2SO_4 and any precipitating salts and the hydroxy aromatic are sepd. from the neutralised waste water. Neutralised water is the subject of wet oxidn. with oxygen (contg. gas) at 100-370°C at 1-300 bars pressure.

Waste water formed on prepn. of e.g. resorcinol and beta-naphthol is purified by wet oxidn. The COD-decomposition rates are $\geq 90\%$. 14.12.77 as 860374 (5pp931)

BERE/ ★ D15 27699B/14 ★US 4145-286

Removing hydrocarbon(s) from water automatically - by passing water into a chamber where hydrocarbon s) settle out and are pumped out when oil level reaches a predetermined level

BERESKIN F P 01.08.77-US-820553

J01 P41 (20.03.79) B01d-21/24 B03d-03

An automatic system for the removal of waste hydrocarbons from water has the waste water entering a primary vessel through a baffled inlet chamber, allowing solids to fall to the bottom of a main collection chamber as the waste hydrocarbons float upwardly on the water in the chamber. The separated water flows out of the chamber into a sewer system.

When the oil level reaches a predetermined level a sensor system allows water to enter the bottom of the main collection chamber whilst closing off the water discharge outlet. The hydrocarbon level is forced upwardly until gravity forces them out of the waste discharge outlet into a storage vessel. When the waste is discharged, normal waste water flow-through is resumed. Upon filling the storage vessel, all operations are suspended until the stored hydrocarbons are pumped out. 1.8.77 as 820553 (6pp1345)

WALK/ ★ D15 27700B/14 ★US 4145-287

Recovering grease from waste effluent water - by gravity separation in tank with siphon removal of water

WALKER H L 17.01.77-US-760095

(20.03.79) B01d-21/24

Waste effluent contg. a mixt. of grease and water is received in a sump. A pump removes the effluent from the sump and transfers it to a separator tank in which the grease fraction floats on the water fraction. The sump includes a level sensor which actuates the sump pump until the sump liquid level has fallen to a lower level.

A siphon dips into the water fraction and discharges water when a predetermined liquid level is present in the separator tank. Discharge of the water via the siphon continues until a predetermined lower level is reached. The siphon comprises a vertical tube with an air inlet adjacent a T-coupling at its upper end.

The appts. recovers grease from waste effluent from a restaurant prior to discharge into a municipal sewer. 17.1.77 as 760095 (11pp295)

FODA ★ D15 27704B/14 ★US 4145-291

Water dispenser with inverted storage bottle - discharging through porous ceramic capsule contg. dispersed metallic silver

FOREMOST-MCKESSON 07.09.77-US-831262 (27.06.76-US-726762)

Q39 (20.03.79) B67d-03 C02b-03/10

Water dispenser comprises an inverted container of water whose neck is received in the top of a storage tank. Where the neck enters the storage tank a basket supports a ceramic capsule with a central aperture and ribs which intercept the flow of water from the container to the tank. The capsule is porous and is below the liq. level of the storage tank when full.

Metallic Ag is dispersed within the porous ceramic capsule and is thus contacted by water during filling of the tank and during storage. Tests showed that the capsule controlled the growth of bacteria in the storage tank.

Appts. dispenses water and controls the growth of bacteria during storage. The capsule requires replacing once a year. 7.9.77 as 831262 (6pp295)

CANA ★ D15 27707B/14 ★US 4145-295

Cellulosic ester ultrafiltration membrane prepn. - by casting thin film and gelling in bath contg. polar cpd. pref. alcohol

CANADIAN PAT & DEV LTD 15.08.77-US-824642

A88 J01 (A11) (20.03.79) B01d-13/04 B01d-31 B29d-27/04

In forming a cellulosic ester (I) semi-permeable membrane by casting a thin film from a mixt. of (I), pore former and casting solvent, removing part of the solvent from the film and immersing the film in a gelation bath contg. a polar org. cpd. miscible with the casting solvent, the improvement, for producing an ultra-filtration membrane, comprises controlling the temp. of the gelation bath at -20 to +30°C and using as the polar cpd., an alcohol in a concn. in the bath greater than that required to produce an initial minimum flux for the membrane equivalent to point B in the fig.

The membranes may be used in the treatment of oily waste waters for pollution control, blood dialysis and treatment of mineral tailings and org. solutes such as starch, vitamins and proteins of m. wts. >15000. Flux rates of 14-10000 gals/sq. ft/day at 100 psig and a $MgSO_4$ rejection at 100 psig of < 40%. 15.8.77 as 824642 (9pp966)

NIPS D15 69236Y/39 =US 4145-306
Stable granular calcium hypochlorite compsn. - contg. hydrated and anhydrous granulate, for water sterilisation tablets (NL 20.9.77)
NIPPON SODA KK 25.03.76-JA-031953
*E33 (20.03.79) *DT2710-804 +C09k-03*

A calcium hypochlorite compsn. is a heterogeneous mixt. of (A) ≥ 0.3 pts. wt. hydrated calcium hypochlorite compsn. contg. > 50% available chlorine and keeping an amt. of crystallisation water of 2-3 moles per mole in the form of the trihydrate; and (B) 1 pts. wt. anhydrated calcium hypochlorite compsn. contg. > 65% available chlorine and < 2% crystallisation water. Compsn. comprises a stable, safe, granular calcium hypochlorite compsn. contg. ≤ 55% available chlorine. Pref. the amt. of crystallisation water kept in hydrated compsn. is 2.5-3.0 moles per mole hypochlorite.

Compsn. is suitable for preparing break-resistant, good -dissoluble calcium hypochlorite tablets. 7.3.77 as 774948 (8pp931)

HOWA- D15 17978A/10 #US 4145-383
Farm yard sewage aeration system - using worm conveyor in vertical open tube for air and sludge circulation
HOWARD MACH LTD 28.08.76-DT-638965 (01.09.76-US-719454)
*(20.03.79) *DT2638-965 C02c-01/18*

Slurry is aerated by immersing an aeration appts. in the slurry, the appts. including a screw conveyor in a tubular casing having an open upper inlet and an open lower outlet, so that slurry fills the casing but the inlet is accessible to air, and rotating the screw to pump slurry down to the outlet so that air enters and is discharged through the outlet. Slurry forms a vortex and remains in the casing to line the casing.

The appts. is pref. moved laterally through the slurry. Aeration of high viscosity liquids can be effected. 15.12.77 as 861440 (7pp1376)

MATT/ ★ D15 27825B/14 ★ZA 7704-661
Water treatment system - using pairs of permanent magnets projecting into conduit
MATTHEWS J W 02.08.77-ZA-004661
(09.10.78) C02b-01

KROF/ ★ D15 27842B/14 ★ZA 7800-141
Soil-like material prodn. from sewage sludge - by adding acidic ferrous salt soln., alkaline earth base, silicic cpd., dry alkaline earth base, removing water and ageing
KROFCHAK D 10.01.78-ZA-000141
(02.11.78) A01n-07 C01b-33/12 C01f-11/02 C01g-49/14 C02c-01/40

See Also

D16 J5 4027517

D16 : FERMENTATION INDUSTRY

PAUW/ ★ D16 25947B/14 ★BE -872-264
Pure anti cyclo:pentano:hexane 2,4-carbonate prodn. - by culture of pure serum on mixt. of T lymphocytes, albumin, sodium chloride, lecithin extracts and collagenase
PAUWELS S 24.11.78-BE-872264
B04 J04 R16 (16.03.79) C12d G01n

Prodn. of pure anti- cyclopentanohexane 2,4-carbonate (I) comprises first centrifuging 5 ml. of serum at 20°C for 1 hr. at 2000 r.p.m. The supernatant is passed through a chromatography column and the eluates contained.

A culture of human T lymphocytes, 100 mg human albumin, 0.7% NaCl, 100 mg lecithin extracts and 10 mg. collagenase is incubated 24 hrs. at 37°C. A sample of serum purified as above is then inoculated into the culture and incubated for 72 hrs. Orange spots appear on the culture at the end of this time. They are dissolved in physiological soln. and passed through a chromatography column to give pure (I).

The prod. can be used in determn. of cyclopentanohexane 2,4-carbonate by radioimmunoassay. 24.11.78 as 872264 (4pp903).

BRAS- ★ D16 25979B/14 ★BE -872-349
Analytical appts. for measuring alpha-di:ketone concn. - operates continuously and used during beer fermentation
BRASSERIES KRONENBE 30.01.78-FR-003284
E17 J04 R16 (16.03.79) G01n

Analytical appts. for the continuous dosage of α-diketones, partic. diacetyl, and their precursors, in view of determining their concn. by spectrophotometry, starting with distn. condensates, contains an entry of 3 tubes for air, the product dose, and reactant, pref. 1% orthophenyl diamine in 4N acid, which come together at an ejector. This permits segmentation of the samples by bubbles of air.

This is followed by a homogenisation coil, a delay coil an injector into which HCl is fed, 2 homogenisation coils, a tube allowing free flow, a tube passing through a pump, an air injector, and a feed section to the measuring appts.. A duplicate of the above is also provided as a reference, being the same except that it is fed by an alcoholic soln., the other being fed by an alcoholic soln. contg. distn. condensates of diacetyl etc., e.g. a 5% soln..

The concn. passes through a max. value, and it is important to ensure that concn. variations are proceedin normally, in order to avoid a bad quality product. 29.11.78 as 872349 (10pp1331).

MOSQ/ ★ D16 B/14 ★BR 7705-5
Culture medium for Matarrhizium anisopliae - comprises rice whi is cooked on the outside but raw inside
MOSQUEIRA A V 22.08.77-BR-005576
(20.03.79) C12k-01/06

BART/ ★ D16 B/14 ★CS 7703-
Sulphite lyes for yeast cultivation
BARTA J 14.06.77-CS-003908
(31.01.79) C12b-03

NIPK ★ D16 B/14 ★DK 7802-
3-((S)-1′-Phenyl-ethyl-amino) propyl-amino bleomycin prodn.
NIPPON KAYAKU KK 18.08.77-JA-098997
B03 (12.03.79) C12d 14.6.78 as 002674

HELL/ ★ D16 26081B/14 ★DL -133-
Grape freezing for ice wine mfr. - by cold air counterflow in th planes
HELLERT B 04.11.77-DL-201878
(10.01.79) C12g-01

In an artificial freezing process for grapes the freezing rate is held < 1 cm per hr. (0.65-0.85 cm per hr.) Th air flows over the moving grapes in three planes in a c nter flow, with the lowest plane receiving the coldest a the middle plane used for the freezing proper and the t plane for precooling.

This simulates the natural freezing where grapes are eft exposed to -5°C to -12°C to freeze out water in crystals and to produce a greater concn. of sugar and soluble ouget substances for ice wine. 4.11.77 as 201878 (8pp)

ARU- ★ D16 26151B/14 ★DL-133-820

rewery mashing process - to utilise otherwise unusable cereals for rodn. of various spirits

INST GARUNGS GETRAN 16.11.77-DL-202099

(24.01.79) C12c-07/04

A brewery mashing process at saccharification temps. is given for enzyme-damaged cereals in which enzyme formulations having cytolytic and, pref., proteolytic activity are added to the mash before conventional saccharification with malt and/or microbial amylase formulations so as to cause sufficient permeability in the vegetable cell walls for amylolytic enzymes to act. 16.11.77 as 202099 7pp922)

CHD D16 21613T/14 =DS 2047-071

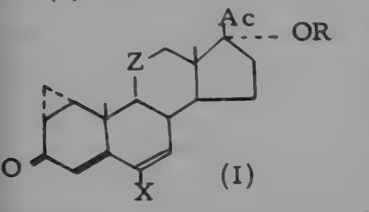
11-hydroxylated 1-alpha-2-alpha-methylene steroids - with gestagenic activity

SCHERING AG 18.09.70-DT-047071

*B01 (29.03.79) *DT2047-071 +A61k-31/57 C07j-07*

1α, 2α-Methylenesteroid derivs. of formula (I) are new.

In (I), X is H, F, Cl or Me; Z is -β-CH(OH)- or C=O; and R is H, alkyl or acyl.



(I)

Prepn. of derivs. (I) comprises biochemical 11β-hydroxylation of corresp. steroids I, (Z $=CH_2$), in culture media in which Curvularia species are propagated; the 11β-hydroxy steroids are islated from the culture medium and opt. acylated, alkylated or oxidised to the 11-ones. The prods. (I) are strong gestagenic agents, esp. for the treatment of gynaecological disorders. 18.9.70 as 047071 (5pp047)

HAYA/ D16 34092S/20 =DS 2055-028

Starch syrups contng oligoglucoside fruc- - tose prodn

HAYASHIBARA K (HAY /) 14.01.70-JA-003976 (09.11.69-JA-089514)

*E13 (D13 D17) (29.03.79) *NL7016-343 C12d-13/02 +C12c-01/18*

The prodn. of a starch syrup contg. a high percentage of non-crystallising, very sweet, stably coloured, heat-resistance oligoglycosyl fructose is described. The process comprises adding cane sugar and/or fructose and/or glucose as acceptors to solns. of liquefied starches having a dextrose equiv. of ≥10 and allowing an anylase of Bacillus macerans (e.g. IFO 3490, IAM 1227 or ATCC 7048) to act on the mixt. for 1-3 days at a pH of 4.5-8.

The syrup may be spray-dried to an easily-handled powder of relatively low hygroscopicity but high sweetening power. 9.11.70 as 055028 (6pp922)

AGEN D16 10393T/07 =DS 2138-059

Glucose isomerase - produced in culture medium contg xylobiose and prodn of fructose from glucose

AGENCY OF IND SCI TECH 30.07.70-JA-066934

*E13 (D17) (29.03.79) *NL7110-522 C12d-13/10*

Glucose isomerase is obtd. in higher yields by culturing a suitable microorganism in a xylobiose-contg. medium (opt. contg. xylan (derivs.)).

The isomerase obtd. is used to convert glucose to fructrose at 45-85°C and pH of 5.5-8.0. 29.7.71 as 138059 (10pp922)

FARB D16 24338U/18 =DS 2151-236

Pure, crystalline penicillinacylase prodn - by adsorption on bentonite and elution with salt soln used in prodn of 6-aminopenic

BAYER AG 14.10.71-DT-151236

*B04 (B02) (29.03.79) *DT2151-236 C07g-07/02*

Prepn. of pure crystalline penicillinase from crude extracts of Escherichia coli cells comprises adjustment of the pH to 3.5-5.5 (pref. 5.0), and removal of suspended cell tissues by centrifuging.

The clear liq. is treated with aluminium silicate, (pref. bentonite); the adsorbent is sepd. and eluted; the eluate [illegible] on a macroporous cation exchange resin and the enzyme is pptd. by addn. of $(NH_4)_2SO_4$. 14.10.71 as 151236 (4pp047)

CORP D16 18258U/13 =DS 2245-402

Xylose isomerase compsn - by culture of a streptomyces mutant to make sweeter maize syrup products

CPC INTERNATIONAL INC 17.09.71-US-181639

*(29.03.79) *BE-788-843 C12d-13/10 +C07g-07/02*

A xylose isomerase enzyme formulation is obtd. by culturing a synthetically-produced Streptomyces mutant (I) which, when used to culture a xylose (–producing material) in a Co-free nutrient medium, forms > 50% xylose isomerase activity than that produced from St. olivochromogenes (ATCC 21114) under identical conditions.

(I) pref. St. olivochromogenes ATCC 21713-5, is used to isomerise dextrose to leavulose. 15.9.72 as 245402 (10pp922)

ROGG D16 85013W/52 =DS 2536-702

Formation of aerosol prods - using microbiological fermentation to produce propellant in situ

ROGER & GALLET 28.08.74-FR-029386

*A97 B07 +P34 Q34 (29.03.79) *BE-831-732 A61k-07/06 C09k-03/30*

Prodn. of aerosol prods. in suitable containers comprises filling the containers with the required components and CO_2 under pressure; in partic., microorganisms which generate CO_2 and nutrients (pref. sugars and/or starch), are inlcuded with the contents so that after the vessels are sealed, sufficient CO_2 is formed to provide adequate but not excessive pressure.

Pref. microorganisms are yeasts, esp. saccharomyces, lactobacilli, leuconostoc and clostridium species. The prods. are stabilised by the addn. of buffer agents and surfactants or dispersion aids, esp. non ionic wetting agents. The process is applicable to pharmaceuticals and cosmetic prods. 18.8.75 as 536702 (9pp047)

MARL D16 25064Y/14 =DS 2636-462

Anaerobic culture collecting and transporting appts. - in controlled atmos. tube contg. hydrogen and carbon dioxide generators

MARION LABS INC 22.12.75-US-643260

*B04 (29.03.79) *US4014-748 C12k-01/10*

A device for the reception and the transportation of a bacteria culture consists of a long flexible tube which contains a first crushable ampulla near the smear swab with a liq. nutrient. At the closed end of the flexible tube, a gas-producing tablet is followed by a second crushable ampulla contg. a substance to produce hydrogen in reaction with the tablet. The space between the two ampullas is taken by a filter which is permeable to gas but not to liq., a solid catalyst, and a liq.-absorbent plug.

This creates a simple and efficient control for the atmos. surrounding the bacteria culture. 13.8.76 as 636462 (7pp39)

LINM ★ D16 26251B/14 ★DT 2741-940

Aerobic fermentation control - by oxygen probes in fermenter and in waste gas pipe from it

LINDE AG 17.09.77-DT-741940

(D13) (29.03.79) C12b-01/16 C12j-01/10

Aerobic fermentation, e.g. in the prodn. of vinegar from ethyl alcohol by means of vinegar bacteria, is carried out in a fermenter with fitments for the check and control of the oxygen content in the fermenter, with a waste gas pipe and feed pipes for air and oxygen. In addition to the oxygen probe in the fermenter, another oxygen probe with a threshold switch is arranged in the waste gas pipe.

The arrangements ensures that the oxygen concn. is kept to a constant figure which is an optimum for the growth of the nitro-organisms. 17.9.77 as 741940 (14pp39)

KURE ★ D16 26389B/14 ★DT 2840-036

Nitrogen-contg. polysaccharide active against plant viruses - obtd. by ammonia treatment of Basidiomycetes culture prod.

KUREHA KAGAKU KOGYO 16.09.77-JA-111968

C03 (29.03.79) A01n-15

Product for controling plant viruses comprises a N-contg. polysaccharide (I) produced by reacting a culture product of a Basidiomycete fungus with an aq. 0.03-17 N NH_4OH soln. at 150-250° C and autogenous pressure, filtering the product, and drying the filtered soln.

Specifically, (I) is characterised by having (a) elemental analysis 38-50% C, 2.5-10% N, 5.5-7.5% H, balance O; (b) systemic antiviral activity; (c) a mol. wt. of 500-10,000 (d) a characteristic IR absorption band at ca $1620 cm^{-1}$.

The product can be used to protect plants of the family Solanaceae or Cucurbitaceae against infection by pathgenic viruses, esp. tobacco mosaic, cucumber mosaic and cucumber green-mottled mosaic virus. 14.9.78 as 840036 (28pp367)

CHUS ★ D16 26443B/14 ★EP ---1-287

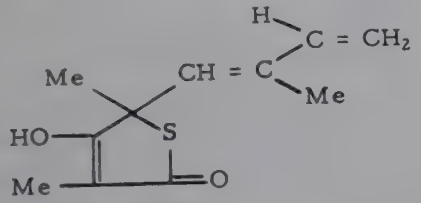
Antibiotic No.2-200 obtd. from Nocardia sp. ATCC 31319 - useful against Gram negative bacteria and having low toxicity

CHUGAI SEIYAKU KK 22.09.77-JA-113205

B02 C02 (04.04.79) A61k-35/66 C07d-333/32 C12d-09/14

D/S: E(DT,FR,GB)

Antiobiotic No. 2-200 of formula (I) is new:



(I)

(I) is an antibacterial, esp. effective against Gram-negative strains, with low toxicity and no delayed toxic effects after admin. It is useful as a therapeutic agent in man and animals.

21.9.78 as 100953(21pp1248).

ISR: No relevant documents have been disclosed.

MERI ★ D16 26475B/14 ★EP --- 1-365

Prepn. of antigenic and immunogenic herpes virus sub-unit - by contacting infected cells with surfactant, hydrolysing and purifying

MERCK & CO INC 19.09.77-US-834598

B04 C03 (04.04.79) A61k-39/12 C12k-07

D/S: E(BE, CH, DT, FR, GB, LU, NL, SW).

(A) Antigenic, immunogenic HSV2 subunit having 3 gps. of viral directed glycoproteins are new. A first gp. is of mol.wt. 10,000-130,000, a second gp. of mol.wt. 83,000-90,000 and a third gp. of mol.wt. 55,000-60,000.

(B) Antigenic, immunogenic HSV1 subunit having a first gp. of viral directed glycoproteins of about 123,000 mol. wt. and a second gp. of about 60,000 mol.wt., is new.

Used in vaccines to induce neutralising antibody and cell-mediated immune responses, and to protect laboratory animals against paralysis and death caused by the Herpes virus.

14.9.78 as 400098 (24pp1248).

ISR: US3962421; 1 Journal Reference.

LCAS ★ D16 26507B/14 ★FR 2396-018

acetylated water soluble gluco-peptide prepn. from escherichia coli - used as antiinflammatories and immunostimulant(s)

LAB CASSENNE 01.07.77-FR-020318

B04 (02.03.79) A61k-37/02 C07g-07/02

Water-soluble acetylated glucopeptides are prepd. from lysed Escherichia coli cells. They have a molecular wt. of 1000-200000 contain ≥ 25% biuretogenic material and ≥ 30% neutral monoseccharides. They do not contain diaminopimelic acid and have a UV absorption max. at 210 mμ.

Glucoproteins of molecular wt. ≥ 300000 extracted from lysed E, coli cells are submitted to acetolysis, usually with a mixt. of acetic anhydride, acetic acid and sulphuric acid. The crude acetylated prod. is treated with an organic solvent, such as chloroform, and the aq. phase undergoes diafiltration using a porous membrane which retains material of mol.wt. ≥ 1000. The retained material is sepd. 1.7.77 as 020318 (17pp520)

LCAS ★ D16 26508B/14 ★FR 2396-019

Acetylated water soluble gluco-peptide prepn. - from pseudomonas aeruginosa; used as antiinflammatories, antibacterials, and immunostimulant(s)

LAB CASSENNE 01.07.77-FR-020319

B04 (02.03.79) A61k-37/02 C07g-07/02 C12k-05

Water soluble acetylated glucopeptides (I) are prepd. from lysed Pseudomonas aeruginosa cells. They have a molecular wt. between 500 and 200000 and contain > 20% buiretogenic material and ≥ 25% neutral monosaccharides. (I) contains no diaminopimelic acid and has UV absorption maxima at 210 and 260 mμ.

Glucoproteins of mol. wt. ≥ 300000 extracted from Lysed P. aeruginosa are submitted to acetolysis, usually with a mixt. of acetic anhydride, acetic acid, and sulphuric acid. The crude acetylated prod. is treated with an organic solvent, such as chloroform, and the aq. phase undergoes diafiltration using a porous membrane which retains material of mol wt. > 500. The soln. not passin the membrane contains (I). 1.7.77 as 020319 (17pp520)

LCAS ★ D16 26509B/14 ★FR 2396-02

Acetylated water soluble gluco-peptide prepn. - from Hafni Aerobacter cloacae or Klebsiella pneumoniae, used antiinflammatories and immunostimulant(s)

LAB CASSENNE 01.07.77-FR-020320

B04 (02.03.79) A61k-37/02 C07g-07/02

Water-soluble acetylated glucopeptides are prepd. from lysed cells of Hafina, Aerobacter cloacae, and Klebsiell pneumoniae. They have a mol wt. between 500 and 2000 contg. > 5% biuretogenic material and ≥ 25% neutral monosaccharides. They do not contain diaminopimelic acid and have a UV absorption max. at 210 mμ.

Glucoproteins from lysed cells of Hafnia, A. cloacae, or K. pneumoniae having a mol. wt. ≥ 300000 are aceto lysed, usually with a mixt. of acetic acid, acetic anhydr ide, and H_2SO_4. The prod. is treated with an organic sol vent such as chloroform and the aq. phase submitted to diafiltration to eliminate material having a mol. wt. ≤ 500, leaving the prod. sought. 1.7.77 as 020320 (29pp52

VYSO- D16 49004Y/28 =GB 1543-

Continuous prodn. of biomass from ethanolic substrates - usin multistage tower fermenter

VYSOKA SKOLA CHEMIC 04.03.76-CS-001436 (23.12.75-008812)

*(04.04.79) *DT2649-547 C12b-01/10 C12c-11/14 C12d-13/0*

Microbial biomass is prepd. from ethanol and a nutrien medium in a fermentation process by inoculating the medium with a culture and aerating. The resulting biomass is then further aerated continuously and ethanol i an amt. of 3-15 wt. % of the nutrient medium added. Th fermentation then takes place at pH 4.0-6.5 and temp. 25-45°C. High substrate losses are avoided. 22.12.76. as 053499 (10pp1364)

SHIS/ ★ D16 26539B/14 ★GB 1543

Culture media contg. vegetable matter and peat hydrolysates high biomass yield cultivation of fodder yeasts

SHISHKOVA Z P 08.09.77-GB-037474

C03 (D13) (04.04.79) C12b-03/08 C12c-11/22

Culture medium contains (by wt.) 48-97% hydrolysate c vegetable matter at pH 4-4.4; 0.1-50% peak hydrolysat at pH 4-4.4; 0.02-0.08% (as N) of N source; 0.03-0.12 (as P_2O_5) of P source; 0.016-0.064% (as K) of K sourc and water to 100%.

The medium is used for cultivation of fodder yeasts that act as vitamin-protein additives to low protein ba fodder for animals and birds. The yield of the biomas of fodder yeasts is improved (up to 70 wt. %). 8.9.77 as 037474(5pp1248)

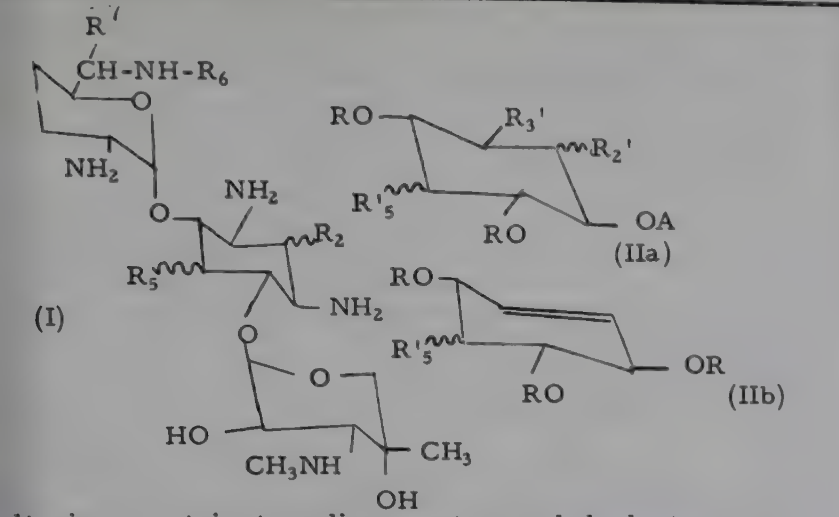
STER D16 67317X/36 =GB 154

Aminocyclitol antibiotics of the streptamine type - p microbiologically from cyclitols or aminocyclitols (BE170876)

STERLING DRUG INC 22.09.75-US-615593

*B03 (04.04.79) *DT2606-517 A61k-31/71 C07h-15/22*

Aminocyclitol antibiotics of formula (I) are prepd. by



(I) (IIa) (IIb)

ulturing a nutrient medium contg. carbohydrates, a ource of assimilable N, essential salts, and a cyclitol f the 2-R_2'-5-R_5' 3,4,6-trihydroxy-cyclohexanone or 2-$_2$'-5-R_5'-1,3,4,6-tetrahydroxy-cyclohexane class of ormula (IIa) or of the 5-R_5'-3,4,6-trihydroxycyclohex-1-ne class of formula (IIb) in the presence of Micromonopora purpurea ATCC 31,164.

In the formulae, R_6 and R_7 are H or CH_3; R_2 and R_3 are or OH; R is H or acetyl; R_3' is O or OH; and R_2' and $_5$' are H or OR. 9.2.76. as 53689/77 Div. ex. 1529376 pp984)

OLE- D16 48211X/26 #GB 1543-612

ecovering unicellular protein grown on methanol - in high yields sing a specific strain of bacterium Methylomonas

MOLEKULARBIOLOG GES 12.12.74-DT-458851 (26.02.76-GB-007665)

*(04.04.79) *DT2458-851 C12d-13/06 +C12k-01/04* .

repn. of single cell protein comprises cultivating an bligate methanol-utilising bacterium, Methylomonas sp. SM 580 which can use only methanol as its C source, erobically at 20-45°C. The medium may contain a growth romoting agent. When the resulting biomass is sepd. rom the nutrient medium the latter may be recycled. The iomass pref. contains 2-9 wt.% nucleic acid.

Process provides low cost protein with high nutritive alue suitable for incorporation into human and animal oodstuffs. 26.2.76. as 007665 (5pp945)

NVR D16 65270X/35 =GB 1543-783

q. emulsions of metabolisable vegetable oils - contg. less water han oil and stabilised with proteins (BE060876)

AGENCE NAT VALORISATION 07.02.75-FR-004003

*B07 +P33 (04.04.79) *DT2603-321 A61k-39 A61k-47*

table injectable liq. compsn. comprises a water-in-oil ype emulsion having a metabolisable vegetable oil phase I) and a physiologically acceptable aq. phase (II). Emulsion contains less of (II) than of (I). Emulsion further omprises a non-immunogenic stabilising protein.

Pref. the compsn. also contains an adjuvant agent of water-soluble fraction type, the principal constituent f which is formed by peptidoglycane of bacteria, or y a fragment of peptidoglycane, or by N-acetyl-muranyl-L-alanyl-D-isoglutamine or an analogue. 9.2.76. s 004902 (10pp936)

ITR ★ D16 26697B/14 ★J5 4025-934

onascus dyestuffs soln. having high chromaticity - is obtd. from onascus fungal strain using aq. alcohol soln. contg. e.g. sodium hloride

MITSUBISHI RAYON KK 29.07.77-JA-091893

E24 (27.02.79) C09b-61

Dyestuffs are extd. from Monascus strain fungi or their oji using an aq. soln. of alcohol contg. salt. The process s efficient and gives good yield. The resulting dyestuff soln. has high chromaticity and good storability.

Monascus fungi such as Monascus purpureus, Monascus major and their cultures and koji grown on substrates such as starch, glucose, rice, flour, bread, ethanol etc. are used. The soln. used as extractant contains ≥1 of methanol, ethanol, propanol, isopropanol, propylene glycol, glycerine etc. at a concn. of 20 - 90%. The salt is sodium chloride, potassium chloride, calcium chloride etc. at a concn. 0.5 wt.% up to its saturation. The pH is 3 - 12 and the liq. temp. is 0 - 100°C.

In an example rice koji was prepd. using Monascus No. 1001 fungus and it was dried and powdered. To 1 g of the powder were added 20 ml. of 50% ethanol contg. 9% NaCl and the dyestuff was extd. by stirring at room temp. for 2 hrs. The extract was diluted 150 times and the absorbance at 500 µm was found to be 0.331, compared with 0.256 for a control not contg. NaCl. 29.7.77 as 091893 (3pp119).

NATS/ ★ D16 26851B/14 ★J5 4026-328

Controlling diseases of plants, weeds and insects - by mixing agrochemical with fermentation material, fermenting and applying prod. to soil

NATSUI K 26.07.77-JA-089593

C03 (27.02.79) A01n-09

Method comprises mixing an agrochemical which controls plant diseases, weeds and insects with putrefying substance (fermentation material); fermenting the mixt.; and then applying the fermented prod. to the soil. Only one application per year is required.

The putrefying substances may be any organic material, e.g. oil cakes, fish meal, rice bran, bone powder, chemical fertiliser or lime. It is possible to add fermentation-accelerating substance. As a result of tests on rose, tomato, egg-plant and cucumber, it has been found that Sumithion is effective in the control of harmful insects, that Benlate and Actidione are effective in the control of plant diseases and that herbicide is effective in the control of weeds. 26.7.77 as 089593 (2pp108).

SEKI ★ D16 26871B/14 ★J5 4026-391

Cultivating Corynebacterium yamanasiensis in nutrient medium - contg. methanol as main carbon source to form prod. useful as animal feed or raw material for pharmaceuticals

SEKISUI CHEMI IND KK 29.07.77-JA-091907

B04 C03 (D13) (27.02.79) A23k-01 A23l-01/34 C12k-03

Cultured bacteria is prepd. by cultivating Corynebacterium yamanasiensis in a nutrient medium contg. methanol as a main carbon source and collecting the cultured bacterial cells.

Used as animal feed, food, or raw material for pharmaceuticals or other chemicals.

The microorganism is the new species Corynebacterium yamanasiensis Ferm-P 4106. The cultivation is carried out at 5 - 41 pref. 25.40°C, in a medium of pH 6 - 9. Normally, the concn. of methanol in the medium is ≤ 50 g/L. In addition, ammonium salts, nitrates, urea, casein, corn steep liquor, peptone, yeast extract, meat extract, etc. are used as nitrogen source. Other minerals and inorganic salts are also used. 29.7.77 as 091907 (5pp16).

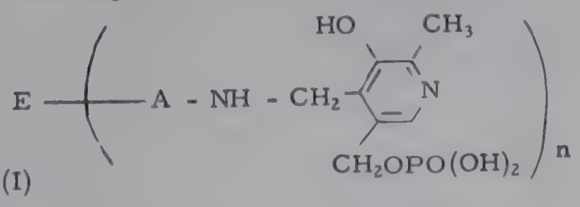
SANY ★ D16 26872B/14 ★J5 4026-393

Enzyme deriv. with improved stability and activity - prepd. from pyridoxal phosphate and nucleoside di:phosphatase

SANKYO KK 27.07.77-JA-090007

B04 (27.02.79) C07g-07/02

Enzyme deriv. (I) is prepd. by reacting pyridoxal phosphate with nucleoside-diphosphatase in buffer soln. and reducing the reaction product. In the formula E is nucleoside-diphosphatase gp. A is $-(CH_2)_4-$ gp. in lysine side chain in protein molecule of nucleoside-diphosphatase; and n is 1-8.



$$E\left(-A-NH-CH_2-C_5HN(OH)(CH_3)(CH_2OPO(OH)_2)\right)_n$$

(I)

The enzyme deriv. (PALP-NDPase) obtd. by reacting pyridoxal-5'-phosphate (PALP) with nucleotide-diphosphatase (NDPase) is stable in wider pH range and wider temp. range and shows higher activity comparing with those of natural NDPase. As it has a reactive substd. phenyl gp. in its side chain the PALP-NDPase can be processed to insolubilised enzyme. 27.7.77 as 090007 (4pp5).

NIRA ★ D16 26873B/14 ★J5 4026-394
Fixing an enzyme on a solid surface - by reacting reagent with gps. capable of reacting amino gp. with poly-amine to form film on surface and reacting amino gp. with enzyme
UN'TIKA KK 29.07.77-JA-092069
A96 B04 (27.02.79) C07g-07/02

Method for fixing an enzyme on the surface of a solid material comprises reacting a reagent with $\geqslant 2$ functional gps. capable of reacting an amino group with a polyamine to form a film of the reaction prod. on the surface and reacting a remaining amino group of the film with an enzyme.

The solid to which the enzyme is fixed is pref. glass, kaolinite, bentonite, rubber, cellulose, dextrin, polystyrene, polyamides, polyesters, etc.. The reagent with $\geqslant 2$ functional groups capable of reacting an amino group is pref. glutaraldehyde, terephthalaldehyde, isophthalaldehyde, dialdehyde starch, hexamethylenediisocyanate, etc.. The polyamide is pref. ethylenediamine, hexamethylenediamine, diethylenetriamine, polyethyleneimine, etc..

The method is useful for recovering enzymes or stabilising enzymes. It is also useful for a continuous enzymatic reaction. 29.7.77 as 092069 (4pp16).

AJIN ★ D16 26874B/14 ★J5 4026-395
Fermentative prodn. of L-lactate dehydrogenase - by culturing suitable Bacillus strains under aerobic conditions
AJINOMOTO KK 26.07.77-JA-089400
B04 (27.02.79) C12d-13/10

Prodn. of L-lactate dehydrogenase comprises cultivating a suitable strain belonging to the Genus Bacillus and recovering the accumulated enzyme.

Previously the source of L-lactate dehydrogenase has been limited to animal tissues. The fermentative process for producing the same facilitates the prodn. at a lower price.

Suitable microorganisms are Bacillus subtilis Ferm-P 4092, B. blevis ATCC 8185 and B. cereus Ferm-P 4093. The cultivation is carried out at 25 to 40°C for 1 to 3 days under aerobic conditions. The pH of the medium is kept at 6.0 to 8.5 during the cultivation. 26.7.77 as 089400 (3pp16).

KYOW ★ D16 26875B/14 ★J5 4026-396
Malate dehydrogenase for use in liver function diagnosis - is isolated from microorganisms of Corynbacterium, Brevibacterium or Arthrobacter
KYOWA FERMENTATION KK 28.07.77-JA-089791
A96 B04 (27.02.79) C07g-07/02 C12d-13/10

The malate dehydrogenase has the following characteristics: (1) km value to oxalacetic acid $< 2 \times 10^{-5}$M; (2) it acts as a catalyst of the reaction: oxalacetic acid + NADH + $H \longrightarrow$ L-malic acid + NAD^{+}; (3) substrate specificity: oxalacetic acid and L-malic acid; (4) optimal pH at 25°C for 1 minute: 8.5-9.0 for converting oxalacetic acid to L-malic acid and 10.1 for converting L-malic acid to oxalacetic acid; (5) stability: stable at pH 6 to 9 in 0.1 M phosphate buffer at room temp. for 60 minutes; (6) thermostability: stable at 35°C for 15 minutes in a medium of pH 7.4; (7) remaining activity when treated for 15 minutes at pH 7.4: 60% at 40°C, 8% at 50°C and 0% at 55°C; (8) mol.wt.: 60,000 by gel filtration with Sephadex G-100, and 39,000 by electrophoresis with SDS-polyacrylamide gel; (9) isoelectric point: 4.1. 28.7.77 as 089791 (5pp16).

GIFU- ★ D16 26877B/14 ★J5 4026-399
Clear peach wine prodn. without using wild yeast - by adding sulphurous acid and pectin-decomposing enzyme before fermenting
GIFU-KEN 27.07.77-JA-090130
(27.02.79) C12g-03/02

The method comprises mashing well ripened peaches; removing kernels; adding 100-250 ppm sulphurous acid; adding 0.2-0.7% pectin-decomposing enzyme to decompose the peach flesh; standing the mixture for enzymic reaction; opt. adding supplementary sugar; putting the mixture in a fermenter; adding the yeast which has been previously deactivated to sulphurous acid; fermenting it without adding water for 10-15 days; removing insolubles from the fermented prod. by centrifugation, filtration, coagulation-pptn. etc.; and clarifying the liq..

The peach wine has excellent appearance, mild taste and flavour and its colour can be regulated by regulating the amt. of sulphurous acid. A white peach wine can be prepd. by using relatively large amts. of sulphurous acid, treating the fermented prod. with enzymes which decompose colourants and decolourising the fermented prod. with active carbon. Sulphurous acid is added to prevent browning of the mixt. can be prevented. Pref. the yeast is wine yeast or 'sake' yeast. 27.7.77 as 090130 (3pp5).

TOKR- ★ D16 27030B/14 ★J5 4026-9
Gas-liq. contact device used in culturing microbes and enzymes has vertical reactor column with spinning spindle shape and feed and liq. feed pipes connected to bottom of column
TOKYO RIKA KIKAI KK 02.08.77-JA-092774
J01 (28.02.79) B01j-08/02 B01j-10 C12b-01

A device contacts a vapour phase with a liquid phase of an organic cpd. in a reactor column for selectively oxidising it with O_2 using a fixing oxidising enzyme or microbes. The mass transfer resistance between the phases is reduced thus allowing a continuous reacting operation at high yield. The device is used on microbe and enzyme fermentation and incubation.

The reactor column has a spinning spindle shape and is vertically erected. A middle portion of the column ha the largest dia. An air feeder is connected to a lower end of the column and liquid feed pipes to a section nea the upper or lower end so that each opening directs in t tangential direction to the inner wall of the column. 2.8.77 as 092774 (4pp26).

KURS ★ D16 27160B/14 ★J5 4027-
Polysaccharide contg. glucose, galactose, mannose and fructos prepd. by cultivating Bacillus microorganism; used e.g. in fo paper, cosmetic or photographic industry
KURARAY KK 04.08.77-JA-094286
B04 C03 F09 (D13 D15 D21) (01.03.79) C08b-37 C12d-13/04

Polysaccharide having thermo-reversible gel-formatio ability, whose main constituents are glucose, galactose mannose and fructose at the molar ratio of 6:4:3:2, is produced by cultivating microorganisms belonging to th genus Bacillus in a nutrient culture medium.

The polysaccharide has a wide variety of uses such as in food industry, therapeutic field, water-treatment electro-static agent, photographic industry, paints, stabilisers, paper industry, cosmetics, agricultural fi etc.. 4.8.77 as 094286 (5pp75).

JUNG- D16 45330U/32 =J7 9004
Trisodium or tripotassium citrate - from difficultly -soluble citrat alkali and solid alkali carbonate
JUNGBUNZLAUER SPIRI (JUN -) 04.02.72-OE-000906
*E12 (12.03.79) *BE-794-726 C07c-59/16 +C12d-01/04*

Title cpds are prepd. by reaction of difficulty soluble citrates (e.g. Ca^{2+}, esp. those pptd. from fermentati broths) whereby NaOH or KOH is added to an aq. susp sion of an alkaline earth (alkali) citrate (400-500 g/l c rate) and solid K_2CO_3 or Na_2CO_3 is added at 40-80°C, prod. being mixed well to give a conc. soln. of Na or citrate.

A pure prod. is obtd. and conc. soln. is obtd. dire without expensive evapn. No bicarbonates, hydrogen c -tes, soluble alkaline salts, or foam form and the alk earth carbonate is easily filtered off to be used to ppt more citric acid from broths etc. 2.2.73 as 013656 (clg. 4.2.72-OE-000906) C07c 59/16, C12d 1/04, (12. JUNBUNZLAUER SPIRITUS-UND CHEMISCHE FAB A (4pp) (J48081815)

AJIN D16 11801V/07 =J7 900
Water-soluble polysaccharides prodn - from natural produc extraction with aq solns of urea or derivs
AJINOMOTO KK 17.07.72-JA-071454
*B04 C03 (D13 D17) (12.03.79) *DT2336-378 A61k-45*

Natural polysaccharides, or plants or microorganism ontg. these are treated with an aq. soln. contg. urea or erivs. of formula R_1E_2N-CX-NR_3R_4, (where X is O, S or NH, and R_{1-4} are each H or 1-4C alkyl). The concn of rea or deriv is pref. $>$2 mol/l. and extraction is by immrsion for $>$1 hr. at 40-70°C. The polysaccharides are rep. extracted from a fungus, bacteria, yeast tree or raminaceae grass.

Extraction is simplified and the structure and props. ncluding the anti-tumor acitivty of the polysaccharides are etained. 17. 7. 72 as 071454 A61k 45/00 (12. 3. 79) AJINOM OTO CO INC (4pp) (J49030547)

ULL/ D16 04159X/03 =SU -607-532

ingle cell protein cultivation - with sepn of protein-contg and rotein-free fractions from non-recycled waste waters

MULLER H 21.06.74-CH-008653

*C03 (26.04.78) *DT2527-651 A01n-05 A23k-01/06*

ingle cell protein foods are cultivated by a process in which on-recycled waste waters obtd. in sepn. of the microrganisms are sepd. into fractions which contain and which o not contain proteins. The process is used for simulaneous recovery of (i) proteins and enzymes; (ii) prepn. f growth-promoters and -inhibitors, useful in green lant cultivation, and prepn. (iii) active substances, e.g. iotin and salts. Water pollution through non-recycled aste waters is reduced. Sepn. of proteins and enzymes an reduce biological oxygen requirement by up to 90%.

The protein-contg. fractions are pref. sepd. from waste aters by pptn. at different pH, ultra-filtration, or over olecular sieves. They may then be concd. and opt. dried The remaining filtrate materials can be sepd. by fractionation or extn. Protein-free fractions can be recycled artly or entirely, to fermentation process, and growth romoters and inhibitors are pref. worked up.

Muller, H. Bul. 18/15.5.78. 20.6.75. as 146729 (2pp)

ACC= ★ D16 27406B/14 ★SU -607-572

ick encephalitis virus antibodies - are prepd. from blood serum and mmuno-sorbent based on aluminium hydroxide gel

VACCINE SERUM RES 11.05.76-SU-356296

B04 C03 (25.04.78) A61k-35/16

Antibodies against tick encephalitis virus have been produced. The activity of the prepn. is made more specific y mixing blood serum with an immuno-sorbent based on $Al(OH)_3$ gel. The mixt. is incubated, inert proteins are separated at 2-8°C and the antibody is eluted with pure ater at pH 11.0-11.1, temp. 2-8°C.

Minaeva, V.M., Slupkaya, M.S., Raikher, I.I. et al. Bul 19/25.5.78. 11.5.76. as 356296 (2pp835)

MERI D16 60477A/34 =US 4145-252

yncytial respiratory virus vaccine prepn. - by attenuation in human iploid pulmonary fibroblasts

MERCK & CO INC 17.08.77-US-825520 (09.02.77-US-766995)

*B04 (20.03.79) *BE-863-676 C12k-07*

An attenuated respiratory syncytial virus is prepd. by (a) serially passaging a respiratory syncytial virus in human dipoid lung fibroblasts at an incubation temp. of 30-38°C for sufficient passages to alternate the virus yet retain its antigenicity and immunogenicity and (b) harvesting the resulting virus.

Pref. 3-30 (esp. 4-15) serial passages are employed. Pref. human diploid lung fibroblasts are W1-38 fibroblasts. The virus is useful in the prepn. of a live virus vaccine. 26. 6. 78 as 918760 (+17. 8. 77-US-825520) (4pp918)

NEST D16 88588Y/50 =US 4145-254

Orange pigment from Monascus species prepn. - by two stage cultivation in growth stimulating and pigment stimulating media

ASSIS TECH NESTLE S 02.06.76-CH-006919

*E24 (D13) (20.03.79) *DT2724-992 C12d-13/02 +A23l-01/27*

Prodn. of an orange Monascus pigment by aq. aerobic culture of Monascus microorganisms is claimed. Microorganism is (1) grown at pH 4-7 in a growth medium; (2) obtd. biomass is transferred to second medium which stimulates the prodn. of pigment, the pH being controlled to 2-4 to inhibit reaction of orange pigment with medium to form a red pigment. Growth process is continued for 2-7 days at 20-35°C, the pigment then being extracted.

Pigment such as rubropunctatin or monascorubrin, is obtd. having max. absorption at 470 nm without prodn. of the known red pigment which is used in food colouring. 25. 5. 77 as 800354 (4pp963)

USAS ★ D16 27683B/14 ★US 4145-255

Selective determination of phenol and related phenol(s) - using electrochemical cell with ferrocyanide electrolyte, and anode coated with phenol oxidising enzyme gel

NAT AERO & SPACE ADMIN 25.02.77-US-772167

E14 J04 (20.03.79) C12b-01 C12k-01/10

Electrochemical cell for the detection of phenol (I) (including (I)-related cpds.) consists of: (a) a cathode compartment contg. a cathode in an electrolyte contg. ferrocyanide ions; (b) an anode compartment contg. a conducting anode coated with a gel consisting of a (I)-oxidizing enzyme (II) and immersed in an electrolyte contg. ferrocyanide ions; (c) means for passing O_2 into the anode compartment; (d) means for maintaining a conductive relationship between the cathode and anode compartments; and (e) equipment connected to the anode and cathode to measure the potential of the oxidn. of (I).

Cell allows the selective oxidn. and potentiometric determination of (I) and related cpds. at concns. of 3 x 10^{-7} to 1 x 10^{-4}M. Thus the method is useful for the determination of (I) pollutants in industrial effleunts and surface waters, etc. 25. 2. 77 as 772167 (8pp478)

PHIP ★ D16 27765B/14 ★US 4145-445

Integrated protein prodn. system - by converting hydrocarbon(s) to methanol then fermenting in medium contg. ammonia made in system

PHILLIPS PETROLEUM CO 10.09.76-US-722196

(D13) (20.03.79) A23k-01

Protein-contg. feeds are prepd. by converting a 1-4C hydrocarbon in a CO_2-utilising process to give a MeOH-contg. stream. This acts as C and energy source in a culture with a MeOH-utilising micro-organism, with O_2-contg. gas to maintain aerobic conditions. N-sources, nutrients and are also provided. A prod. stream contg. single cell protein and an off-gas stream comprising CO_2 and unused O_2. The off-gas stream is sepd. into CO_2 (for recycling) and O_2-contg. gas (also for recyling).

Air is sepd. into O_2 and N_2 streams. The O_2 is used for the aerobic cultivation process, and the N_2 is reacted with H_2 to form NH_3, which is fed to the culture medium as N source. The prod. stream, opt. after dewatering, is mixed with supplementary feed components to give a high-protein feed prod.

Integrated system for prodn. of low-cost single cell proteins for man and animals. Reuse of all effluents avoids environmental problems. By-prod. urea for fertiliser use may be formed. 10. 9. 76 as 722196 (10pp1248)

FUKO D16 89396X/48 =US 4145-455

Novel modified protein compsns. prepn. - by reforming using plastein rich in cysteine

FUJI OIL KK 04.04.75-JA-041599

*(D13) (20.03.79) *J51115-500 +A23j-03*

Protein compsn. is prepd. by mixing a cysteine-enriched plastein contg. $\geqslant$5 wt.% half-cystine with plant seed, cow milk, animal meat, fish meat, egg or microorganism protein, in ratio such that plastein is $\geqslant$1 wt.% w.r.t. protein. The resultant mixt. is dissolved or dispersed in water and heated to 40-90°C, to promote the gellation or foaming property of such protein.

Plastein is used in the fields of nutrients and medicines due to its ability to incorporate various amino acids into reconstituted plastein, or by elimination of amino acids from it. 5. 4. 76 as 673885 (6pp931)

See Also

D13 DT 2743618
D13 J5 4026353
D22 J7 9005237
D13 GB 1543353
D15 DL 133788
D22 US 4145253
D13 GB 1543463
D15 J5 4026283

D17: SUGAR; STARCH

KOSA/ ★ D17 B/14 ★CS 7703-892
Sugar beet chips preservation
KOSAR J 13.06.77-CS-003892
(31.01.79) A23k-03/03

ALKU D17 23579A/13 =GB 1543-493
Removing organic impurities from aq. solns. - esp. cellulose and starch hydrolysates, using acid cation exchangers and polymers contg. thiol gps. (NL 21.3.78)
AKZO NV 17.09.76-NL-010396
*A91 E19 J01 (04.04.79) *DT2740-241 C02b-01/16*

An organic impurity is removed from an aq. soln. by contacting the aq. soln. with an acid cation exchanger and then with a polymer or polycondensate which contains S in the form of thiol gps. bonded to C atoms. Pref. the impurity is removed from an aq. soln. of saccharose, cellulose, lactulose, starch hydrolysates or di- or poly-alcohols.

Sorbed colourants in the thiol resin are easily regenerated and the resin has a low ageing rate. 19.9.77. as 039000 (9pp982)

SUMO D17 02371Y/02 =GB 1543-750
Starch paste for granulations - contg. gelatinised starch dispersed in water and an alcohol and ore acetone
SUMITOMO CHEMICAL KK 17.06.75-JA-074094
*A11 B07 C03 (04.04.79) *DT2627-122 C08l-03/02*

Starch granules are prepd. by granulating a starch paste comprising 5-20 wt.% gelatinised starch and 95-80 wt.% mixt. of water and a 1-3C alcohol and/or acetone. Pref. the organic solvent is 20-50 wt.% of the mixt. with water.

The granules have good disintegration properties, are binders, esp. for foodstuffs and medicines. 16.6.76. as 024945 (6pp974)

PFEI D17 65050X/35 =GB 1543-765
Amino acids extn. from sugar beet - by treatment with strong acid and weak base ion exchangers
PFEIFFER & LANGEN 10.04.75-DT-515621 (10.04.75-DT-515591)
*B05 E16 (04.04.79) *BE-840-396 C07c-51/48 C07c-99/12 C13d-03/14*

Crude juice from sugar mfr. is treated to recover amino acids, other organic acids and a purified sugar soln. by (i) subjecting it to a mild cleaning to flocculate or coagulate impurities including colloids while retaining (most of) the amino acids and invert sugar, (ii) sepg. the flocculated or coagulated impurities from the juice, (iii) passing the resulting juice through a strongly acid cation exchanger in the H^+- form, (iv) passing the juice through a weakly basic anion exchanger in the OH form, (v) recovering a purified sugar soln., (vi) eluting the cation exchanger with a soln. of cations other than those exchanged to recover an amino-acid contg. fraction and (vii) eluting the anion exchange resin with NH_4OH to recover an organic acid-contg. fraction.

The mild cleaning is by establishing in the crude juice a pH of 2-5 or by liming and opt. carbonating the juice. 9.4.76. as 014681 (11pp974)

STAR= ★ D17 27320B/14 ★SU -606-880
Dextrin prodn. line - features two stages with dextrinisation vessels connected to intermediate dextrinisation vessels
STARCH PRODUCT RES 30.06.76-SU-378393
(19.04.78) C13l-01/10

Dextrin prodn. with types having different solubility is ensured by a line including an intermediate dextrinator. The latter is mounted above the dextrinator of the first stage in the line, andis connected to it by a pipe with a stationary helical insert.

The dextrinator of the second stage is connected to the intermediate dextrinator by an air conduit via a dust separator. The unit controlling the humidification and cooling of dextrin comprises series-mounted and interconnected chambers for spraying air with a solvent. Chambers for spray trapping, and air conduit with dextrin batcher, as well as cyclone for separating the humidified dextrin from air are also included.
Gorbatov, V.N., Karpenko, R.M., Pevzner, G.M. et al
Bul. 18/15.5.78. 30.6.76. as 378393 (4pp89)

DASU- D17 86919Y/49 =US 4145-23
Supersaturated sugar solution seeding - using ground saccharos suspension in suspension medium of specified viscosity (N 23.11.77)
DANSKE SUKKERFABRIK 21.05.76-DK-002269
*A97 (20.03.79) *DT2722-579 C13f-01/02*

Super satd. sugar soln. is seeded to effect crystallisatio using a suspension of finely milled sugar suspended in a liq. which is at least partially water soluble, which does not dissolve sugar crystals and which boils at above the b.pt. of the soln. being seeded. The suspension agent a the amt. of suspended fine crystallised sugar are such th the viscosity of the suspension is low enough to permit th suspension to spread in the sugar soln. to be crystallise and high enough to form a suspension which is stable for longer periods when subjected to slow flowing movement.

The suspension agent is esp. polyethylene or polyprop lene glycol and the suspension is pref. milled in a ball mill comprising steel balls. 20.5.77 as 798862 (5pp945

See Also

D16 DS 2138059 D16 DS 2055028 D16 J7 9004960
D25 J7 9004963

D18: SKINS; HIDES; LEATHER; TOBACCO

STOP- ★ D18 25990B/14 ★BE -872-394
Pyridine di:carboxylic acid prepn. from di:methyl pyridine - by oxidn. with chromium salts and hydrolysis of intermediate formed
STOPPANI L SPA 01.12.77-IT-030272
A41 E13 G06 (A60 E31) (16.03.79) C07d

The two-stage process comprises (a) the homogeneous phase reaction at 70-115 (80-110)°C; of a soln. of 2,6-dimethylpyridine in 50-80, (60-70)% H_2SO_4 - such that after the oxidn. reaction, there are present 3-20 (6-10) mols. free acid/mol. dipicolinic acid formed, and a soln. of soluble salt of Cr (VI) of concn. as CrO_3, 40-65 (45-50) %, in 10-100%, pref. 20-50% w.r.t. the stoichiometric amt..

The two reactants are admixed over 2-3 hrs. and the reaction itself is effected for 3-0.5 (2-1) hrs., depending on the temp., By elimination of 1 mol. water, there is formed a novel intermediate addition cpd. (I) between 2,6-pyridine dicarboxylic acid and chromic anhydride, which has the formula: $C_7H_3O_4N.CrO_3$ (I). The reaction mass is cooled, centrifuged and the separated solid washed.

In the second stage (b), the cpd. (I) is hydrolysed at 100-50 (100-80)°C; with water in amt. 5-15 (9-11) times the wt. of the dry solid, in the presence of 6.7 of CrO_3 in the hydrolysis liq., for 0.5-4 hrs, pref. 1-2 hrs. The mixture is then cooled to ppte. the 2,6-pyridine carboxylic acid, which is then centrifuged, dr and recrystallised from water.

The acid is obtained in 99.5% purity. It is used as a organic synthesis intermediate and starting material; a a monomer for the synthesis of polyester and polyamid polymers; stabiliser for peroxides and peracids; in

lishing solns. for metals; as sequestrant; stabiliser for
oxy resins and photographic solns. and emulsions. A
mplex salt of trivalent Cr is obtained as a by-product,
eful in better tanning. 30.11.78 as 872394 (16pp004).

ALC/ ★ D18 B/14 ★CS 7708-952
ather prodn. rollers safety plate
BALCAREK J 29.12.77-CS-008952
(31.01.79) C14b-17/12

DRM- ★ D18 26117B/14 ★DL -133-687
ather for shoe uppers - from chrome tanned pigskin, by treatment
th zirconium tanning agent, deacidifying and treating with
ganic tanning agent
BOR-MUBOR CIPOIPARI (BUDA-) 14.07.77-DL-200067
(17.01.79) C14c-03/28

rodn. of shoe upper leathers from chrome tanned and
red pigs leather is claimed. The leather, opt. treated
ith an aldehyde tanning agent in an amt. corresp. to 0.5-
% glutaraldehyde, is post tanned in a bath at pH 2.5-3.0
ontg. 0.5-2.5% of a zirconium tanning agent for $\geqslant$ 10
ins. The bath is then de-acidified to pH 5-5.5, resin
nning agent is added in an amt. of 0.5-6% as dry solids,
llowed by an organic tanning agent in an amt. 1-6% as
tive tanning material. The leather is then coloured,
efatted, fixed and opt. treated with a resin tanning agent
lded to the fixing bath in an amt. of 0.1-1% as dry solids.

The prods. have improved performance properties as
hoe sole materials. Local differences in elongation of
e leather are overcome and loose areas in the leather
rface are filled. The prods. also have improved sweat
esistance. 14.7.77 as 200067(15pp513)

JRN- D18 95567X/51 =DS 2523-555
ontinuous handling of hides and skins - esp. dehairing of the
hole skin in a single automatic operation
MASCHINENFAB TURNER (USMC) 28.05.75-DT-523555
*(29.03.79) *NL7605-708 C14b-01/06*

ides and skins are processed continuously, esp. for the
emoval of flesh, in a machine with two similar units whi-
n eliminate the need to feed the skin through a machine
vice, since it is fed automatically into the second unit,
fter one half of the skin has been processed in the first
nit.

The skin is fed in the open conditions through the
onveyor rollers of the first unit in to the clamping zone
f the conveyor rollers of the second unit, which close
hen the treatment of the skin in the first unit commences.
8.5.75 as 523555 (7pp1045)

TW ★ D18 26236B/14 ★DT 2741-648
de splitting machine feed rolls - supported in swivelling levers for
ess reduction
FORTUNA-W MASCHFAB AG 15.09.77-DT-741648
(29.03.79) C14b-01/18

he feed rolls on hide splitting machines are rotably hing-
l to the end of intersection levers. The end of the lever
r the lower feed roll is tiltably supported above, and the
d of the lever for the upper feed roll below the horizontal
itting plane of the splitting blade.

This prevents the excessive stress applied to the
plitting blades by the split leather and makes it possible
discharge the waste split more accessibly on the top.
.9.77 as 741648 (15pp39)

APT ★ D18 26381B/14 ★DT 2839-707
omogenisation of tobacco slurries etc. - using spring loaded
nnulus with one circular face being rotated and slurry injected at
essure against this
IMPERIAL GROUP LTD 20.09.77-GB-039039
J02 P15 (29.03.79) A24b-03 B01f-05/06

lurries containing suspended solids esp. impurities which
eed to be homogenised into it are treated by injecting
em under pressure against a flat surface and extruding
em through a narrow slot. The flat surface consists of
disc on the end of a rotating shaft with a circular shroud
round it. This is formed from tungsten carbide and has a
tationary matching ring facing it. It is pushed against
is ring by a coil spring and the slurry pressure holds it

Used for homogenisation of liquid slurries esp. tobacco slurry. The use of stationary mixers of this type is known The rotation gives more uniform prod. and extends the useful life of the rings between dismantling for replacement. 13.9.78 as 839707 (16pp1053)

SAND- ★ D18 26514B/14 ★FR 2396-085
Stamping tool for leather shoes and fancy goods etc. - combines cutting with decoration by impression and colouration
SANDVIK BROUSSAUD 28.06.77-FR-019860
A35 (02.03.79) C14b-05 D06p-07

A tool for cutting hides, skins and plastics sheet material partic. for use in the footwear and fancy leather goods industries is described. The tool comprises a stamp with precutter and a final cutting head aligned with the precutter and equipped not only to cut but to decorate the cut blanks with impressions and colouration.

The cutting head can comprise cutting plades and/or stamping ribs which may be welded or removably attached to the cutting head. Provision can be made for heating the cutting head and/or for applying dye to elements of the cutting head as required for decoration of the cut blanks. The stamping ribs can be continuous to give a continuous impressed line or discontinuous to give dotted lines etc.

The combination tool reduces the mfg. time. 28.6.77 as 019860 (6pp448)

ORIE- ★ D18 26829B/14 ★J5 4026-301
Leather board prepn. - by mixing chrome-tanned shaving dust with asbestos or cationic inorganic fibre adding anionic emulsion adhesive and sheet forming
ORIENTAL ASBESTOS K 28.07.77-JA-090751
A82 F08 (27.02.79) B29j-01/04 C14b-07/04

The method comprises mixing 50-95 w/w% of chrome-tanned shaving dust and 5-50 w/w% of fine asbestos or cationic fine inorganic fibre uniformly with water, adding anionic emulsion-type adhesive and mfg. the mixt. in sheets by the wet method.

The mixt. can be easily mfd. into sheet and excellent leather board can be obtd. inexpensively from hitherto discarded chrome-tanned shaving dust. 28.7.77 as 090751 (4pp5).

ROHM D18 64786V/37 =SU -607-556
One-step enzymatic unhaired hide prepn. - using tripsine and/or papaine and/or neutral bacterial protease
ROHM GMBH 16.02.73-DT-307603
*(20.04.78) *DT2307-603 C14c-01/06*

Unhaired hides ready for tanning are produced by subjecting raw material free from preserving salt, in a vat or mixer, to action of an aq. bath set to pH 9-12 and contg. (a) fungus proteinase having optimum activity against casein at pH > 7, (b) bacterial protease having optimum activity against haemoglobin at pH > 9, (c) a primary, sec. or tert. amine or a precursor dissociating to form such an amine and opt. (d) a reducing organic S cpd. Fungus proteinase can be replaced completely or partly by trypsin (I), and/or papain (II) and/or a bacterial protease (III) having optimum activity at pH 6-9.

Unhaired hides are free from hair, scud or sediments. Waste water is free from sulphides. Loosened hair can be collected on a screen.

Bacterial proteases used may be formed by Bacillus subtilis mesentericus, Baccilus, natto, Streptomyces griseus and Bacillus cereus or mycoids (I), (II) or (III) are used in predominating amounts, e.g. ratio 3:1.
Monsheimer, R., Pfleiderer, E. Bul. 18/15.5.78.
2.9.75. as 979588 (3pp)

FILM= ★ D18 27424B/14 ★SU -607-606
Leather fibre separation from impurities - using stepped air duct and intake manifold contg. pressure fan
FILM MAT SYNTH FIBR 31.12.75-SU-308748
J01 P43 (16.05.78) B07b-04

The separation unit can be used for leather fibre sepn. from impurities in an air stream, and includes air ducts loading pipe, unloading pipes and intake manifold. To increase the separation efficiency when treating coagulating material, the intake manifold is provided with pressure fan. The air duct is stepped and has individual unloading pipes in each stage

Genovker, B.V., Sidorov, V.G., Sotnikov, S.V. Bul. 19/25.5.78. 31.12.75. as 308 748 (3pp110)

27543B/14 ★SU -607-841

CORR= ★ D18

Leather tanning extract prodn. - using mechanical vibrations during grinding of starting material

CORRESP TEXTILE LIG 20.05.76-SU-364487

(10.05.78) C14c-03

The effectiveness of a tanning extract is increased (by 4-5 %) by applying vibrations (for 60-120 sec) during the grinding of the starting material.

This treatment results in some chemical changes as indicated by changes in the wavelength of maximal light absorption.

Komissarov, S.A., Bul. 19/25.5.78. 20.5.76. as 364487 (1pp70)

78436A/44 =US 4144-894

AMMA D18

Reconstituted tobacco mfr. - using aq. suspension of tobacco and tamarind gum and drying to give coherent, easily detachable sheet

AMF INC 29.06.77-US-811022

*A97 P15 (20.03.79) *BE-868-601 A24b-03/14*

An aq. slurry compsn. for the prepn. of reconstituted tobacco material comprises particulate tobacoo and an adhesive agent therefor. The improvement comprises employing as adhesive agent sufficient tamarid gum to render the compsn. formable into continuous coherent integral shaped structures at a solids level of $\geqslant$12 by wt.

Also claimed is continuous coherent shaped structure comprising discrete tobacco particles bonded with an adhesive comprising taramand gum. Pref. the structures also comprises cellulose (deriv.)

Reconstituted tobacco of high solids level with controlled viscosity, can be prepd. 29.6.77 as 811022 (5pp964)

62629W/38 =US 4144-8

AMMA D18

Selective lipoid extn. from tobacco - with solvent system cont
hydrocarbon solvents for fats, pref. hexane, and lower alkanols

AMF INC 08.03.74-GB-010470

*P15 (20.03.79) *DT2510-023 A24b-15/02*

Tobacco is treated to remove lipid by contacting with an
-eotrope of a hydrocarbon fat solvent and a lower alkano
Pref. the fat solvent is hexane, the alkanol is isopropan
in ethanol and the ratio of hexane to alkanol is 80:20.

Pref. the azeotrope is in the vapour phase. The resi
ual lipid content as determined by Soxhlet extn. is great
reduced. 6.3.75 as 556080 (5pp964)

42517A/24 =US 4145-5

EAST D18

Non-crystalline polyester fibres prodn. from terephthalic acid - a
alkylene glycol(s), used for cigarette filters and nonwoven fabrics

EASTMAN KODAK CO 06.12.76-US-748037

*A23 F01 +P15 (20.03.79) *DT2753-789 C08g-63/18*

A fibre of a polyester of terephthalic acid or its ester fo
ming deriv. and a glycol of 60-100 mol% 1,2-propylene
ycol and 0-40 mol% ethylene glycol. Polyester has inhe
ent viscosity of $\geqslant$0.35 in a 60/40 wt. pts. soln. of phe
/tetrachloroethane at 25°C at a concn. of 0.5 g polyeste
in 100 ml solvent and a Tg of $\geqslant$80°C.

Pref. inherent viscosity is $\geqslant$0.5 and Tg $\geqslant$85°C.
ylene glycol content of polyester is 10-30 mol%. Pref.
continuous melt blown web is formed. Fibres are esp.
used in the production of bonded coherent cigarette filte
nonwoven fabrics, etc. 6.12.76 as 748037 (9pp931)

See Also

D23 US 4145354

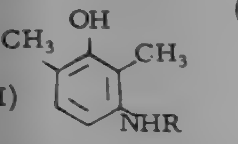
D2: DISINFECTANTS; DETERGENTS

D21 : DENTAL; TOILET PREPARATIONS

REA D21 10689R/07 =DS 1967-172
,6-dimethyl-3-aminophenol coupling agents for hair - dyes
L'OREAL SA 14.08.68-LU-056722
*E14 (29.03.79) *BE-737-378 A61k-07/13 C07c-103/38*

ew N-substd. 3-amino-2, 6-dimethyl-phenols are of formula (I)

I)

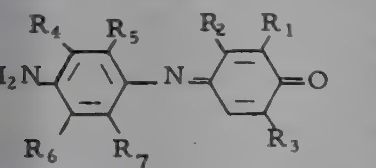


(where R is acetyl, propionyl or carbamylmethyl).

(I) are made by known methods, e.g. reacting acetic anhyd. with 3-amino-2, 6-dimethyl phenol and are used in combnation with known oxidn. dyes to give highly fast blue to ed shades on human hair. 31.7.69 as 967172 Div.ex 939063 (3pp922)

REA D21 92054R/49 =DS 2066-044
ndoaniline dyeing compositions for ketatirnic - fibres
L'OREAL SA 11.06.69-LU-058848
*E14 P14 (E24) (29.03.79) *BE-751-753 A61k-07/13*

colouring agent for human hair contains a dye of formula



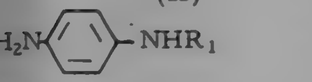
(where R_1 and R_3 are each H, halogen, 1-4C alkyl or alkoxy, a ureido gp. or a gp. of formula -NHCOR (R being 1-4C alkyl), R_2 is H, halogen, 1-4C alkyl or alkoxy, ureido, -NHCOR (R being 1-4 alkyl) or -NHR_8 (R_8 being H, 1-4C alkyl, 1-4C ydroxy alkyl or a carbamylmethyl gp.), R_3 not being H hen R_2 is -NHR_8 and R_{4-7} are H, halogen, 1-4C alkyl or -4C alkoxy, but R_5 and R_7 may not be Cl at the same ime).

The dye is pref. used in amts. of 0.05-0.2 wt.% and rovides purple to blue-green shades from aqs. (-alcoholc) solns. 11.6.70 as 066044 Div.ex 2028846 (7pp922)

REA D21 14036A/08 =DS 2737-291
N)-alkoxyethyl or alkoxy-propyl para phenylenediamine cpds. - sed in hair dyeing compsns.
L'OREAL SA 20.08.76-FR-025386
*E14 (29.03.79) *BE-857-939 A61k-07/13*

ye for human air contains an aq. alkaline soln. of a phenylene diamine of formula (I), opt. another oxidn. dye, coupler, a direct dye, the leuco deriv. of an indoaniline r indophenol, a surfactant, an organic solvent, a thickener, an antioxidant and the usual auxiliaries.

(II)

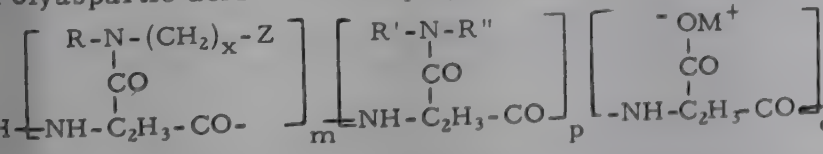


In (I) R_1 is $(CH_2)_n OR$, R being (m)ethyl and n is 2 or 3 and is used in amts. of 0.001-6 wt.% (based on wt. of total formulation) and is ref. used at a pH of 9-10.

Use of (I) reduces toxicity and produces long-lasting olourations. 18.8.77 as 737291 (9pp922)

REA ★ D21 26385B/14 ★DT 2839-869
air cosmetic compsns. contg. poly:aspartic acid derivs. - prepd. by eacting poly:dehydro-aspartic acid with an amine opt. contg. a ercapto- or sulpho gp.
L'OREAL SA 14.09.77-FR-027770
A23 (A96) (29.03.79) A61k-07/06 C08g-69/08

olyaspartic acid-derived polymers have formula (I)



$$H\left[\begin{array}{c}R\text{-}N\text{-}(CH_2)_x\text{-}Z\\ |\\ CO\\ |\\ \text{-}NH\text{-}C_2H_3\text{-}CO\text{-}\end{array}\right]_m\left[\begin{array}{c}R'\text{-}N\text{-}R''\\ |\\ CO\\ |\\ \text{-}NH\text{-}C_2H_3\text{-}CO\text{-}\end{array}\right]_p\left[\begin{array}{c}{}^-OM^+\\ |\\ CO\\ |\\ \text{-}NH\text{-}C_2H_3\text{-}CO\text{-}\end{array}\right]_q D \quad (I)$$

where Z is a mercapto- or sulpho gp. in free form or s an alkali- or alkaline earth metal salt; x is integer 2-6; is H or lower alkyl; R' is H, lower hydroxyalkyl, 1-18C lkyl or ≤18C alkenyl; R" is H, lower hydroxyalkyl or which they are linked, form a 6-membered ring opt. contg. an O or N atoms as additional heteroatom; M is H, alkali metal- or ½ alkaline earth metal atom; D is -NR-$(CH_2)_x$-Z, -NR'R" or -OM; m is integer ≠0 and p and q are integers including O, provided sum m+p+q is 15-500).

Prepn. of (I) and a new process for the quantitative prepn. of light-coloured polydehydroaspartic acid, used as starting material, are also claimed.

(I) are used in cosmetic hair-treatment compsns. pref. in 0.1-10 wt.% concn. The compsns. are used as shampoos waving-, rinsing-, non-rising wave strengthener-, re-structurising- or setting lotions, as dye compsns. or vehicles or as capillary creams. 13.9.78 as 839869 (33pp)

ICIL ★ D21 26394B/14 ★DT 2840-274
Extruder for high-friction pastes for mfr. of dental fillings - has barrel lined with exchangeable PTFE, polyethylene, polypropylene or nylon film
IMPERIAL CHEM INDS LTD 19.09.77-GB-038878
A32 Q31 (A88) (29.03.79) B65b-03/12

Extruder for frictional pastes e.g. compsns. of polymerisable material contg. ≥50 wt.% finely ground glass such as are used for dental fillings, comprises a barrel covered at 1 end and a piston inside it, the cover having an extrusion orifice. The bore of the barrel has a plastics, exchangeable lining comprising a tubular portion closely hugging the bore; a 1st disc with an opening not larger than the extrusion orifice and closing the tubular portion near the cover; and a displaceable 2nd disc in front of the piston.

The replaceable lining minimises cost of wear and tear of the extruder as a whole thus extending substantially the useful service life of the equipment. 15.9.78 as 840274 (13pp267)

ALES/ ★ D21 26487B/14 ★FR 2395-750
Toilet prod. for the hair and scalp - comprises three compsns. of natural prod. extracts successively applied
ALESSANDRI A R 29.06.77-FR-020725
(02.03.79) A61k-07/06

Toilet prod. for capilliary usage comprises several compsns. each constituted by a mixt. of natural extracts in soln. in an appropriate support. The compsns. which are applied successively are (1) an alcoholic soln.; (2) an aq. soln. and (3) a compsn. diluted in a neutral oil. After application, a lightly detergent soln. is applied followed by rinsing with an acid soln.

Each compsn. has complementary effect keeping the hair plentiful, supple and shiny. 29.6.77 as 020725 (7pp)

GODE/ ★ D21 26488B/14 ★FR 2395-756
Lotion for promoting hair growth - contains plasma from blood of animal previously injected with specified emulsion
GODEFROY L G 28.06.77-FR-020711
(02.03.79) A61k-39

The lotion consists of a diluted plasma obtd. by removal of blood from an animal, of the same Foresman gp. as man, which has been injected with an emulsion prepd. with pigs skin and partic. with the layer of basal cells. The emulsion for injection is pref. obtd. by splitting up the layer of basal cells of pigs skin into a physiologically isotonic soln. at 1 pt. skin/100 pts. soln.

The lotion is used to treat baldness conditions which are resistant to known treatments. If the papilla are not totally destroyed, pigmented hair regrows after 5-6 weeks, whereas known treatments only give a colourless down. 28.6.77 as 020711 (6pp597)

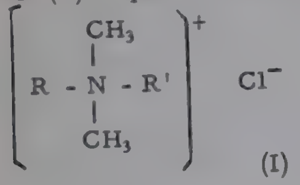
WARN ★ D21 26559B/14 ★GB 2004-466
Prosthetic denture - where lateral posterior prosthetic tooth locations can be altered to approximate patients residual gum ridge
WARNER-LAMBERT CO 21.09.77-US-835143
A96 P32 (04.04.79) A61c-13

The denture comprises a segmented hard base structure of configuration conforming to human mandibular or maxillary ridges. Each segment is of hard rigid material (hard acrylic plastics). The segments are joined in such a way that they can be laterally adjusted relative to each other.

Prosthetic teeth are disposed about and bonded to the lower portion of each segment, the teeth being shaped and positioned on the base structure so as to simulate human natural dentition. A deflectable tray layer (pref. of thermo-deflectable acrylic plastics) is bonded to the base and can be moulded to the oral contours during fitting. The segmented base may be laterally adjusted during fitting to align the prosthetic teeth with the mandibular or maxillary ridges. 19.9.78 as 037316 (10pp992)

KANE ★ D21 26674B/14 ★J5 4025-906
Two layer-type liq. shampoo - contg. higher fatty acid poly:ol ester and quat. ammonium salt
KANEBO KK 29.07.77-JA-091554
A96 E19 (27.02.79) A61k-07/06 C11d-01/62 C11d-03/04 C11d-09/02 C11d-10

Two layer-type liq. shampoo contains $\geq$ 1 higher fatty acid ester of mannitol, pentaerythritol and/or sucrose; and (b) a quat. ammonium salt of formula (I).


$$\left[R-\overset{CH_3}{\underset{CH_3}{N}}-R' \right]^+ Cl^- \quad (I)$$

In (I) R is 6-17C alkyl or alkenyl group, R' is benzyl, 4-nitrobenzyl, 3,4-dichlorobenzyl, 2-chlorobenzyl, 4-chlorobenzyl, 2,4-dichlorobenzyl, isomeric trichlorobenzyl, (m)ethylbenzyl, dimethylbenzyl, 2,4-dimethylbenzyl, 3,4-dimethylbenzyl, or methyl.

Compsn. further comprises NaCl, polyhydric alcohol, liq. or pasty hydrocarbon, animal or vegetable oil, ethyl alcohol, potassium salt of a higher fatty acid, and water. 29.7.77 as 091554 (9pp126).

KIMI- ★ D21 26752B/14 ★J5 4026-092
Japanese gelatin dental impression material - contg. water soluble salt of alginic acid
KIMIZU KAGAKU KENKY 29.07.77-JA-092089
A96 P32 (27.02.79) A61c-09

3.0 - 35 wt.% of water-soluble salt of alginic acid is added to Japanese gelatine impression compsn.. The impression material is used for dental treatment. It is possible to perform combined impression of Japanese gelatine impression material and alginic acid impression material without impairing accuracy of the Japanese gelatine impression material.

Specifically, 3 - 35 wt.% of sodium alginate or potassium alginate is added to common Japanese gelatine impression material consisting of 55 pts.wt. of Japanese gelatine, 55g of zinc oxide, 2 pts.wt. of cellulose acetate, 3 pts.wt. of HgS or a small amount of menthol. 29.7.77 as 092089 (2pp86).

KANE ★ D21 26856B/14 ★J5 4026-336
Basic cosmetic compsn. e.g. face lotion - contains a powdered zeolite to prevent oxidative degradation of oils and vitamin/A
KANEBO KK 31.07.77-JA-092344
E33 (27.02.79) A61k-07

Basic cosmetic compsn. (e.g. face lotion, cream, milk lotion, etc.) contains 0.5-50 (1-20) w/w% of fine powdery zeolite. Zeolite is the fine powder of alkali(ne earth) metal salt of hydrous aluminosilicic acid and is of formula $(RO)_w(Al_2O_3)_x(SiO_2)_y(H_2O)_z$ (where R is the metal, and w, x, y, z are positive integers).

By combining zeolite in the cosmetic comspn. the odorous organic components and fine metallic ions originated from starting materials can be easily adsorbed on zeolite and the oxidn.-degradation of oily components and vitamin A can be prevented. Zeolite can be stably dispersed in the compsn. without caking and the cosmetics are not only excellent in preservative property, deodourising activity and adhesive property, but also smoothen skin. 31.7.77 as 092344 (6pp5).

KANE ★ D21 26857B/14 ★J5 4026-337
Water-in-oil cream or milk lotion - contg. glycerine, di:glycery mono-or di:oleate, oil and water
KANEBO KK 28.07.77-JA-090973
E17 (27.02.79) A61k-07

Objective W/O type cream or milk lotion composition contains (a) glycerin, (b) diglyceryl-mono-oleate and/or diglyceryl-di-oleate, (c) liquid oil and (d) water.

The cosmetic composition is excellent in preservative stability, mechanical stability, homogeneity, appearance and affinity to skin and can give refreshing feeling at its application. It is not sticky and can be prepared inexpensively. Those desirable effects are caused by the application of glycerin and diglyceryl-mono-oleate and/or diglyceryl-di-oleate and through their effect the water content in the composition can be increased. 28.7.77 as 090973 (7pp5).

KAWA- ★ D21 26859B/14 ★J5 4026-34
Nail lacquer remover - contg. acid amide cpd. as effectiv component
KAWAKEN FINE CHEM K (FUJC) 29.07.77-JA-090988
E19 (27.02.79) A61k-07/04

Nail lacquer remover contains acid amide cpd. (I) as the essential ingredient. (I) is a good solvent for nitrocellulose, the major component of nail lacquer and is non-flammable safe liquid. By combining oil and fat and wetting agent in the nail lacquer remover nutrients can be gi en to nails and the damage of nails by the remover can b prevented.

Pref. (I) include 1,3-dialkyl-2-imidazolidinone (where alkyl is (m)ethyl or propyl). Though the remover can be used in the form of soln. it can also be used in th form of emulsion obtd. by combining fatty acid salt and nonionic surfactant in the liquid nail lacquer remover. 29.7.77 as 090988 (6pp5).

GYUN- ★ D21 26903B/14 ★J5 4026-8
Pearl white soap having grain-like pattern - produced from mi contg. sodium iso:oleate
GYUNYU SEKKENKYOS 01.08.77-JA-092879
E17 (D24) (28.02.79) C11d-13

The process comprises blending a plain soap contg. 1 - 15 % of sodium isooleate with 0 - 2 % of a transparency improver (an agent providing the soap with transparenc e.g., propylene glycol, glycerine, cane sugar, sorbit, etc.), a pearl-whitener (an agent for providing pearl-like gloss by its orientation, e.g., rutile, fish scale, bismuth oxochloride, etc.) and opt. perfume, dyestuffs etc; enhancing the orientation of the whitener by passin through a multi-stage kneader attached with a grating in each stage; extruding the soap compsn., and stampin it into any desired shape with wooden grain-like pattern

Typically 93.7% of plain soap, 5% of sodium isooleat 0.3% of rutile, a dyestuff, perfume and ethanol in a tota amt. of 0.5% and 0.5% of propylene glycol are mixed, stirred in a mixer thoroughly and charged in a 4-stage kneader. The extrudate is stamped into shaped soap ha ing wooden grain pattern.

The process can provide shaped products of pearl-white soap of wooden grain pattern continuously by sim kneading to that for conventional mechanically kneaded soap. The inclusion of sodium isooleate can reduce the amt. of the transparency improver and provides conver iently the orientation of the pearl-whitener. 1.8.77 as 092879 (7pp59).

TAKG ★ D21 27217B/14 ★J7 9004
Silica powder abrasive with high apparent density - prepd reacting sodium silicate with mineral acid in the presenc electrolyte
TAKI KAGAKU KK 27.01.68-JA-005065
E36 L02 (12.03.79) A61k-07/16 C01b-33/18

Method comprises reacting sodium silicate with miner acid in the presence of electrolyte under the stated cor tions to give silica powder of apparent density of 0.25- g/cm^3 SiO_2/Na_2O ratio is 2-4, concn. of sodium silica

5-15%, concn. of mineral acid is 5-15% amt. of electro yte is 15 to 60 pts wt. per 100 pts wt SiO_2, temp. is 60 00°C and pH at the end of the reaction 4-6 (apparent ensity is measured on specimen prepared by placing 5g lica powder in glass cvlinder of 29 mm and tapping 500 rcles at 70 cycle/min and at 10mm height).

The method gives high apparent density silica powder seful as an abrasive, with specific surface area ranging om 10 to 400m ^{2}/g depending on reaction conditions. 7.1.68 as 005065 C01b 33/18, A61k 7/16.(12.3.79) AKI KAGAKU KK (6pp83)

ME= ★ D21 27404B/14 ★SU -607-570
ling material used in dentistry - is prepd. from barium sulphate, rcelain dust, ethyl hydroxy-methacrylate polymer, calcium ıoride and ascorbic acid
LENGD MED INST 15.09.76-SU-401672
*A96 (25.04.78) A61k-05/**

omatological filling material used in dentistry consists a fluorine cpd., base and solvent. In order to avoid econdary caries and tooth pulp infection, the following rmulation is proposed (wt.%): $BaSO_4$ 7.4-10, porcelain ıst 6.5-10, CaF_2 0.1-1, ethylhydroxymethacrylate 35-5, $K_2S_2O_8$ 1.3-2, ascorbic acid 1.2-2, and pure water 3.5-40, 0.

nteingart, M.Z., Luk'yanenko, V.I., Bordiyan, B.G. et . Bul. 19/25.5.78. 15.9.76. as 401672 (2pp835)

GIN D21 86526Y/49 =US 4145-305
is-acetoxymethyl phosphine oxide as per cpd. activator - or ecursors of the oxide useful in bleaching compsns.
UGINE KUHLMANN 04.06.76-FR-016927
*E11 F06 M14 (D22) (20.03.79) *BE-855-194 C11d-03/39 C11d-07/54 D06l-03/02*

ct ivation of percompounds comprises associating with ≥1 percompound a quantity of ≥1 phosphorus contg. ctivator sufficient to activate the percompound compont. The activator is (a) tris(acetoxymethyl)-phosphine xide of formula $(CH_3COOCH_2)_3PO$; (b) tris (acetoxymethyl) hosphine of formula $(CH_3COOCH_2)_3P$ or (c) a tetrakis(aceoxymethyl)phosphonium cpd. of formula $(CH_3COOCH_2)_4P^+$ $^-$, where X is an (in)organic ion.

The activators are used with percompounds in bleaches or textile fibres, oils, fats, and waxes, for cosmetic tretment of hair and skin, for passivation of metallic surces, and in purificn., disinfection and sterilisation techiques. A more rapid bleaching or oxidising effect is btd. without changing the temp. 1.6.77 as 802515 3pp918)

ADI D21 88386Y/50 =US 4145-307
Vater-in-oil emulsifiers prodn. - from fatty alcohol glycidyl ethers nd (hydroxy amines, useful in cosmetics
BASF AG 22.05.76-DT-623085
*E16 (20.03.79) *DT2623-085 +B01j-13 C07c-89/02 C07c-91/12*

Vater-in-oil emulsions are produced at 65-80°C by adding ater in small portions to an oily or fatty phase contg. an mulsifier. Water is at 1-5°C above that of fatty or oily hase.

The emulsifier is a reaction product obtd. from reaction of saturated or unsaturated 9-22C fatty alcohol or their ixts. with epichlorohydrin in the presence of an acid catlyst, in molar ratio 1:0.5-1.5. Resulting glycidyl ether then reacted with $R_1R_2R_3N$, where R_1 and R_2 are each H r 2-4C hydroxyalkyl, R_3 is 2-4C hydroxyalkyl or cpd. of rmula $-(CH_2)_m-$ $Y-(CH_2)m'-{}_nX$, where R_1 and R_2 are H, is -O- or -NH-, m is 2 or 3, m' is 2 or 3, n is 0-6, X NH_2 or OH. Molar ratio of glycidyl ether with $R_1R_2R_3N$ 1:0.1-6.0, reacted in the presence of an acid or alkaline atalyst.

Prod. is an excellent auxiliary in the cosmetic industry. .5.78 as 902909 (2.5.77-US-792730) (4pp931)

OLG ★ D21 27752B/14 ★US 4145-411
ressurised shaving foam compsn. - contg. mineral oil, lanolin and rea for richer foam
COLGATE PALMOLIVE CO 23.02.76-US-660295 (13.11.72-US-305865)
P34 (20.03.79) A61k-07/15 A61l-09/04

In a foaming shaving cream dispensed from a pressurised container, contg. 1-10 wt.% propellant, 70-90 wt.% water opt. contg. ≤20% of a 2-3C alcohol, and 5-15 wt.% anionic surfactant, and opt. 0.5-3 wt.% foam stabiliser which is an alkanolamide of a 12-18C fatty acid, a gum, an organic colloid, propylene glycol, glycerol or sorbitol, the improvement comprises adding 0.25-1% mineral oil, 0.005-0.025% lanolin and 0.001-0.006% urea.

The foam is thicker and richer. 23.2.76 as 660295 (+5.9.74-US-503237) (4pp955)

VIPO- ★ D21 27753B/14 ★US 4145-412
Oral compsns. contg. Sanguinaria canadensis extract - for oral cavity cleansing, tissue conditioning and teeth cleaning
VIPONT CHEMICAL CO 14.02.77-US-768278
(20.03.79) A61k-07/26

Compsn. for appln. to oral cavities consists of a carrier together with an extract of Sanguinaria canadensis obtd. by treating cut or ground bloodroot with MeOH. This mixt. is kept at 60°C for 24 hrs., filtered and evapd. to dryness. The residue in $CHCl_3$ is acidified with HCl and dried, and the solid is dissolved at 0.1-40% concn. in glycerol with 0.1-30% $ZnCl_2$. Pref. 1-10% of extract is used esp. at 0.5% in a toothpaste base.

Used in oral cleansing prepns. and esp. toothpastes to act as a breath freshener and oral tissue conditions, and for cleaning the teeth when use for 30 days regularly causes improved conditions. 14.2.77 as 768278 (3pp1248)

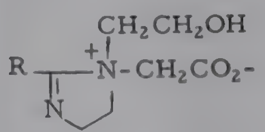
GILL ★ D21 27754B/14 ★US 4145-413
Artificial sun tanning compsn. - based on cuprous salt and benzyl alcohol or 2,3 di:hydroxybenzoic acid
GILLETTE CO 15.08.77-US-824792
E32 (E14) (20.03.79) A61k-07/02

A skin colouring compsn. comprises an aqueous dermatological base contg. 0.045-0.09% based on wt. of water, of cuprous chloride and 2-4% based on vol. of water, of benzyl alcohol or 2,3-dihydrobenzoic acid.

Compsn. gives a golden brown colour closely resembling a natural tan. The compsn. can be combined with conventional sunscreen agents and cream base formulations without the compatibility problems associated with dihydroxyacetone. 15,8.77 as 824792 (4pp955)

MICH/ ★ D21 27762B/14 ★US 4145-436
Body deodorising antimicrobial compsns. - contg. an alkylimidazolium betaine, and a long chain amine oxide
MICHAELS E B 07.11.77-US-849031
C03 E16 (C02 E13) (20.03.79) A61k-31/41

Broad spectrum antimicrobial compsn. (pH 4-9.5) of low toxicity contains: (a) 0.1-40 pts. by wt. of a higher alkylimidazolium betaine (I); and (b) 0.1-40 pts. by wt. of an N-oxide of formula (II)-(IV):



(I)

$R_1N(Me)_2 \longrightarrow O$

(II)

(where R' and R_1 = 10-18C alkyl or mixed alkyl).

$R_1-N(CH_2CH_2OH)_2 \longrightarrow O$

(III)

$R_1CONH(CH_2)_3N(Me)_2 \longrightarrow O$

(IV)

Compsns. have enhanced activity against Gram +ve and Gram -ve bacteria (and fungi and protozoa), and have skin degerming, cleansing, and deodorizing props. In partic., the compsn. provides long-term inhibition of body odour, but with less eye and skin irritation than known compsns. The compsns. are also useful for treatment of dandruff, crotch itch, athlete's foot, etc. 7.11.77 as 849031 (7pp478)

See Also

D16 J5 4027517 D22 J5 4027566 D25 BE 870913

D22: BANDAGES; DRESSINGS

BEGH- ★ D22 26005B/14 ★BE -872-447
Breeches-type disposable napkin for babies - prevents leakage and concentrates fluids into absorbent zone without wrinkles or roughness
BEGHIN SAY 30.12.77-FR-039764
F07 P21 (16.03.79) A41b

A disposable napkin prevents both leakage and the exposure of the skin to more than the absolute min. of urine, by dispensing with a flap and eliminating the formation of wrinkles in the absorbent wadding. The napkin consists of an absorbent pad between an upper sheet of material permeable to liquids and a bottom impermeable film.

Elastic cords are glued whilst stretched, at 15 - 19 mm from the long edge of the wadding on each side. ved recesses are cut into the long sides of the napkin to accommodate the legs and give a breeches effect. 30.11.78 as 872447 (15pp1014).

HAMP/ ★ D22 26056B/14 ★DL -133-518
Permanent implant - comprising substrate with passivating layer and active, biocompatible layer which may be combined
HAMPEL H 14.12.77-DL-202613
E36 P32 (10.01.79) A61f-01

A metal (alloy), plastics or ceramic implant is provided with a passivating coating and a coating of physiologically active, but biocompatible, materials. The layers may be applied separately or a single layer can fulfil both functions. E.g. a layer of nitride, oxide or carbide is followed by a layer of, e.g., amino acid(s).

The implant has an unlimited life (given that there is no deterioration in the recipient's constitution). 14.12.77 as 202613 (7pp922)

LOHM ★ D22 26246B/14 ★DT 2741-826
Elastic net bandage - has elastic warp thread with inelastic fringe interlinked by inelastic weft thread coiled around warp
LOHMANN GMBH 16.09.77-DT-741826
F07 P32 (29.03.79) A61f-13

An elastic net bandage is made of a textile with an elastic warp and an inelastic weft. The warp comprises independent inelastic threads, e.g. of polyamide, underlaid by elastic synmetic threads, e.g. of polyurethane.

Inelastic weft threads, e.g. of cotton, each extend in curvilinear fashion along a respective warp thread before crossing to the neighbouring, or an adjacent, warp thread, and then returning to the original warp thread to continue therealong in curvilinear fashion. The weft threads may however, continue along the neighbouring warp thread. 16.9.77 as 741826 (10pp402)

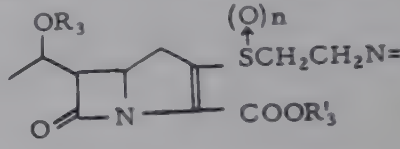
PERS ★ D22 26396B/14 ★DT 2840-340
Absorbent, comfortable cellulose sponge tampon prodn. - by saturating with softening liq., expelling excess liq. and packing
PERSONAL PRODUCTS CO 16.09.77-US-833858
A96 P32 (29.03.79) A61f-13/20

A packed, soft, comfortable menstrual tampon is made by (a) forming a tampon out of regenerated cellulose sponge as absorbent; (b) saturating the tampon with a softening liq; (c) exerting sufficient pressure, opt. with heating, on tampon to remove excess liq. pref. so that tampon retains 0.05-2.5 (0.05-1)g liq./g sponge; and (d) packing the tampon in a container which is impermeable to softening liq.

Cellulose sponge is non-toxic and can be degraded biologically. The moist, soft, expanded tampon can absorb a large quantity of menstrual fluid, e.g. > 8x its own dry wt. of fluid would be absorbed by a tampon retaining 0.9g water/g sponge. The softening liq. is esp. water or petroleum, glycerol, polyethylene glycol or polypropylene glycol. 15.9.78 as 840340 (16pp200)

MERI ★ D22 26432B/14 ★EP ---1-264
(N)-Methylene-thienamycin S-oxide and S-di:oxide derivs. - useful as broad spectrum antibacterials
MERCK & CO INC 15.09.77-US-833619
B02 C02 E13 (04.04.79) C07d-487/04
D/S: E(BE, CH, DT, FR, GB, LU, NL, SW).

The N-methylene derivs. of thienamycin sulphoxide or sulphone of formula (I) and their salts are new:



(I)

(n is 1 or 2;
R$_3$ is H,
yl, acetyl, pro
ionyl, butyryl,
chloroacetyl,
methoxyacetyl
aminoacetyl, methoxycarbonyl, methylcarbamoyl, ethyl-
carbamoyl, phenylthiocarbonyl, 3-aminopropionyl, 4-
aminobutyryl, mono-, di- or tri-methylaminoacetyl, 3
dimethylaminopropionyl, 3-trimethylaminopropionyl, tr
ethylaminoacetyl, pyridiniumacetyl, guanylthioacetyl,
guanidinoacetyl, 3-guanidinopropionyl, N^3-methylguanid
inopropionyl, hydroxyacetyl, 3-hydroxypropionyl, acryl
propynoyl, malonyl, PhO.C(O)-, amidinoacetyl, acetami
inoacetyl, amidinopropionyl, acetamidinopropionyl, gua
ureidoacetyl, guanylcarbamoyl, carboxymethylaminoac
yl, sulphoacetylaminoacetyl, phosphonoacetylaminoacet
N^3-dimethylaminoacetamidinopropionyl, ureidocarbonyl
dimethylaminoguanylthioacetyl, 3-(1-methyl-4-pyridiniu
propionyl, 3-(5-aminoimidazol-1-yl)propionyl, 3-methy
1-imidazolium-acetyl, 3-sydnonylacetyl, o-aminomethy
benzoyl, o-aminobenzoyl, PO(OMe)$_2$, PS(OMe)$_2$,
PS(OMe)(OM), PO(NMe$_2$)$_2$, PO(OM)NMe$_2$, PS(NMe$_2$)$_2$,
PS(OM)NMe$_2$, SO$_2$OM or PO(OM)$_2$;.

M is H or alkali(ne earth) metal cation;

R'$_3$ is H, Me, t-Bu, phenacyl, p-bromophenacyl,
CMe$_3$CO$_2$CH$_2$, Cl$_3$CCH$_2$, allyl, 3-Me-2-butenyl, 2-Me-2
propenyl, benzyl, Ph$_2$CH, p-t-butylbenzyl, phthalidyl,
5-indanyl, acetylthiomethyl, acetoxymethyl, propionyl
methyl, methallyl, 3-butenyl, 4-pentenyl, 2-butenyl, ac
oxyacetylmethyl, pivaloylacetylmethyl, diethylamino,
methylaminoethyl, methoxymethyl, p-acetoxy benzyl,
pivaloylbenzyl, p-isopropoxybenzyl, 5-indanylmethyl,
zyloxymethyl, methylthioethyl, dimethylaminoacetoxy-
methyl, crotonolacton-3-yl, acetamidomethyl, acetylth
ethyl, pivaloylthiomethyl or methylthiomethyl;

X and Y are H, R, OR, SR or NR$_1$R$_2$;

R$_1$ and R$_2$ are H, 1-6 C alkyl, 3-6 C alkenyl, 3-6 C
cloalkyl, 4-7 C cycloalkylalkyl, 4-6 C cycloalkenyl or
C cycloalkenylalkyl, benzyl, p-methoxybenzyl, p-dime
aminobenzyl, cinnamoyl, 2-thienylmethyl, 3-thienylme
2-furylmethyl or 1-methyl-5-tetrazolylmethyl; and

R is H, 1-6 C alkyl or aminoalkyl, 2-6 C alkenyl or
inoalkenyl, 2-6 C alkoxyalkyl, 2-12 C mono-, di- or
tri-lower alkylaminoalkyl, 1-6 C perhaloalkyl, 2-6 C
thioalkyl, Ph, benzyl, 2-, 3- or 4-pyridyl or 2-thiazol

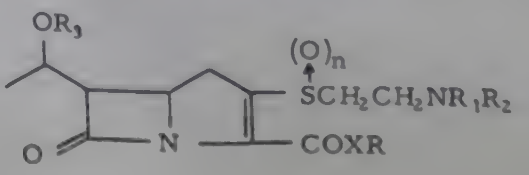
Broad-spectrum antibacterials for use in human a
veterinary medicine, additives to animal feedstuffs, f
preserving foodstuffs and as disinfectants; also usef
industrial bactericides in paper processing, in water-
ed paints, etc. Dose: 2-600 mg/kg daily.

15.9.78 as 100899 (122pp1248)

ISR: FR2332012.

MERI ★ D22 26433B/14 ★EP ---
N-Substd.-thienamycin S-oxide and S-di:oxide derivs. - use board spectrum antibacterials
MERCK & CO INC 15.09.77-US-833621
B02 C02 E13 (04.04.79) A61k-31/40 C07d-487/04 C07f-09
D/S: E (BE, CH, DT, FR, GB, LU, NL, SW).

N-Substd.-thienamycin S-oxide and S-dioxide derivs. formula (I) and their salts are new:



(I)

(n is 1 or 2;

is O;
is H, 1-10 C alkyl, phenacyl (opt. ring substd. by Cl, r, F or 1-6 C alkyl), (1-6 C)alkoxy (1-6 C) alkyl, 2-12C lkanoyloxyalkyl, 1-6 C halo- or perhalo-alkyl (the alo being F, Cl or Br), 2-10 C alkenyl, 3-14 C alkoxy- arbonylalkyl, 4-21 C dialkylaminoacetoxyalkyl, 2-13 C lkanoylamidoalkyl, (6-10 C)aryl(1-3 C)alkyl, mono- or i-cyclic heteroaralkyl (having 4-10 ring atoms and 1-6 in the alkyl, with O, N or S as heteroatoms), nuclear- ubstd. aralkyl or hetero-aralkyl (the substituents being 1, F, Br, I or 1-6 C alkyl), 1-6 C alkanoyloxy, 1-6 C lkoxy, mono- or bi-cyclic heterocyclylalkyl (the heter- cycle contg. 4-10 atoms, and the heteroatoms being O, or N and the alkyl having 1-6 C), aryl having 6-10 ing C and opt. substd. by OH, 1-6 C alkyl, Cl, F, Br, -12 C alkylthioalkyl, 4-12 C cycloalkylthioalkyl; or -10 C)acylthio(1-6 C)alkyl;
$_1$ and R_2 are H or acyl;
$_3$ is H, alkyl or acyl;

rovided that R-R_3 are not all H).

(I) are broad-spectrum antibacterials for use in uman and veterinary medicine, additives to animal eedstuffs, for preserving foodstuffs and as disinfectants; lso useful as industrial bactericides in paper process- ng, in water-based paints etc. Dose: 15-600 mg/kg aily.

5.9.78 as 100900 (95pp1248).
SR: FR2356649.

IOM- ★ D22 26441B/14 ★EP ---1-285

iquid disinfecting appts. - has direction of potential applied to main lectrodes reversed periodically to increase efficiency

INST BIOMEDIZIN TEC 23.12.77-DT-757854 (21.09.77-DT-742508)
P34 (04.04.79) A61l-01 A61l-03 C02b-03/02 C07c-05/12
/S: E(BE, CH, DT, FR, GB, LU, NL, SW).

isinfecting appts. having a pair of main electrodes (5,6) n opposite sides of a bank of auxiliary electrodes (7) has he direction of the potential applied to the main elect- odes periodically reversed.

Used for disinfecting liquids by anodic oxidation. Efficien- y of disinfection is increased and continuous disinfection s possible also during cleaning of main electrodes.

1.9.78 as 100950 (17pp536)

SR: CH-560170; DT2311504; FR2283699; FR2224207; H-319956.

LOM/ D22 54368X/29 =GB 1543-326

nmobilizing and supporting splint - applied to human or animal mbs using polyurethane rigid foam reaction mixture

BLOMER A 02.01.75-DT-500002
*A96 P32 +P73 (04.04.79) *DT2500-002 A61f-13/04 +B32b-01/06*

n immobilising and/or supporting appliance for applica- on to a part of a human or animal body comprises ≥ layers flexible material i.e. fabric, which between them define cavity containing at least two chemical components capa- e of reacting to form a hardenable foam, pref. a poly- rethane foam.

The reaction components are accomodated within the vity in separate containers which are capable of being ptured by external application of traction pressure, ultra- nic waves, radiation, temperature or by ageing, to per- it the components to mix.

The appliance may be in the form of a double walled be. 2.1.76. as 000066 (9pp1382)

OC D22 92423X/50 =GB 1543-346

vo ply tissue paper has plies separated in distinct zones - to ovide high bulk, low density and good absorbency

PROCTER & GAMBLE CO 30.05.75-US-582521
*F09 P73 +P72 (04.04.79) *BE-842-308 D21f-11/04 D21h-01/02*

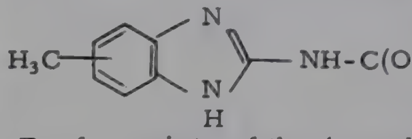
soft bulky absorbent paper sheet with basis weight of -40 lb/3000 ft^2 has a cross-section comprising at least vo superposed fibrous layers in contact over most of eir areas and at least one partially displaced in a plane rpendicular to the sheet in small discrete deflected reas occurring at 100-3600 areas/in^2.
[illegible] density than the remain- ing parts, and the overall bulk density when uncalendered at a loading of 80 g/in^2 is 0.020-0.200 g/cm^3. There are pref. two outer layers of short, and a central layer of long, papermaking fibres, the fibres being of hardwood and softwood respectively. 26.5.76. as 021874 (31pp1358)

FARB D22 59405Y/34 =GB 1543-521

Microbicidal methyl-(2)-benzimidazolyl carbamate derivs. - for protection of industrial materials e.g. glues, paper, textiles, resins, coating prods.

BAYER AG 05.06.76-DT-625391
*A60 E13 G03 P34 (G02) (04.04.79) *BE-851-569 +A01n-09/22*

Materials such as adhesives, glues, paper, cardboard, textiles, plastics, leather, wood, paints, plaster and aq. solns. or suspensions are protected against microorganisms by applying, or incorporating, a compsn. contg. ≥ 1 methyl-substd. 2-benzimidazolyl-carbamic acid methyl ester (opt. in the form of tautomers) of formula (I):


(I)

Pref. a mixt. of the 4-methyl and 5-methyl cpds. is present, esp. 0.5-1.5 pts. wt. of the 5-methyl cpd. per pt. wt. of the 4-methyl cpd. Pref. 0.001-1 pts. wt. active cpd. is used per 100 pts. material to be protected.
16.2.77. as 006468 (4pp992)

EISA D22 67288X/36 =GB 1543-788

Water dispersible absorption material - contains lower hydroxy-alkyl or alkyl cellose ether

EISAI KK 14.02.75-JA-017969
*A96 P32 P34 (A11) (04.04.79) *DT2605-907 +C08b-11/20 C08l-01/26 C08l-99*

Absorbent for blood, which can be dispersed in cold water, contains filaments of ≥1 (hydroxy)alkyl cellulose ether (I), each (hydroxy)alkyl gp. having 1-3C atoms. Pref. (I) is (m)ethyl cellulose, hydroxyethyl cellulose, hydroxy propyl cellulose or hydroxypropylmethyl cellulose.

Absorbent is partic. a vaginal tampon; prior disposal problems are eliminated.13.2.76. as 005788 (4pp936)

NITL ★ D22 26751B/14 ★J5 4026-091

Composite absorbing member for surgical use - comprising porous film, liq. diffusing flaky substance and liq. absorbing pad detachably adhered

NITTO ELECTRIC IND KK 29.07.77-JA-091710
A96 F07 P32 (27.02.79) A61f-13/20

A composite absorbing member comprises a porous film, a liq. diffusing flaky substance and a liquid-absorbing pad detachably adhered on each other. The liquid-diffusing flaky substance has liq. absorptivity greater than that of the liquid-absorbing pad and a liq. retaining properties less than that of the liq.-absorbing pad.

Composite absorbing member is used for surgical treatment. It is possible to cure the opening of a wound without injuring the cuticle of the wound because only a liquid-absorbing pad or a liquid-diffusing substance are peeled off while a porous film is left on the opening of the wound. 29.7.77 as 091710 (3pp86).

MITR ★ D22 26761B/14 ★J5 4026-189

Sterilising bag for sterilising medical instruments - prepd. by overlapping sheet of heat-resistant plastic film, thermoplastic layer and nonwoven cloth inner face, and sealing circumference

MITSUBISHI RAYON KK 28.07.77-JA-090565
A92 Q34 (27.02.79) B65d-81/18

Sterilising bag is by overlapping a complex sheet formed by laminating a heat-resistant plastic film and a nonwoven cloth, which has holes > 0.5 mm in dia. penetrating the via a thermoplastic layer which softens or melts at a temp. below the thermal deformation temp. of the heat-resistant plastic film and the perforated non woven cloth, so that the face of the perforated nonwoven cloth becomes the inner face, and hot-press-sealing the circumferential part of the overlapped sheet at a width of > 1 mm.

The heat resistant plastic film and nonwoven cloth are e.g. polyester, polyolefin, nylon, etc., and the thermoplastic layer e.g. polyethylene, polypropylene, etc..

The sterilising bag is useful for the sterilisation of medical instruments by high pressure steam or gas such as ethylene oxide is good at preventing the re-infection by bacteria after the sterilisation. 28.7.77 as 090565 (5pp50).

MITR ★ D22 26762B/14 ★J5 4026-190
Complex sheet for sterilising bag mfr. - is prepd. by laminating heat-resistant plastic film and sheet form fibrous matter with holes via a thermoplastic layer
MITSUBISHI RAYON KK 28.07.77-JA-090564
A92 P73 Q34 (27.02.79) B32b-27/08 B65d-65/40 B65d-81/20

Complex sheet for sterilising bags is prepd. by laminating a heat-resisting plastic film and a sheet-form fibrous matter with holes via a thermoplastic layer which softens or melts at a temp. below the thermal deformation temp. of the heat-resisting plastic film.

The thermoplastic layer is e.g. polyethylene, polypropylene, etc. and the heat-resisting plastic film and sheet form fibrous matter are e.g. polyester, polyolefin, nylon, etc..

The complex sheet is useful as material for sterilising bags used for the sterilisation of medical instruments by high pressure steam or gas such as ethylene oxide. By overlapping the complex sheets so that the face of the sheet-form fibrous matter becomes the inner face and heat-sealing them by melting the thermoplastic layer, the sterilising bag is easily formed, and also heat-sealing of the bag after placing instruments to be sterilised in it can be carried out by hot-pressing. 28.7.77 as 090564 (3pp50).

MITP ★ D22 26835B/14 ★J5 4026-307
Antiseptic for wood - contg. cyano-gp. contg. cpd. e.g. 2-chloro-2 chloromethyl glutaronitrile
MITSUBISHI PETROCH KK 26.07.77-JA-089538
C03 E16 F09 P63 (27.02.79) B27k-03/34

Antiseptic contains ≥1 cyano cpd. of formula $NC-C(X)(CH_2X)-C(R)H_2CH-CN$ (I) as active component. In (I) X is Cl or Br, and R is H or cyanoethyl.

Cpds. (I) are relatively less toxic and are free of specific odour. (I) is e.g. 2-chloro-2-chloromethyl-glutaronitrile, 2-bromo-2-bromomethylglutaronitrile, 1,2-dichloro-2,4,6-tricyanohexane or 1,2-dibromo-2,4,6-tricyanohexane. (I) have antibiotic activity against Basidomycetes microorganisms. 26.7.77 as 089538 (5pp5).

SANY- ★ D22 26836B/14 ★J5 4026-308
Preservative compsn. for wood - comprises a preservative and plasticiser(s), e.g. chloroparaffin
SANYO MOKUZAI BOFU 30.06.77-JA-077241
C03 E19.F09 P63 (C01) (27.02.79) B27k-03/34

The compsn. contains a preservative and ≥1 plasticiser selected from chloroparaffin, phthalic acid diesters, phosphoric acid triester, alkylbiphenyl, alkylester of aliphatic mono-, di- or tri-carboxylic acid, oligoester of adipic acid alkyleneglycol, its modified prod. (obtd. by modifiying its end gps. with alkanol), alkane-acid or alkene-acid, epoxy-fatty acid glyceride, tetrahydro-phthalic acid alkyl-ester and trimellitic acid trialkylester.

The impregnation of oil-soluble preservative into wood is promoted. Further the plasticisers are nonvolatile, tasteless, colourless, odourless and nontoxic substances and dissolve easily, giving good preservation, weathering resistance, water-resistance etc..

Pref. preservative is creosote oil, copper naphthenate, chlordene(1,2,3,4,5,6,7,10-octanol, 4,7,8,9-tetrahydro-4,7-methylene-indene), tributyl-tin-oxide, etc. 30.6.77 as 077241 (7pp5).

YOSH ★ D22 26839B/14 ★J5 4026-311
Agent for treating wood to prevent discolouration - comprises a sodium or potassium perborate or percarbonate and a chelating agent
YOSHITOMI PHARM IND KK 27.07.77-JA-090833
C03 E34 F09 P63 (E19) (27.02.79) B27k-03/32 B27k-05/02

The agent comprises ≥1 of Na perborate, K perborate, Na percarbonate and K percarbonate and ≥1 chelating agents which can form chelate compound with Fe ion.

The wood which is discoloured by insecticide, antiseptic, etc., and is used for preventing the discolouration of wood by combining it previously in insecticide or antiseptic. 27.7.77 as 090833 (5pp5).

NIPK ★ D22 26849B/14 ★J5 4026-326
High temp. stable gelatin cataplasm - contg. polyoxyethylene and metal salt of polyacrylic acid
NIPPON KAYAKU KK 28.07.77-JA-090782
A96 P34 (27.02.79) A61k-09/70 A61l-15/06

Gelatin cataplasm contg. polyethylene oxide and metal salt of polyacrylic acid, is new. The metal salt of polyacrylic acid and polyethylene oxide are used in place of Na polyacrylate which has been used as an additive to a gelatin cataplasm. The metal salt of polyacrylic acid means those of average molecular wt. 100,000 - 10,000,000, including salts with alkali metals (e.g. Na, K, Li), alkaline earth metals (e.g. Ca) and trivalent metals (e.g. Al, Fe), which may be used in amt. of 0.01 - 20% to the whole quantity of cataplasm.

The cataplasm is (a) highly flexible and fit for movement of the body; (b) adhesive tightly to the skin; (c) very stable at high temp. during preservation for a long period of time; (d) good in water-holding capacity; (e) easily and cleanly removable from the skin. 28.7.77 as 090782 (6pp52).

TSUM ★ D22 26855B/14 ★J5 4026-33
Deodorant for urine and excrement - contains bis-(1-oxy-2-pyridyl di:sulphide or (N) di:methyl-(N)-phenyl (N fluorodichloromethylthio) sulphamide
TSURUMI SODA KK 01.08.77-JA-091378
*E14 P34 (E13) (27.02.79) A61l-09/**

Deodorant contains as active component bis(1-oxy-2-pyridyl)disulphide (I) and/or N-dimethyl-N'-phenyl(N'-fluorodichloromethylthio)sulphamide (II). When using (I) or (II) alone, the amount to be added to excrements and urine is >100 ppm (300-400 ppm). When (I) and (II) are used in combination, the amount is more >50 ppm (100-200 ppm), and in this case there is obtained the synergistic effect.

The deodorant is used for deodorising bad smell cause by urine and excrements in storage type toilets, cyclisation type toiler or portable toilet. Therefore, it is used in the toilets in trains, bus, electric train, ship and aircraft and by livestock raiser. It has high and long-lastin deodorising effect. 1.8.77 as 091378 (3pp108).

MITO ★ D22 27026B/14 ★J5 4026-9
Gas cleaning appts..- in which cassette type filters are advanc upstream prior to exchange
MITSUBISHI HEAVY IND KK 03.08.77-JA-092559
J01 (28.02.79) B01d-53/04

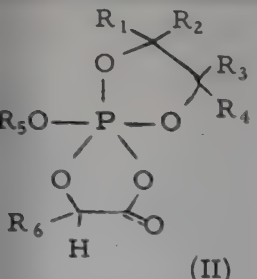
Various kinds of adsorbent (I), (II) and (III) are separately positioned in adsorbing appts. (A). Each adsorbent is divided into several pieces of cassettes. A bad fume contg. gas is passed through the adsorbing appts. to remove bad fume from the gas.

Each kind of the adsorbing cassette positioned at the upper stream side to the gas is completely saturated, each kind of the central adsorbing cassette is partially saturated, and each kind of the adsorbing cassette positioned at the downstream side to the gas is not satd..

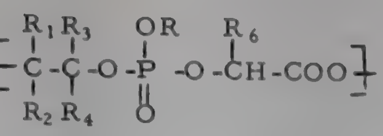
In exchanging or packing of the used adsorbing agent each kind of completely saturated adsorbing cassette of the upper stream is removed, and each kind of a new adsorbing cassette is inserted in the downstream side, and each kind of the partially satd. cassette and non-satd. adsorbing cassette is moved to the upper stream. 3.8.77 as 092559 (5pp51).

SAEG/ ★ D22 27182B/14 ★J5 4027-
Water- and organic solvent-soluble poly:phosphate prodn. - reacting spiro acyloxy phosphorane with prim. or sec. alcohol heating resulting pent:oxy phosphorane
SAEGUSA T 02.08.77-JA-093120
(D21) (01.03.79) C07f-09/08

Polyphosphate (I) is prepd. by reacting spiro type acyl phosphorane (II) with prim. or sec. alcohol and heatin the resulting pentaoxyphosphorane.



(II)



$$\left[-\overset{R_1}{\underset{R_2}{C}}-\overset{R_3}{\underset{R_4}{C}}-O-\overset{OR}{\underset{\|O}{P}}-O-\overset{R_6}{C}H-COO-\right]$$

(I)

the formulae, R_{1-4} are H, lower alkyl or aryl; R_5 is ryl or halo-lower alkyl; R_6 is H, lower alkyl or aryl; =residue of prim. or sec. alcohol).

(I) is soluble in water or organic solvent such as MSO and useful as antiseptics, cosmetic additives, od antiseptics, surface treating agents, or antioxidants ith low toxicity. Its specific biological activity is expect-d.

In an example 6 mmol each of ethylene phenylphosphite nd pyruvic acid were dissolved in benzonitrile (1 mol) nd kept at 0°C overnight under dry N_2 atmosphere to fford 2-oxo-3-methyl-5-phenoxy-1, 4, 6, 9-tetraoxo-5-nosphaspiro[4, 4]nonane (6mmol). Methanol was added the product at room temp., heated at 120°C for 48 rs. and poured into excess diethylether/n-hexane to recipitate a polymer. It was dried in vacuum to give pow-ery polyphosphate (yield=35 %). (I) ($R_1=R_2=R_3=R_4=H$, $_6=R=CH_3$), mol.weight=4200. 2.8.77 as 093120 (7pp104).

NVO D22 05210X/03 #J7 9004-700

ectric light bulb with oxidn. catalyst covering - to remove fumes nd odours from rooms

UNIVERSAL OIL PROD 13.09.73-US-396950 (09.12.75-JA-146822)

*P34 R45 +P14 (09.03.79) *US3930-796 B01d-53/34 H01k-01/32 +A01l-09*

n electric light buld is (partially) covered with an oxidn. atalyst such that the heat generated by the bulb causes e catalyst to remove fumes and odours from the room. implicity and portability is obtd. 9.12.75 as 146822 01d 53/34, A01l 9/00, H01k 1/32 (9.3.79) UNIVERSAL IL PROD CO (5pp) (J52071371)

AKU- ★ D22 27234B/14 ★J7 9005-237

osorbent cotton mfr. - by reacting cotton wool with cellulase obtd. om microorganisms

YAKULT SEI KAGAKU K 21.06.68-JA-043265

F04 P32 (D16 F06) (14.03.79) A61f-13/18 D04h-01/02

fr. comprises reacting cotton wool with cellulose obtd. om a microorganism. The water absorbability of the otton wool is improved without deterioration of the intrin ic characteristics of the cotton wool.

In an example 60 mg. of cellulose was first dissolved 5 of 0.1 mol. acetic acid buffer soln. (pH 4.5) and 30 g otton wool was added to the soln. The cotton wool was 30°C for 90 mins. and then washed with water. It was ied to obtain 30 g. of absorbent cotton. The water osorbability of the absorbent cotton was increased by -15% c.f. the original cotton wool. 21.6.68 as 043265 1f 13/18, D04h 1/02 (14.3.79) YAKULT SEI KAGAKU (3pp2)

OOC D22 46830U/33 =SU -607-533

osorbent product - eg disposable nappy or sanitary towel

MO OCH DOMSJO AB 22.02.72-SW-002179

*F07 P32 +P21 (26.04.78) *BE-795-064 A41b-13/02 A61f-13*

sposable produce e.g., nappie, sanitary towel etc., of ctangular form, has an outer sheath, a thicker part and thinner part and consisting of first, second and third lay-s of absorbent material surrounded by layers of liquid-rmeable textile. The second and third layers are tra-zium shaped, placed one above the other and on the first yer in such a way that the sloping sides of the trapezium oss each other while the other sides are parallel and rectly above the corresp. edges of the first layer, when e second and third layers are folded starting from the apezia along two parallel fold lines at right angles to the ntre of the assembly, so that the absorbent product exhi-ts a thicker part where at the other end, a space is formed limited by the edges.

can be produced with a thicker end and a space for reception of faecal matter in the case of the nappie, at a low enough cost for it to be disposable. Blomkvist, N., Lef, A. Bul. 18/15.5.78. 21.2.73. as 889701 (2pp)

STEF/ D22 04361A/03 =US 4144-623

Feminine hygiene tampon mfr. - involves feeding matched lengths of cotton wool and cord into a winding spindle

STEFFENS B 30.06.76-DT-629381

*F04 P32 (20.03.79) *DT2629-381 A61f-13/20*

A tampon blank is mfd. by supplying a string from a roll onto a fleece on an horizontal conveyor, cutting off the string, pressing one part of the string onto the fleece and turning the other part transverse to the one part, and tearing off a portion of the fleece and winding the portion on a pin to form a blank.

Pref. the fleece is pressed down to both sides of the string part to be turned. The string part is pref. turned pneumatically or mechanically. The fleece portion is pref. ripped off at the string cut-off. 27.6.77 as 810569 (7pp1376)

FARH D22 29118Y/17 =US 4144-886

Absorbant laminates for use as napkins etc. - with a fabric layer coated with an absorbant carbohydrate deriv.

HOECHST AG 24.10.75-DT-547650

*A96 F07 P34 P73 +P21 P27 P32 (20.03.79) *BE-847-515 A61f-13/16 B32b-03/26 B32b-05/18 B32b-21/06*

An absorbent laminate comprises a first layer of cellulose flock ≥1 layer of a tissue having an absorbent carbohydrate deriv. on ≥1 face and a covering fleece. The tissue layer is positioned between the fleece and the first layer.

The improvement comprises that the absorbent carbohydrate deriv. is crosslinked cellulose ether, crosslinked starch ether or starch grafter with acrylonitrile and subsequently saponified. Pref. the carbohydrate deriv. is crosslinked CMC.

The laminate is used in sanitary towels, absorbent paps, undersheets for beds, diapers, etc. They retain a large proportion of the absorbed material. 26.10.76 as 735445 (6pp964)

JOHJ ★ D22 27627B/14 ★US 4144-887

Adhesive fastener for disposable diaper - has separate backing and facing webs which are foldable to storage position

JOHNSON & JOHNSON 20.10.76-US-734205 (29.09.75-US-617902)

A96 P32 (20.03.79) A61f-13/16

A disposable diaper has adhesive tab fasteners each of which comprises a backing web folded over the edge of the diaper to form first and second anchoring legs which have an adhesive coating on their inner face to permanently adhere to the diaper.

A face web has a fixed end permanently attached to the second leg, and a grippable adhesive-face region at its opposite end. A free working portion is situated between the two ends and this has a layer of pressure-sensitive adhesive on one of its faces. A release area is releasably attached to the adhesive layer on the free working portion.

In the storage position the grippable adhesive-free region extends inwardly away from the lateral margin of the diaper and beyond the release area and the first leg of the backing web. The free working portion is separable from the release area in the non-storage position.

The tab fastener is used to secure the disposable diaper about the waist of an infant. The fasteners remain flat against the diaper in the folded condition and do not interfere with the diaper mfg. machinery. 20.10.76 as 734205 C.i.p. 3987793 (7pp295)

ANDP D22 27188A/15 =US 4145-186

Colorimetric determination of sterilising agent dosage - by indicator dye mixt. with salt of strong acid and weak base

ANDERSEN HW PROD INC 04.10.76-US-729552

*A97 J04 P34 +R14 R16 (20.03.79) *DT2729-711 G01n-31/22 +G01k-11/12*

Method of measuring the instantaneous degree of effectiveness of a sterilant delivered to an enclosed space includes coating inert particles with a strong acid salt, weak base, acid-alkali indicator dye mixt.; placing the particles in a container impermeable to the sterilant; passing the sterilant from the space through an opening into the container such that the sterilant reacts with the salt to effect a colour change, a demarkation line between unreacted and reacted salt(i.e. when the sterilant is exhausted) being produced, which advances when as time, temp. and conc. of sterilant in the space increases. The container has calibrated indicia to provide successive indication of the effectiveness. 4.10.76 as 729552 (7pp1376)

ABBO D22 32067A/18 = US 4145-253

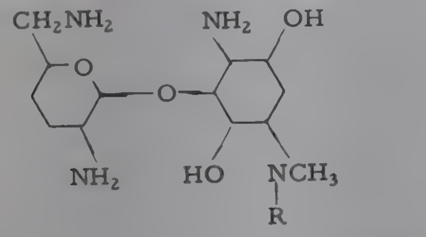
Fortimycin D and KE antibiotics - with broad-spectrum antibacterial activity

ABBOTT LABORATORIES 14.01.77-JA-002338 (28.10.76-JA-128837)

*B03 E13 +P34 (D16) (20.03.79) *BE-860-210 C12d-09/14*

Prepn. of antiboitics (I) (where R is H or $C(O)CH_2NH_2$) comprises culturing a Micromonospora olivoasterospora microorganism esp. ATCC 21819, ATCC 31009, ATCC 31010 or NRRL 8178. Pref. culture is at 25-40°C for 2-15 days at neutral pH.

(I)



Cpds. (I), named as Fortimicin D ($R = COCH_2NH_2$) and Fortimicin KE (R=H) are used as sterilising and sanitation agents and as pharmaceuticals They have broad spectrum antibacterial action. 27.10.77 as 845970 (16pp945)

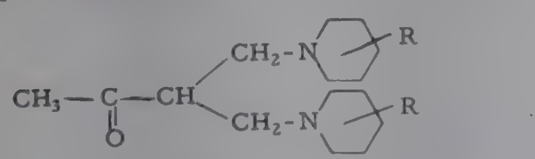
MERI ★ D22 27759B/14 ★US 4145-426

Antimicrobial piperidino-butan-2-one(s) - useful as intermediates for known piperidino butan-2-one(s) which have antibacterial and antifungal activity

MERCK & CO INC 18.07.77-US-816613

C02 E13 (20.03.79) A61k-31/44 C07d-211/44

Piperidino butan-2-ones of formula (I) are new.



In (I) R and R^1 are 1-3C alkyl, OH, 1-3C hydroxy-alkyl, phenyl, carboxy carboxamido, N-1-4C alkylcarboxamido, 2-5 alkoxycarbonyl, 1-pyrrolidinyl or 1-piperidinyl provided that R and R^1 are substd. at either the 3 or 4 posn. on the piperidine rings and the rings are identically substd.

(I) are antimicrobials, useful against the action of bacteria and fungi. 18.7.77 as 816613 (5pp954)

SCOP ★ D22 27772B/14 ★US 4145-464

Surface particles adhered to nonwoven web - to improve absorbency, used e.g. as wiper or in disposable diapers

SCOTT PAPER CO 15.10.76-US-732776

F04 P73 (20.03.79) B32b-05/14

Particulate material of less than 48 mesh size is bonded to the surface of a high loft cellulosic fibre web having compressed regions. The particulate material comprises at least 50% of the surface layer and is mixed with the fibres at the interface with the high loft areas. The web has a preponderance of 1.2-6.35 mm fibres of a size which would be retained on a 14 mesh screen.

The particulate layer effectively laterally wicks liquids for absorbtion into relatively dry particulate-free areas. Flooding of pads made from the particulate-surfaced web is thus reduced. 15.10.76 as 732776 (9pp1320)

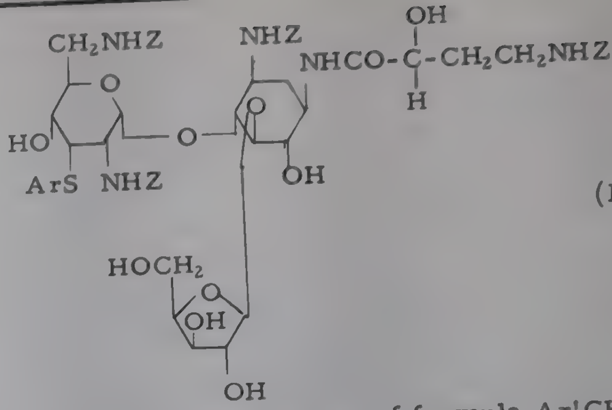
PARK ★ D22 27797B/14 ★US 4145-529

Antibacterial 3'-deoxy butirosin A prepn. - by reducing tetra-N-protected-3'-arylthio-3' deoxy butirosin A

PARKE DAVIS & CO 31.07.75-US-600677

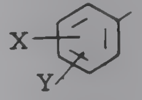
B03 (20.03.79) A61k-31/71 C07h-15/22

Prepn. of 3'-deoxybutirosin A comprises reducing the corresponding tetra-N-protected-3'-arylthio-3'-deoxybutirosin A of formula (I) using molecular hydrogen in the presence of a noble metal catalyst or sodium in liquid ammonia.

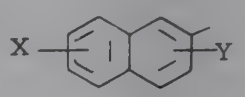


(I)

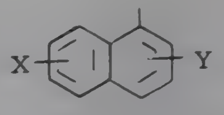
In (I) Z is a protecting gp. of formula $Ar'CH_2O.CO.-$; Ar and Ar' are gps. of formulae (II), (III) and /or (IV), X and Y are H, halogen, NO_2, 1-4C alkyl or 1-4C alkoxy).



(II)



(III)



(IV)

3'-Deoxybutirosin A and its acid addition salts possess antibacterial activity against a number of microorganisms and esp. against Pseudomonas aeruginosa and certain but irosin- and gentamycin-resistant microorganisms. It ca be administered parenterally or topically. It can also be used to sterilise the gastrointestinal tract by oral administration. Further it can be used as a sterilising agent in in-vitro applications such as sterilising laboratory instruments, pharmaceutical prods., etc.. 31.7.75 as 600677 (6pp914)

OLIN ★ D22 27802B/14 ★US 4145-5

Sodium di:chloro-isocyanurate compsns. - contg. alkali met chloride, with improved resistance to thermal decompsn.

OLIN CORP 08.09.76-US-721261

E12 (20.03.79) C07d-251/36

Compsn. contains Na dichloroisocyanurate (I) and 6-14 (12) wt.% (on (I)) of an alkali metal chloride (II), pref. Na

Compsns. are readily soluble in aq. solns., and have improved resistance to thermal decompsn. (I) are usefu in laundry, bleaching and sanitising applications. 8.9.7 as 721261 (3pp478)

PETL ★ D22 27804B/14 ★US 4145-5

2,3,4,5-Tetra:hydro-pyrimidine - prepd. by reaction of a carbor cpd. with ammonia in the presence of carbon di:sulphide as cataly

PETROLITE CORP 15.06.77-US-806878 (27.09.72-US-292494)

C02 E13 M14 (20.03.79) C07d-239/06

Prepn. of 2,3,4,5-tetrahydropyrimidines (I) comprises acting an aldehyde or ketone at ambient-temp. and pres ure with NH_3 or NH_4OH in the presence of 0.1-2.0 mole CS_2 as catalyst.

(I) are intermediates in the prepn. of N-dithiocarboxy lates. Reaction of (I) with CS_2 (c.f. 42060 A(23)) gives xanthates which are useful as corrosion inhibitor, insec cides, oxygen scavengers and biocides. 15.6.77 as 806878 C.i.p. 4085084 (7pp954)

STER ★ D22 27844B/14 ★ZA 7800-5

Heterocyclic methylene-bis:aza-oxa cpds. - for preventing retarding growth of bacteria and fungi

STERLING DRUG INC 30.01.78-ZA-000537

C02 E13 (01.11.78) C07d-203/10

See Also

D13 EP ---1280 D15 GB 1543404 D21 US 4145305

D23: OILS; FATS; WAXES

FADE/ ★ D23 26017B/14 ★DL-133-406
Prodn. of free-flowing paraffin wax granules - by passing molten wax through a perforated centrifuge basket
FADER W 20.09.77-DL-201094
J04 (03.01.79) B01j-02/12

Free-flowing paraffin wax granules are made from low-viscosity wax with m.pt. 50-70°C and viscosity 4-9.5 cSt. at 80°C, by heating to 65-85°C and feeding continuously to a conical or cylindrical centrifuge basket contg. 500-2000 (1400) perforations of 1.0-1.6(1.4-1.6) mm. size and rotating at 1000-1800 (1500) rpm. The wax is forced through the holes into a granulate tower through which cool air flows.

Used in modern candle mfr. and wax processing. The wax is almost dust-free, contg. only 2-4% below 0.63 mm. Instead of the usual 15-17% in powdered wax. Particle size distribution is narrow and the tendency to agglomerate is reduced. High output rates of 400-1300 kg/h. are obtd. 20.9.77 as 201094 (7pp195)

FIED/ ★ D23 26058B/14 ★DL-133-525
Two-layer filtering arrangement - to remove fuller's earth from oils without requiring a filtering aid
FIEDLER H 31.10.77-DL-201770
H07 J01 (10.01.79) B01d-39/10

In centrifugal disc filtering appts. for removing bleaching earth from mineral oils, used oils and vegetable oils, the filter comprises a two layer metallic mesh the first of which, capable of withstand very high mechanical stresses having mesh openings of 0.01-0.5 mm while the second (upper) layer has mesh openings of 0.01-0.1, pref. 0.025-0.063 mm.

This provides a means for directly filtering the oil, i.e without need for a filter aid or without special regard to the particle size of the adsorbent, to provide a solids-free filtrate. After filtration, the filter cake is easily removed. 31.10.77 as 201770 (5pp922)

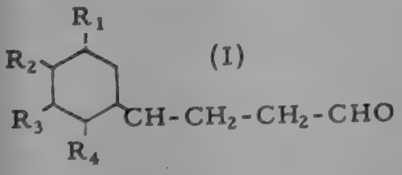
ELSP/ ★ D23 26116B/14 ★DL-133-686
Rotary solid-liquid extractor - with sector shaped containers and spacer plates attached to central vertical tube
ELSPASS R 26.09.77-DL-201190
(17.01.79) B01d-11/02 C11b-01/10

A rotary extractor for solid/liquid extraction with solvents in the mfr. of oil from rape seed consists of a rotor formed by a vertical, centrally supported tube with brackets into which sector-shaped containers are hooked. The containers have rollers at their outer end which run on a track; they have slots at the inner and outer ends for spacer plates.

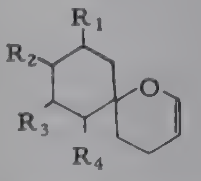
An extractor of large diameter and capacity can thus be mfd. at little expense. The extractor is easy to transport and to assemble on site and ensures a high functional reliability. 26.9.77 as 201190 (8pp39)

NAAR D23 55356R/31 =DS 2006-388
New perfumes and preparation of perfume - compositions
NAARDEN INT NV 04.02.69-NL-001750
*E15 (29.03.79) *BE-745-356 C07c-47/44 C11b-09*

Novel cycloalkylidene butanals are of formula (I)



(I)

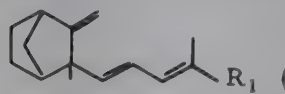


(II)

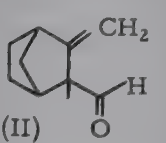
In (I) R_1 with R_4 and/or R_2 with R_3 may form an alkylene or propenylene bridge and any residual atoms are H. (I) have a fruity-green smell with undertones of pure lilly-of-the-valley. Their prodn. is by otherwise known methods (e.g. by heating over a Cu catalyst at 200-400°C). 3.2.70 as 006388 (4pp922)

BADI ★ D23 26274B/14 ★DT 2742-185
Subsd. pentadienyl-bi:cycloheptane derivs. used as perfumes - are prepd. by reacting methylene-methyl-formyl bi:cycloheptane with a phosphorylide by Wittig reaction
BASF AG 20.09.77-DT-742185
E15 (29.03.79) A61k-07/46 C07c-13/40 C07c-35/28 C07c-47/45 C07c-69/74 C07c-121/48

New bicyclic perfume substances have formula (I)



(I)



(II)

(where R_1 is $-CH_2OH$ $-CHO$, $-COOMe$, $-COOEt$, $-CN$ or Me). 2-Methylene-3-methyl-3-formyl-bicyclo-/2,2,1/-heptane, having formula (II), and used as precursor in prepn. of (I), is also new.

(I) can be used as fully synthetic perfumes and have interesting organoleptic properties. E.g. (I where R_1 is $-CH_2OH$), i.e. 2-methylene-3-methyl-3-(4'-hydroxymethyl-1',3'-pentadien-1'-yl)-bicyclo/2,2,1/-heptane, b.pt. 130°C/0.08 Torr. has a balmy, woody, mild odour, (I where R is Me), b.pt. 65°C/0.1 Torr, has a pleasant woody note. 20.9.77 as 742185 (17pp200)

INDE/ ★ D23 26276B/14 ★DT 2742-206
Paraffin coating for candles - applied by pumping hot paraffin over revolving candle
INDERBIETHEN H 20.09.77-DT-742206
(29.03.79) C11b-05

A paraffin layer is applied to a candle in order to give it a coloured surface or to improve the surface or to prevent a run-out of the liq. paraffin by a harder outer skin. The paraffin is directed to the surface in a liq. hot state and the candle itself is rotated during this operation.

The difficulties caused by lightweight candles in the conventional immersion process are eliminated. The method ensures a uniform and spotless coating. 20.9.77 as 742206 (7pp39)

SYNT= ★ D23 27292B/14 ★SU-606-851
D-Limonene used for mfr. of perfumes - is obtd. by treating dill oil free of carvone with maleic anhydride and steam extraction
SYNTH NAT PERFUME 23.09.76-SU-407850
E15 (24.04.78) C07c-13/21 C11b-09

D-limonene for perfumes and cosmetics is obtd. from dill oil, after sepn. of carvone, by treating the oil with maleic anhydride at 90-150°C; removing technical limonene with steam; and distillation of product in a vacuum. For increased yield, the residual fractions from steam removal and distillation are boiled with boric acid in toluene soln. followed by distillation of limonene in vacuum. Yield is $\leqslant$ 33% of wt. of oil or 87% limonene content of oil.

Kruglova, M.V., Kustova, S.D., Karpova, T.I. et al. Bul 18/15.5.78. 23.9.76. as 407850(2pp1347)

ZORK/ ★ D23 27318B/14 ★SU-606-878
Fat and crackling separator - has additional centrifuge with two augers of variable pitch
ZORKALTSEV V N 09.11.76-SU-419173
(17.04.78) C11b-01/06

Improved sepration of fat from cracklings is due to an additional screen centrifuge in the downstream of one of the augers in combination with an auxiliary auger. The two augers are mounted on both sides of the additional centrifuge and feature a variable pitch of their flight, while the auger in the upstream of the main centrifuge has a constant pitch.

The heated cracklings and the water-fat emulsion are fed to the inlet tube where they are picked up by the auger and forced through the gap between the layer limiter and

Zorkaltsev, V.N. Bul. 18/15.5.78. 9.11.76. as 419173 (2pp89)

BIOL= ★ D23 27319B/14 ★SU -606-879
Antioxidant for fats and oils used in food industry and medicine - comprises 2,2,4-tri:methyl-1,2,3,4-tetra:hydro hydroxy-quinoline cpds., to improve stabilisation
BIOLOG CHEM FUSION 05.10.76-SU-409574
E14 (17.04.78) C11b-05

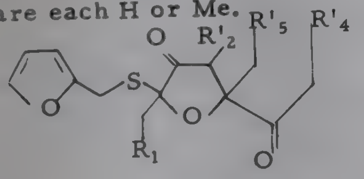
Fats and oils are stabilised against oxidn. by adding 0.001-0.1 wt.% 2,2,4-trimethyl-1,2,3,4-tetrahydro-6-hydroxy-quinoline and/or 2,2,4-trimethyl-1,2,3,4-tetrahydro-8-hydroxyquinoline. Effective stabilisation is provided at 70°-170°C.

The stabilisers may be prepd. by dealkylating the corresponding 2,2,4-trimethyl-1,2,3,4-tetrahydro-6- or -8-(m)ethoxy quinolines.

Shmulovich, V.G., Dmitrichuk, N.A., Goldenberg, V.I. et al. Bul. 18/15.5.78. 5.10.76. as 409574 (3pp314)

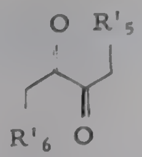
INFL D23 53306A/29 =US 4145-354
5-Alkanoyl-2-furfuryl-thio-di:hydro-2,5-di:alkyl- 2H)furan-3-one(s) - for improving flavour and aroma of food, medicine, tobacco
INT FLAVORS & FRAGR INC 28.07.77-US-819957 (17.03.78-US-887637)
*B07 E13 +P15 (B03 D13 D18) (20.03.79) *US4092-334 C07d-307/64*

The prepn. of 5-acyl-2-(furfurylthio)dihydro-2,5-dialkyl-3-([2H]-furanones of formula (I) is described. In (I) R'$_1$-R'$_4$ are each H or Me.

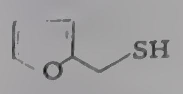


(I)

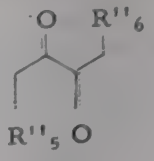
Prepn. comprises (i) reacting an α,β-diketone of formula (II) with a furfuryl mercaptan of formula (III) and reacting the resulting addn. prod. with an α,β-diketone of formula (IV) (R'$_5$, R'$_6$, R''$_5$, R''$_6$ being H or Me the number of Me gps. in these being the same as in R'$_1$-R'$_4$). (I) are used to improve the flavour of foodstuffs, medicines and tobacc Parent patent claimed (I) as new. 17.3.78 as 887637 Div. ex. 4092334 (28pp964)



(II)



(III)



(IV)

COUS/ D23 47687W/29 =US 4145-452
Fat compsn. with quasi-vitreous structure - by blending a dry gum with a mixt. of liquid and solid fat
COUSIN C M 14.01.74-FR-001154
*(20.03.79) *BE-824-057 A23d-05*

Fatty substances contain fatty constituents which are glyceridic esters of fatty organic acid. Some constituents are solid, and others liq. at room temp. such that relative amts. yield a crystalline structure.

Compsn. contains higher polyholosides vegetable gum to 0.01-1.5 wt.% w.r.t. gum unassociated with water in fatty substance. Gum is insol. in fatty constituents. Fat substance has quasi-vitreous structure at room temp. in which the fatty constituents are divided into small areas bounded by elongated chains of gum.

Compsn. are used in food industry, esp. with solid objects, required to have a determined shape, such as ba patties, thin layers, or coatings and fillings. 19.10.77 a 843551 (+6.1.75, 6.1.77-US-538941, 757335) (5pp931)

D24: SOAP; SOAP DETERGENTS

See Also
D21 J5 4026807

D25: OTHER DETERGENTS

CHEM ★ D25 25905B/14 ★BE -870-802
Aq. cleaning solns. contg. alkyl glycol ether sulphate(s) - and electrolytes, enabling high electrolyte concns.
CHEM WERKE HULS AG 28.09.77-DT-743607
E17 (27.03.79) C11d

Cleaning agent soln. contain ⩾5 (⩾10)% of the usual electrolytes and cpds. of formula $R-O-CH_2CH_2-OSO_3M$ (where R is 3-7C alkyl and M is Na or K.).

Solns. are used esp. in industrial applications particularly in cleaning by machines. They foam very little, can contain high concns. of electrolytes which are stable to storage, and are easily biodegradable. 27.9.78 as 870802 (12pp597).

UNIL ★ D25 25934B/14 ★BE -870-913
Liq. soap prod. contg. specified potassium soaps - together with specified alkylene glycol(s), water and opt. glycerol (OE 15.3.79)
UNILEVER NV 05.10.77-GB-041467
E12 (D21 E17) (29.03.79) C11d-09/04

The soap comprises 12-40% K soaps of saturated fatty acids the molecule of which contains preponderantly 12, 16 or 18C atoms, 0-20% of glycerol and 20-5% of propylene-, ethylene-, diethylene-, or triethyl-glycols or mixtures of these.

The soap is esp. used in distributors used for hand washing in toilets etc.. The improvement on the principal patent comprises replacing (part of) the glycerol with the alkyleneglycol resulting in less hardness and a better elimination by rinsing. 29.9.78 as 870913 Add to 799838 (9pp597).

FMCC ★ D25 25936B/14 ★BE -870-9
Activator for per:oxygenated bleach - comprises a carboxyl sulphonic anhydride
FMC CORP 03.10.77-US-838902
E19 (02.04.79) C11d D06p

Peroxygenated bleaching bath contains an anhydride of a carbocylic acid and a sulphonic acid $R^1(SO_2OCOR^2)_n$ or $(R^1SO_2OCO\ _nR^2$; where n = 1-3; R^1 and R^2 are mono- to trivalent hydrocarbon radicals derived from a 1-16C alkane, a 3-7C cycloalkane, or 6-12C aromatic such tha R^1 and R^2 can together form an o-phenylene or o-naphthalene nucleus. (The hydrocarbon radicals can carry 1- various defined substituents).

The peroxygenated cpd. is pref. tetrahydrated sodiu perborate, in sufficient quantity to give 2-2000 ppm. active oxygen, its molar ratio to the defined anhydride being between 20:1 and 1:3. Other constituents can also be present in the bath, partic. a detergent and a buffer to maintain the pH at 6-12.

Cpds. are activation agents for peroxygenated bleaches, enabling them to be used effectively at lower temps They are sufficiently soluble in the bleaching system to ensure the required activation. 2.10.78 as 870943 (26p

EAK ★ D25 26137B/14 ★DL -133-790
egrading fluorinated polymer to oligomers of controlled chain ngth - by irradiation of thin polymer layer, pref. with electron eam
AKAD WISSENSCHAFT DDR 19.05.77-DL-198991
A35 B05 E16 (A14) (24.01.79) C07c-19/08

n the degradation of highly fluorinated polymers, esp. TFE, to oligomers, a thin, uniformly heated layer of he polymer is irradiated by energy-rich radiation, esp. n electron beam, the breakdown prods. are partially ondensed at a temp. close to the b.pt. of the pre-deter-nined max. chain length, and the condensate is recycled n countercurrent exchange with the evaporating break-own prods., so that breakdown prods. up to a pre-deter-nined max. chain length are obtd. The thickness of the ayer of polymer is adjusted to the depth of penetration f the irradiation.

Complete conversion of the polymer to valuable break-own prods. is obtd. A uniform reaction temp. is main-ained. The breakdown prods. may be used as starting-naterials for prepn. of e.g. textile dressings, fluorinat-d surfactants or biologically active cpds. 19.5.77 as 98991 (7pp510)

IENK D25 73612S/46 =DS 2024-050
repn of monoesters of alkylene glycols
HENKEL KG AUF AKTIEN 16.05.70-DT-024050
*E16 (29.03.79) *BE-767-214 C07c-67/26*

lkylene glycol monoesters of 4-26C acyclic (poly)carbox-lic acids are obtd. by reacting the acids with 2-4C alkyl-ne oxides at raised temps. and opt. raised pressure us-ng aliph. mono-/di- and/or polyamines (I) as catalysts.

Suitable (I) are of formula $R_1R_2R_3N$ (where R_1 and R_2 re H or 1-24C aliph. gps. and R_3 is a 1-24C aliph. gp. pt. contg. $\geqslant 1$ N atom).

The esters, useful intermediates in the prodn. of sulp-ate-type surfactants, are obtd. with no α-branching and argely free of by-prods. 16.5.70 as 024050 (4pp922)

ANA ★ D25 26399B/14 ★DT 2840-499
uid for cleaning worked metal articles - contains aromatic-eficient hydrocarbon, ethoxylate and di:esterified mono:glyceride f fatty acid
DANFOSS A/S 26.09.77-DK-004235
E17 M12 (E14) (29.03.79) C11d-03/44

-Phase system cleansing fluid consists of (i) a hydrocar-on poor in aromatics, (ii) an alkyl-aryl-ethoxylate or lkyl ethoxylate, as wetting agent, and (iii)$\geqslant 1$ diesterified nonoglyceride of$\geqslant 1$ fatty acid, esp. lauric acid, as bind-r between the 2 phases (i) and (ii) which are insol. in one nother.

The fluid is used for cleaning metal articles after sur-ace-working. The fluid has good cleansing activity, gen-rates no unpleasant smell and presents no health-hazards, .g. skin irritations. The mixts. separate easily from vater and can be recovered, after use, by rinsing with vater whereby they float on rinsing water surface. 18.9.78 s 840499 (7pp200)

ROC ★ D25 26454B/14 ★EP ---1-310
ow phosphate built detergent compsn. - contg. poly:carboxylate uilder, poly:phosphonic acid or salt, and detergent
PROCTER & GAMBLE CO 26.09.77-GB-039947
A97 E19 (04.04.79) C11d-03
/S: E(BE, DT, FR, GB, NL)

detergent compsn. contg. $\not> 6\%$ P and of pH < 10 (1% aq. oln.) comprises (i) 2-75 % organic anionic, nonionic, mphoteric and/or zwitterionic detergent(s), (ii) 4-50% oly)carboxylate builder (I) of first carboxyl $pK_a < 9$, and ii) 0.01-4% polyphosphonic acid (salt) (II). Pref. (I) has rst pK_a 2-8.5 and pref. has log Ca stability constant 2-7. ompsn. pref. has pH 6-9 (1% aq. soln.).

Low phosphate compsn. has equivalent cleaning perf-rmance to conventional tripolyphosphate-built compsns. nd have effective detergency and building performance ased on lower than usual amts. of polycarboxylate build-rs. Compsn. has improved cleaning performance in the rea of bleachable stain detergency.
.9.78 as 200190 (28pp949).
DT2330503; GB1290724; GB1439000.

PROC ★ D25 26457B/14 ★EP ---1-315
Antistatic, fabric-softening detergent compsn. - comprising mixt. of quat. ammonium cpd. and dispersion inhibitor particles adhered to detergent compsn. granules
PROCTER & GAMBLE CO 26.09.77-US-836811
E19 F06 (04.04.79) C07c-87 C11d-01/62 C11d-11/02
D/S: E(BE, CH, DT, FR, GB, NL).

Fabric conditioning compsn. comprises (a) 3-40 wt.% of a mixt. of 80-20 wt.% quat. ammonium cpd. (I) and 20-80 wt.% of dispersion inhibitor (II), the mixt. being 10-500 (50-200) μ approx. spherical particles partially embedded in and attached to (b) 97-60 wt.% of spray dried granules comprising 99-5 wt.% surfactant (III) and 1-95 wt.% of a mixt. of 1-100% builder and $\leqslant$ 99% inert, inorganic water-soluble salt.

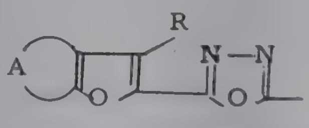
(I) is of formula $(NR_1R_2R_3R_4)^+Y^-$ (I) (where 1 or 2 of R_{1-4} is/are an organic gp. contg. a 16-22C aliphatic gp. or an alkyl-phenyl or alkyl-benzyl gp. with 10-16C in the alkyl gp., the remaining gps. being 1-4C alkyl, 2-4C hydroxyalkyl, or a 3-8C ring contg. the N atom (or atoms); Y is OH, halide, sulphate, (m)ethylsulphate or phosphate).

(II) is an organic solid of max. water solubility 50 ppm at 25°C and softening pt. 100-200 (150-175)°F and is a paraffin wax, (a)cyclic mono- or polyhydric alcohol, (un) substd. aliphatic carboxylic acid, ester of the acids and alcohols, 3-4C alkylene oxide condensate of any of these, or mixts. thereof. All the mixt. of (I) and (II) has a max. water-solubility of 50 ppm at 25°C and a softening pt. of 100-200°F.

Compsn. imparts antistatic props. The prod. is structurally stable, uniform, does not segregate, allows ready dissolution of the detergent, and maintains the integrity of the softener particles in the wash water. Amts. of (I) needed and wastage of (I) are reduced.
26.9.78 as 200208 (90pp949).
ISR: DT2548242; US3993573; DT2312818; DT2704507.

FARH D25 72355X/39 =GB 1543-368
Benzofuran derivs used as optical brighteners - for high mol wt materials soaps and detergents and their prepn (BE060976)
HOECHST AG 05.03.75-DT-509514
*A60 E23 F06 (F09) (04.04.79) *DT2509-514 C07d-273/02 D06l-01/04 + C07d-307/78*

New benzofuran derivs. (I) are of formula Z-D-Z where Z is a gp. (II) and D is a direct bond or a bivalent aromatic, aliphatic or heteroaromatic bridging gp. which continues the conjugation. Each A is independently a grouping which completes an aromatic mono- or polynuclear ring system which is fused with the furan nucleus, and which may be substd. by$\geqslant 1$ non-chromophoric substit.



Each R is independently H, halogen, lower alkyl, phenyl opt. substd. by$\geqslant 1$ lower alkyl, lower alkoxy and/or halogen substit., carboxy, sulpho or functionally modified carboxy or sulpho The pref. cpds. are those which fluoresce in soln. in the range 410-450 nm.

Cpds. (I) are useful for optically brightening plastics, paper, fibres and textile materials. (I) can be incorporated in soaps and detergents. 5.3.76. as 008976 (17pp927)

FARH D25 61192Y/35 =GB 1543-522
Alkali metal phosphate soln. prepn. - from crude phosphoric acid contg. chromium and vanadium by two-stage neutralisation
HOECHST AG 27.02.76-DT-608[illegible]9
*E34 (04.04.79) *BE-851-825 C01b-25/30*

Prodn. of alkali metal phosphate solns. with an alkali metal oxide to P_2O_5 molar ratio$> 1.9:1$ comprises subjecting wet-processed phosphoric acid contg. $>$ 400 ppm V and$>$600 ppm Cr to stepwise neutralisation using alkali metal hydroxide and/or carbonate by initially neutralising the acid in a first step to give an alkali metal oxide to P_2O_5, molar ratio of 1-1.8:1.

The resulting ppte. in sepd. and the soln. mixed with an Fe (II) salt at elevated temp. Method further comprises neutralising the acid in a second step to adjust the above ratio to$>$1.9:1 and sepg. the resulting ppte. to give an alkali metal phosphate soln. This soln. contains $<$20ppmV (based on P_2O_5) and$<$1 ppm Cr (based on P_2O_5) in the event that the acid is reductively pretreated before the first neutralisation and 5-7.6 ppm Cr (based on P_2O_5) in the even that the acid is not so treated.

The obtd. solns. are used to make condensed alkali metal phosphates, useful in detergents. 18.2.77. as 006922 (6pp992)

CIBA ★ D25 26555B/14 ★GB 1543-730

Cast blocks for cleaning lavatories - contain hydrophobic agent, surfactant, and opt. disinfectant and dyestuff

CIBA GEIGY AG 18.12.75-GB-051945
A97 E19 (A25) (04.04.79) C11d-01 C11d-03/18

Package prepd. by casting a block for cleaning lavatory bowls or urinals contains (a) 1-95 wt.% $\geqslant$1 hydrophobic agents (I); (b) 5-95 wt.% $\geqslant$1 surfactants (II); (c) 0. 35wt. % $\geqslant$1 compatible disinfectants; and (d)$\leqslant$15 wt.% dyestuff.

(II) is an opt branched alkyl aryl sulphonate, fatty alcohol sulphate, fatty alcohol ether sulphate, fatty alcohol ethoxylate ($>$16 ethylene oxide (EO) units/mol.), polyoxyethylene alkyl phenol ($>$14 EO/mol), fatty acid monoalkanolamide ethoxylate ($>$14 EO/mol), or an EO-propylene oxide copolymer.

The cleaning block may be immersed directly in the H_2O of the cistern to provide a continuous release of cleaning agent. The compsn. has sufficient hardness and consistency to be removed completely from the mould at room temps. by squeezing or tapping the mould. 17.12.76 (4pp478)

JAPC ★ D25 26631B/14 ★J5 4025-286

High purity anionic surfactant with good detergency effect - is di:sodium salt of sulpho:succinic acid mono secondary alcohol ethoxylate ester

NIPPON SHOKUBAI KAGAKU 29.07.77-JA-090400
E12 (26.02.79) C11d-01/29

Anionic surfactant (I) is composed of disodium salt of sulpho-succinic acid-mono-secondary alcohol ethoxylate ester (II), which is prepd. by (1) formation of maleinic acid-monosecondary alcohol ethoxylate ester (III) by the reaction between maleinic acid anhydrate (V) and 8-20 C sec. alcohol ethoxylate (VI), at below 80°C in N_2 stream in the presence of 0.05-5 wt.% of alkali metal-organic acid salt-catalyst, where the ratio of (V)/(VI) is 0.98/1.02 - 1.02/0.98, and (2) sulphonation of (III) by sodium sulphite and/or sodium bisulphate equimolar as (V), at below 80°C and pH 5.5 ± 0.2 in N_2 stream in the presence of water.

Foams can be easily broken. Calcium can be well-dispersed. Detergency is high in spite of low surface tension and low permeability. Solubility is high and the resistance against hydrolysis is high. 29.7.77 as 090400 (11pp42).

HITA ★ D25 26632B/14 ★J5 4025-287

Defoaming agent used in concn. nuclear plant laundry water - comprises silicone oil and emulsifiers of controlled HLB values

HITACHI KK 29.07.77-JA-090296
A97 K07 (26.02.79) B01d-19/04 C02c-05

A defoaming agent (I) is composed of silicone oil (II), an emulsifier (III) and other emulsifier (IV). The HLB of (IV) is higher than that of (III) and the average value of HLB of (III) and (IV) is 7 - 9.

(I) is esp. for defoaming during concentration of laundry water in atomic electric-generating plant, where a large number of working clothes are washed to remove radioactivity. (I) can exhibit high defoaming activity at high temp.

HLB of (III) should be $<$7, e.g. (3.5), and HLB of (IV) should be $>$7. In use (II) normally coagulates gradually and looses its defoaming activity, but in the present compsn. (II) is well-dispersed and the stability of emulsion of (II) is maintained. 29.7.77 as 090296 (4pp42).

NICH- ★ D25 26673B/14 ★J5 4025-

Prodn. of non-foaming detergent compsn. - by mixing chicker faeces soybean meal and rice bran, carbonising, water treatmen and filtering; using filtrate as detergent

NICHIZO KK 29.07.77-JA-091170
(27.02.79) C11d-11

Faeces of chicken, soybean meal, and rice bran are mixed. The mixture is carbonised by fumigating by heating, whereby the air is shut off, to obtain activated carbon. Obtd. activated carbon is dipped in water and filtered. Obtd. filtrate is used as the detergent compsn.

In an example 40 kg chicken faeces, 30 kg soybean meal, and 30 kg rice-bran were charged in a fumigating furnace and the cover of the furnace was closed tightly to isolate from the external air. The furnace was heated to 500-800°C for 4-6 hr. until no fumigated gas was discharged. About 50 kg obtd. activated carbon was dipped in 400 l distilled water for 2-3 days, and the filtrate obtd. by filtering said activated carbon was preserved in a vessel. When the filtrate was diluted and applied to soils resulted from oils or fats, proteins or other organic substances by dipping, brushing, or spraying, the organic substances were decomposed and dispersed. 29.7.77 as 091170 (2pp126).

JOHN- ★ D25 26904B/14 ★J5 4026-8

Powdery detergent compsn. contg. fatty acid di:ethanolamide(s derived from coconut oil, inorganic carbonate, solid acid a anionic surfactant

JOHNSON KK 02.08.77-JA-092160
E16 (28.02.79) C11d-10/02

Powdery detergent compsn. of foaming type comprises - 1.4 wt.pts. of fatty acid diethanolamides derived from coconut oil (condensn. prods. of the fatty acids and diethanol amine in a molar ratio of 1 : 1, e.g., Promean 3511 and Prophane Extra 24 and in a molar ratio of 1 : e.g., Prophane 2012)occluded in 1 wt, pt. of powder having large specific surface area (those having BET su face area $>$ 100 m^2/g, e.g. aerosil 200 having a BET value of 200 m^2/g, Silton R2 having a BET value of 200 m^2/g and Silton A having a BET value of 250 m^2/g, Ata 40 aluminium silicate having a BET value of 210 m^2/g.) powdery mixt. of an inorganic carbonate and a water-soluble solid acid which is formed by dissolving it in water and a powdery anionic surface active agent.

The detergent compsn. can eliminate conventional disadvantage that the fatty acid diethanolamides are ve effective but are liquid and make the mixing very diffic 2,8.77 as 092160 (3pp59).

DIAL D25 69239T/43 =J7 9004

Carboxymethylstarch - as suspension agent in washing compsns

DIAMALT AG 19.04.71-DT-118902
*A97 (A12 D17) (12.03.79) *BE-782-282 C11d-03/22*

A carboxy methyl starch for use, as a suspension age for impurities, in washing products, is prepd. by the reaction of starch with an alkali and an alkali metal sa of chloroacetic acid, in a practically anhydrous alcoho pref. methanol, medium contg. $<$ 20% pref. 5-15% of at 60°-100°C, pref. 80-90°C, out of contact with atmo heric O_2.

The product is easily degradable. 14.4.72 as 03762 (clg. 19.4.71-DT-118902) C11d 3/22 (12.3.79) DIAMA A.G. (5pp) (J47039181)

PROC D25 40311Y/23 =US 414

Detergent for washing textiles - contg. surfactant and per encapsulated in friable polymer microcapsules releasing cor on handling

PROCTER & GAMBLE CO 28.11.75-US-636381
*A97 +P43 (20.03.79) *DT2653-329 +B08b-03/04*

Laundry detergent compsn. comprises (a) 2-95% of su actant selected from anionic, nonionic, ampholytic ar zwitterionic surfactants, and (b) perfuming agent com ing a perfume encapsulated in water insoluble, friabl crocapsules having an average size of 5-300 µ.

Pref. microcapsules have shell walls of polyureth polyolefin, polyamide, polyester, polysaccharide, si resin, epoxy resin or aminoplast polymer derived fr urea and formaldehyde. The compsn. releases the p ume during manipulation of the dry fabric. 28.11.75 as 636381 (8pp924)

ATLF ★ D25 27711B/14 ★US 4145-302

Detergent-contg. cleansing pads - contg. alkali(ne earth) metal sulphonic or sulphuric acid ester salt detergents

ATLANTIC RICHFIELD CO 26.05.78-US-909881 (18.06.76-US-697510)

A97 (20.03.79) C11d-01/37 C11d-17/04

Improved detergent pad consists of a porous cleansing article which includes a dry H_2O-activated detergent mixt. consisting of: (A) $\geqslant 1$ organic sulphonic acid or H_2SO_4 ester salts (I) of Li, Na, K, NH_4, or Mg; and (b) $\geqslant 1$ organic sulphonic acid or H_2SO_4 ester salts (II) of Ca or Ba.

The sulphonic acid or H_2SO_4 esters from which (I) and (II) are prepd. contain 8-20 total non-aromatic ring C, and are alkylaryl sulphonic acids, α-olefin sulphonic acids, prim. or sec. alkyl H_2SO_4 esters, or mixts. Cation equiv. ratio (I):(II) is 10-1:1-10, and total amt. of (I) and (II) in the detergent pad is 0.5-50% by wt. of the pad. The pad is pref. of polyurethane foam, into which the detergent mixt. is incorporated before polymerisation.

Detergent pads provide both more rapid detergent release, and longer lasting detergency than commercial pads. 26.5.78 as 909881 (5pp478)

MINN D25 60209W/36 =US 4145-303

Importing water and oil repellency - using compsn contg zinc or zirconium coordination complexes

MINNESOTA MINING CO 07.03.73-US-338935 (08.03.71-US-122143)

*A97 E19 G04 P43 (20.03.79) *US3901-727 +C11d-07/06*

A container-stable, water-dilutable, alkaline treating compsn. capable of imparting water and oil repellency and stain resistance to a substrate comprises, in an aq. medium (a) $\geqslant 1$ cpd. of formula $(Rf)_aX(A)_b$, where Rf is fluoroaliphatic radical; a is $\geqslant 1$; X is linking gp. with a valence of a+b and is less electronegative than a $-CF_2-$ gp; A is an acid p.; and b is $\geqslant 1$; (b) a water dispersible Lewis base selected from NH_3, morpholine and volatine alkylamines and (c) $\geqslant 1$ Zn or Zr coordination cpd. which is water dispersible at $\geqslant$pH 8 and which provides sufficient Zn or Zr ion at $<$ pH 8 to combine with the acidic radicals.

The fluorochemical cpd. is present in an amt. sufficient to impart water and oil repellancy to the substrate. The Lewis base is present in an amt. sufficient to maintain the compsn. at $<$ pH 8. When the compsn. is exposed to the atmos.

Compsn. is used for cleaning carpets, upholstery, etc. 2.6.75 as 583040 Div. ex. 3901727 (c.f. 6029 W/36) (+7.3.73-US-338935) (8pp918)

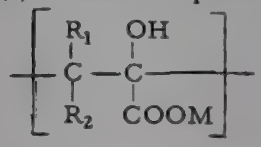
SOLV D25 49681A/28 =US 4145-526

Depolymerising hydroxy:carboxylic polymers to lower polymers - by heating in gaseous medium, prods. being useful as detergent builders and dispersion aids

SOLVAY & CIE 10.01.77-FR-000669

*A97 (A14 A35) (20.03.79) *BE-862-619 C08f-08/50*

A hydroxycarboxylic polymer of reduced mol. wt. is obtd. from a corresponding polymer of higher mol. wt. The hydroxycarboxylic polymer contains monomer units of formula (I) in which R_1 and R_2 are H or opt. substd. 1-3C alkyl contg. hydroxyl or halogen gps. R_1 and R_2 are same or different. M is H, an alkali metal atom, or ammonium gp.



(I)

$$\left[\begin{array}{cc} R_1 & OH \\ | & | \\ -C- & -C- \\ | & | \\ R_2 & COOM \end{array} \right]$$

Prepn. is from a higher mol. wt. polymer having a Flory average mol. wt. >3000 by heating to 60-240°C in a gaseous medium. Pref. heating is in air or nitrogen-contg. gas at 0.001-5 kg/cm² pressure.

Depolymerisation process used does not suffer from disadvantages of using high temps. and uncontrolled depolymerisation. 9.1.78 as 868467 (4pp931)

See Also

D15 DL 133562

CPI INDEXES

LERTING PATENTEE INDEX (II)

Veekly by section and overall, lists all current patents in atentee code order and, within a given patentee, in arliest priority date order. The first line gives patentee code, arliest priority date, patentee name, CPI classes and nally the current patent number. The second line gives ie first part of the title, followed by the accession number.

```
EIGE/ 24.01.75  EIGENMANN L   A93  *DT 2602-948
    Bonding fluid for road marking strips - 60224X/32
EIGE/ 27.01.75  EIGENMANN L   A93 L02(A21)  *DT 2602-947
    Bonding fluid for road marking strips - 60223X/32
```

Not in Basic Abstracts Journal

PI CLASS INDEX (IV)

Veekly only. Headings are all the CPI lasses within the section to which an lerting Bulletin relates, arranged in umerical order. Posted under each class eading is a list, in country then patent umber order, of all basic or equivalent ocuments referenced or cross-referenced nder that heading.

```
     M22
*BE -836-489
*CA -987-881
=DS 1569 023
=DS 2245-330
*DS 2517-206
*DS 2519-679
=DS 2520-359
*DT 2450-918
*DT 2451-494
=DT 2451-607
```

In Country Alerting Bulletin only

ASIC NUMBER INDEX (V)

Veekly by section and overall, lists ll entries by accession number. Each eading consists of the accession umber in bold, followed by the CPI ection letters. There then follows a st of all the family members, com- nencing with the basic and finishing vith the current week's patent. For ach family member the CPI week of sue is quoted, and a plus sign ndicates that a multiple priority has een claimed.

```
09125-X ACDF
  US 3933-788   X05+
  CA -990-674   X26
09192-X BC
  US 3933-948   X05
  BE  -832-423  X10
  NL 7509-762   X10
  DT 2535-514   X11
  SW7509-042    X15
  NO7502-837    X16
  SF 7502-292   X19
  ZA 7504-766   X21
```

In all Editions

'ATENT NUMBER INDEX (VII)

Veekly by section and overall. ists left to right the patent /pe (* for basic, = for quivalent or # sign for non- onvention equivalent or vhere the priority has been rtificially "added" to the pecification), patent number, ccession number and CPI lasses.

```
US 3963
#636 36477U  A97D15M14
*645 49861X  A41E19J04
=646 19776V  A41E19J04
=647 21100X  A17+R4
=650 06289S  A22
#651 24399W  A97K05L02M22
=652 73248V  A12
=653 70544V  A81G03
*654 49862X  A88H01Q4
*655 49863X  A81G03
```

In all Editions

PRIORITY CONCORDANCE (VIII)

Weekly by section and overall. Entries are given within priority country, then year, then serial number order, with an entry for every priority claimed by any given patent for the current week. Each entry quotes related priorities, and lists all patents in week number order, which have the priority in question as their latest priority, i.e. all members of the same family. A plus sign indicates that a specification claims a multiple priority. Finally, the accession number and CPI section letters are given.

This index gives all family members directly from the priority information, without having to know the basic patent number or accession number. Additionally it indicates associated priorities, continuations-in-part and true equivalents in the case of multiple priorities.

```
DT-74
436-898      31.07
 BE -831-846    X08
 DT 2436-898    X09
 J5 1039-729    X20
   13035X-AEF
436-964      31.07
 E FR74 025-718
 DT 2436-964    X09
 FR 2279 771    X20+
   15081X-A
```

In all Editions

BASIC PATENTEE INDEX (X)

Weekly by section in BAJ only. Entries under any given patentee code heading are in earliest priority date order. The title, truncated to 105 characters, is followed by the accession number and current patent number. The last line of each entry consists of the patentee name, the priority details (earliest then latest if there is more than one) and finally the Derwent classes. This index is cumulated quarterly and annually by section as hard copy. Overall A–M cumulations of from a quarter up to 5 years are available as COM.

```
CALI
Nitrile rubber smooth rolled sleeve for well impression packer - also contg
natural rubber, hydrated                               49862X/26  *US 3963-654
   CHEVRON RESEARCH CO 25.06.73-US-373341 +29.07.74-US-492377 A88 H01
Mica contg. plastified sulphur mixt - for coating walls and floors or solidifying
earth in dams                                          49433X/26  *DT 2554-327
   CHEVRON RESEARCH CO 03.12.74-US-529258 +13.11.75-US-631781 A82L02
CANA
Emulsifying agents of microbial origin - used esp. for oil spills, are made by
cultivating a species of                               48076X/26  *CA -990-668
   CANADIAN PAT & DEV LTD 31.08.72-US-285159 A97 D16 H03
```

In Basic Abstracts Journal only

MANUAL CODE INDEX In Basic Abstracts Journal only

At the start of each main group of codes, the manual code and its descriptor are printed in the middle of the column. Each sub-division of a manual code group appearing during the week is given, accompanied by its descriptor. All manual codes occurring during the week within each sub-division are then listed, with accession numbers posted against them.

In all there are about 3,600 manual codes in CPI, each one having an average of less than 200 documents assigned to it per year. The full classification is set out in the Manual Code Instruction Manual, which also contains a keyword index of terms for r reference.

APPENDIX I

COUNTRY COVERAGE

"Major" Countries

Covered completely in CPI and WPI right from the commencement, are listed below alongside current average weekly numbers.

Fast publishing

Belgium	240	
France	780	
Germany, W. unexamined	1100	
Japan unexamined	875*	
Netherlands unexamined	280	
South Africa	135	3410

Slow publishing

Canada	400	
Germany, E.	145	
Germany, W. examined	485	
Japan examined	300*	
Netherlands examined	70	
Soviet Union	775	
Switzerland	240	
United Kingdom	720	
United States	1350	4485

*Only CPI coverage for Japan.

"Minor" Countries

Complete coverage, but only introduced during 1975, with exception of Italy 1978.

Fast publishing

Brazil	95	
Denmark	110	
Finland	60	
Norway	70	
Portugal	25	
Sweden	300	660

Slow publishing

Argentina	—	
Austria	140	
Czechoslovakia	110	
Hungary	35	
Israel	40	
Italy	400	
Rumania	40	765

COUNTRY CODES

For patent number (not priority) purposes, DS distinguishe accepted West German specifications (DAS) from the unexamined applications (OLS) which are given the norma DT code. In the case of Japan J5 represents the unexamine applications, and J7 the examined of the present series.

Argentina	AR	Luxembourg	LU
Australia	AU	Malawi	MW
Austria	OE	Mexico	MX
Belgium	BE	Monaco	MC
Brazil	BR	Netherlands	NL
Bulgaria	BG	New Zealand	NZ
Canada	CA	Norway	NO
Chile	CE	Pakistan	PK
Colombia	CO	Philippines	RP
Czechoslovakia	CS	Poland	PO
Denmark	DK	Portugal	PT
Finland	SF	Rhodesia	RH
France	FR	Rumania	RU
Germany, East	DL	South Africa	ZA
Germany, West	DS	South Korea	KS
Germany West	DT	South Vietnam	VS
Greece	GR	Spain	ES
Hungary	HU	Sudan	SD
Iceland	IS	Sweden	SW
India	IN	Switzerland	CH
Iran	IR	Syria	SR
Ireland	EI	Trinidad	TD
Israel	IL	Turkey	TR
Italy	IT	Untd. Kingdom	GB
Japan	JA	U.S.A.	US
Japan, unex.	J5	U.S.S.R.	SU
Japan, ex.	J7	Yugoslavia	YU

MINOR AND MAJOR COUNTRIES

If the first publication of an invention takes place in one of the 'major' countries listed above, then this publication is called the **basic patent**, a WPI accession number is assigned, and this is used for all subsequent members of the family

If, however, the first publication occurs in one of the 'minor' countries listed above, then the document is regarded as a **provisional basic.** No accession number is assigned, since an abstract is not provided. If this provisional basic is then followed by further family members also from 'minor' countries, these produce entries in the same indexes even though an accession number has still not been assigned.

However, as soon as a member of the family is published in one of the 'major' countries, then this is regarded as the first disclosure. An accession number is assigned, and will apply also to all the earlier members of the family (from the 'minor' countries). Hence it is possible to see, in Indexes V and VIII, entries where the basic has a later week number than some of its equivalents.

ABBO 29.04.74 ABBOTT LABORATORIES B04 D16 =CA 1051-326
Enzymatic analysis using NAD-NADH redox reaction - 77357W/47
ABBO 28.10.76 ABBOTT LABORATORIES B03 D22 E13 (D16) =US 4145-253
Fortimycin D and KE antibiotics - 32067A/18
AGAF/ 03.03.76 AGAFONOVA G S D15 J01 *SU -606-819
Magnetic treatment apparatus for liquids - 27260B/14
AGEN 30.07.70 AGENCY OF IND SCI TECH D16 E13 (D17) =DS 2138-059
Glucose isomerase - 10393T/07
AIRP 12.04.76 AIR PRODUCTS & CHEM INC D15 =GB 1543-528
Activated sludge treatment ok phosphate-contg. aq. effluent - 55841Y/32
AJIN 17.07.72 AJINOMOTO KK B04 C03 D16 (D13 D17) =J7 9004-960
Water-soluble polysaccharides prodn - 11801V/07
AJIN 26.07.77 AJINOMOTO KK B04 D16 *J5 4026-395
Fermentative prodn. of L-lactate dehydrogenase - 26874B/14
ALBE/ 02.12.77 ALBER W C04 D15 F09 J01 (D16) *DL -133-788
Working up lignin-contg. materials to reactive intermediates - 26136B/14
ALBR 18.08.77 ALBRIGHT & WILSON LTD D21 E16 (D25) =DK 7803-634
Surfactant N-carboxy-alkylated acylated ethylene di:amine cpds. - 18420B/10
ALES/ 29.06.77 ALESSANDRI A R D21 *FR 2395-750
Toilet prod. for the hair and scalp - 26487B/14
ALFA 07.04.77 ALFA-LAVAL AB D13 E36 (D16) =PT --67-841
Prevention of bacterial growth in milk - 77709A/43
ALFA 26.08.77 ALFA-LAVAL STALLTEC D15 J02 =DT 2835-914
Liquid aerating stirrer e.g. for manure or sewage - 18516B/10
ALKU 17.09.76 AKZO NV A91 D17 E19 J01 =GB 1543-493
Removing organic impurities from aq. solns. - 23579A/13
ALKU 27.06.77 AKZO NV A92 D25 E17 =FR 2396-076
Alkaline carbonate-acid detergent compsn. - 78401A/44
AMCY 02.11.76 AMERICAN CYANAMID CO B03 C02 D13 =GB 1543-360
Growth stimulating feed additive contg. nitrovine - 33426A/19
AMMA 08.03.74 AMF INC D18 =US 4144-895
Selective lipoid extn. from tobacco - 62629W/38
AMMA 29.06.77 AMF INC A97 D18 =FR 2395-714
Reconstituted tobacco mfr. - 78436A/44
AMMA 29.06.77 AMF INC A97 D18 =US 4144-894
Reconstituted tobacco mfr. - 78436A/44
ANDC- 24.01.77 ANDCO IND INC D15 =US 4145-282
Removing fluoride from waste water by adding calcium and phosphate - 56779A/32
ANDP 04.10.76 ANDERSEN HW PROD INC A97 D22 J04 =US 4145-186
Colorimetric determination of sterilising agent dosage - 27188A/15
ANDR/ 27.10.77 ANDRASIK J D13 *CS 7706-985
Device for halving apricots - B/14
ANHE 29.11.72 ANHEUSER BUSCH INC D16 (D13) =CS 7308-233
Foodstuff prods from yeast - 44015V/24
ANIS 21.09.77 ANIC SPA B05 D21 (D22) =GB 2004-461
Mosquito-repellent agents - 24240B/13
ANIS 21.09.77 ANIC SPA B05 D21 (D22) =NL 7809-593
Mosquito-repellent agents - 24240B/13
ANTI- 24.08.77 ANTICIMEXBOLAGEN AB D15 *SW 7709-496
Stepless controlled effluent water flow to a treatment unit - B/14
ANVR 07.02.75 AGENCE NAT VALORISATION B07 D16 =GB 1543-783
Aq. emulsions of metabolisable vegetable oils - 65270X/35
ANVR 04.08.77 AGENCE NAT VALORISATION B04 C03 D16 =J5 4027-502
Immunostimulant 34129 RP from Streptomyces stimulosus - 06048B/04
AREN- 00.00.77 ARENCO-BMD MASCH D18 =DT 2740-550
Scraping treatment for leather hides - 91807A/51
ARNO/ 30.06.77 ARNOLD G A G D13 *FR 2395-712
Pollen based drink - 26484B/14
ASAG 02.08.77 ASAHI GLASS KK D15 E36 *J5 4027-256
Nitrogenous components sepn. from effluent - 27119B/14
ASAH- 22.09.77 ASAHIMATSU KORIDOFU D14 =DT 2841-146
Steam pressure cooking autoclave for soya beans etc. - 08060B/05
ASAH- 22.09.77 ASAHIMATSU KORIDOFU D14 =DT 2841-147
prodn. of clean peeled soya beans etc. - 08059B/05
ATLF 18.06.76 ATLANTIC RICHFIELD CO A97 D25 *US 4145-302
Detergent-contg. cleansing pads - 27711B/14
AUCO= 14.09.76 AS UKR COLLOID CHEM D15 E33 F09 *SU -606-822
Rapid and inexpensive removal of lignin from waste water - 27263B/14

ADI 22.05.76 BASF AG D21 E16 =US 4145-307
Water-in-oil emulsifiers prodn. - 88386Y/50
ADI 30.06.76 BASF AG C03 D13 =DS 2629-268
Feedstuff based on brewer's yeast - 04345A/03
ADI 20.09.77 BASF AG D23 E15 *DT 2742-185
Substd. pentadienyl-bi:cycloheptane derivs. used as perfumes - 26274B/14
ALC/ 29.12.77 BALCAREK J D18 *CS 7708-952
Leather prodn. rollers safety plate - B/14
ALS/ 01.12.77 BALSANO A D13 *BE -872-242
Aq. bath for removing surface contamination from foodstuffs - 25941B/14
ART/ 14.06.77 BARTA J D16 *CS 7703-908
Sulphite lyes for yeast cultivation - B/14
BECI 28.09.77 BECKMAN INSTRUMENTS INC B04 D15 J04 (D16) =DT 2841-896
Detecting toxicity in aq. liquids by photometry - 10012B/06
*BECK/ 16.11.77 BECKER V D15 H09 *DL -133-787
Safe disposal of sludge from water purifcn. - 26135B/14
BEGH- 20.09.77 BEGHIN-SAY SA A96 D22 F07 =NL 7809-511
Stratified absorbent prod. used as dressing or protective slip - 01969B/02
*BEGH- 30.12.77 BEGHIN SAY D22 F07 *BE -872-447
Breeches-type disposable napkin for babies - 26005B/14
BEIE 21.09.77 BEIERSDORF AG B05 D21 E16 =GB 2004-463
Caries and parodontosis inhibiting dental and/or oral hygiene compsns. - 06142B/04
BEIE 21.09.77 BEIERSDORF AG B05 D21 E16 =NL 7809-314
Caries and parodontosis inhibiting dental and/or oral hygiene compsns. - 06142B/04
BENC 18.08.77 BENCKISER-KNAPSACK D15 E11 F06 M14 (D25 F09) =DK 7803-644
Amino-alkane-carboxylic-di:phosphonic acid prodn. - 18188B/10
*BERE/ 01.08.77 BERESKIN F P D15 J01 *US 4145-286
Removing hydrocarbon(s) from water automatically - 27699B/14
*BERO- 19.09.77 BERO-ENERGIE BERATU D15 *DT 2742-161
Waste effluent heat recovery - 26268B/14
BIND- 15.09.77 BINDICATOR CO D13 =DT 2839-750
Measuring material moisture content in powdered milk processing - 24342B/13
*BIOL= 05.10.76 BIOLOG CHEM FUSION D23 E14 *SU -606-879
Antioxidant for fats and oils used in food industry and medicine - 27319B/14
*BIOM- 21.09.77 INST BIOMEDIZIN TEC D22 *EP ---1-285
Liquid disinfecting appts. - 26441B/14
BLOM/ 02.01.75 BLOMER A A96 D22 =GB 1543-326
Immobilizing and supporting splint - 54368X/29
BOEF 28.06.77 SUDDEUTSCHE ZUCKER D17 =FR 2396-084
Waste heat recovery from evaporative sugar mfr. - 74468A/42
*BORM- 14.07.77 BOR-MUBOR CIPOIPARI D18 *DL -133-687
Leather for shoe uppers - 26117B/14
BORS/ 12.08.77 BORST A H D15 =NO 7802-736
Combined waste water treatment and rubbish disposal - 89700A/50
BORS/ 12.08.77 BORST A H D15 =NO 7802-737
Combined waste water treatment and rubbish disposal - 89700A/50
BOSC 06.05.75 BOSCH R GMBH D13 =GB 1543-382
High quality soft caramel (toffee) mfr. - 88927X/48
*BRAC/ 07.11.77 BRACHER P C03 D15 (C04 D13) *DL -133-786
Continuous treatment of manure - 26134B/14
*BRAS- 30.01.78 BRASSERIES KRONENBE D16 E17 J04 *BE -872-349
Analytical appts. for measuring alpha-di:ketone concn. - 25979B/14
*BUBI/ 08.04.77 BUBIEN J K C03 D13 *US 4144-840
Biologically closed, physically open system for rearing game fish - 27625B/14
BUDA 26.02.76 BUDAPESTI MUSZAKI C03 D13 #US 4145-446
Urea and fatty acid addn. prod for animal feeds - 56102X/30
*BUDA- 14.07.77 BUDAPESTI BORIPARI D18 *DL -133-687
Leather for shoe uppers - 26117B/14
BUHL 24.08.72 BUHLER GEBR AG C03 D13 =DS 2342-842
Fodder cake cooling tower - 21375V/12
*BURG- 29.09.77 VEB BURGER KNACKEW D11 *DL -133-394
Oil spray tunnel for dough - 26011B/14

*CACH/ 10.01.78 CACHO M M D13 *US 4144-805
Nut huller and sheller with rotating blades - 27622B/14
*CANA 15.08.77 CANADIAN PAT & DEV LTD A88 D15 J01 (A11) *US 4145-295
Cellulosic ester ultrafiltration membrane prepn. - 27707B/14
*CANN= 23.08.76 CANNING VEGETABLE D13 *SU -607-568
Non alcoholic liquor used in canning industry - 27403B/14
CANP 02.10.75 CANADA PACKERS LTD D12 E14 (E34) =CA 1051-257
Nitrite-contg. meat preserving solns. - 28485Y/16
CANP 02.10.75 CANADA PACKERS LTD D12 E14 (E34) =CA 1051-258
Nitrite-contg. meat preserving solns. - 28486Y/16
CELF- 11.08.77 CELFIL CO ESTAB D18 F09 =NO 7802-738
Mfr. of paper band for cigarette filter tips - 89704A/50
*CEPA 01.08.76 CELLULOSE PAPER IND RES A97 D15 F09 (A11) *SU -607-786
Purificn. of aq. waste from cellulose sulphate prodn. - 27489B/14
*CHEM 28.09.77 CHEM WERKE HULS AG D25 E17 *BE -870-802
Aq. cleaning solns. contg. alkyl glycol ether sulphate(s) - 25905B/14
CHEM- 01.08.77 CHEMED CORP A91 D15 E34 #J5 4026-974
Dispersing high molecular wt. polymers in water - 31946A/17
CHIN 01.07.77 CHINOIN GYOGYSZER A97 D13 (A11) =FR 2395-711
Food flavours contained in cyclodextrir complex - 78426A/44
*CHLO- 03.08.77 CHLORINE ENGINEERS D15 *J5 4026-959
Treatment of waste liquor produced in washing of boiler - 27017B/14
CHUS 18.08.77 CHUGAI SEIYAKU KK B02 C02 D13 =DK 7803-624
Animal e.g. cattle, sheep or pigs growth promotion - 16289B/09
CHUS 18.08.77 CHUGAI SEIYAKU KK B02 C02 D13 =DK 7803-624
Animal e.g. cattle, sheep or pigs growth promotion - 16289B/09

*CHUS 22.09.77 CHUGAI SEIYAKU KK B02 C02 D16 *EP ---1-287
Antibiotic No.2-200 obtd. from Nocardia sp. ATCC 31319 - 26443B/14

CIBA 17.06.75 CIBA GEIGY AG A88 D15 F06 =GB 1543-416
Purificn. of industrial waste water contg. organic impurities - 00007Y/01

*CIBA 18.12.75 CIBA GEIGY AG A97 D25 E19 (A25) *GB 1543-730
Cast blocks for cleaning lavatories - 26555B/14

CIBA 25.03.77 CIBA GEIGY AG D22 E12 F06 =PT --67-803
Water-soluble phthalocyanine cpds. as antimicrobials - 71128A/40

CIBA 26.05.77 CIBA GEIGY AG B04 C03 D13 (D16) =BR 7803-343
Avilamycin antibiotic as animal feed additive - 86132A/48

CNSF 29.04.75 CONSOLIDATED FOODS CORP A97 D15 E32 =GB 1543-590
Biologically safe drinking water by treatment with silver ions - 88073X/47

*COLG 13.11.72 COLGATE PALMOLIVE CO D21 *US 4145-411
Pressurised shaving foam compsn. - 27752B/14

COLG 23.07.76 COLGATE PALMOLIVE CO A96 D21 E16 =ZA 7704-377
Nonionic aq. hair shampoo - 08684A/05

COLG 09.08.76 COLGATE PALMOLIVE CO A96 D22 =ZA 7703-901
Tape fastener for disposable diaper - 73887Y/41

COLG 09.08.76 COLGATE PALMOLIVE CO D22 F07 =ZA 7703-902
Disposable sanitary towel or diaper - 90087Y/51

COLG 09.08.76 COLGATE PALMOLIVE CO D22 =ZA 7703-903
Disposable diaper with absorbent pad - 68424Y/38

COLG 09.08.76 COLGATE PALMOLIVE CO D22 F04 =ZA 7704-047
Babys disposable napkin etc. contg. hydrocolloidal material - 90086Y/51

COLG 19.08.76 COLGATE PALMOLIVE CO D22 =ZA 7704-048
Tape fastener for disposable diaper - 68421Y/38

COLG 15.07.77 COLGATE PALMOLIVE CO D25 =BR 7804-518
Toilet soap contg. polyethylene oxide and fatty acids - 82204A/46

COLG 17.08.77 COLGATE PALMOLIVE CO A97 D24 (A14 D25) =DK 7803-338
Soap tablet contg. fatty acid salt and interpolymer - 89696A/50

*COOR- 19.12.77 COMMERCIAL ORGANIC B03 D13 E13 *US 4145-349
Saccharin prepn. in high yield and purity - 27731B/14

CORG 14.09.77 CORNING GLASS WORKS D16 =DT 2839-580
Composites of microbes bound to porous support - 24332B/13

CORP 17.09.71 CPC INTERNATIONAL INC D16 =DS 2245-402
Xylose isomerase compsn - 18258U/13

*CORR= 20.05.76 CORRESP TEXTILE LIG D18 *SU -607-841
Leather tanning extract prodn. - 27543B/14

COUS/ 14.01.74 COUSIN C M D23 =US 4145-452
Fat compsn. with quasi-vitreous structure - 47687W/29

*CSIR 22.09.77 COMMONWEALTH SCIENT ORG A97 D15 (A14) *GB 2004-535
Clarifying water by contacting with mineral or clay coagulant - 26565B/14

DAIG/ 05.04.76 DAIGO F D15 F09 H05 L02 =J7 9005-227
Solidifying agent for heavy oil sludge, pulp waste sludge etc. - 83790Y/47

*DAIZ 29.07.77 DAIDO TOKUSHOKO KK D15 E19 *J5 4026-060
Treatment of soln. contg. organic reductant e.g. hydrazine - 26746B/14

*DALE/ 19.09.77 DALE J A97 D15 (A25) *EP ---1-345
Removing salts from aq. soln. - 26470B/14

*DANA 26.09.77 DANFOSS A/S D25 E17 M12 (E14) *DT 2840-499
Fluid for cleaning worked metal articles - 26399B/14

DASU- 21.05.76 DANSKE SUKKERFABRIK A97 D17 =US 4145-230
Supersaturated sugar solution seeding - 86919Y/49

DCAF 10.05.77 DCA FOOD INDS INC D11 =FR 2395-706
Yeast fermentable dough contg. soft wheat flour - 88070A/49

*DEAK 19.05.77 AKAD WISSENSCHAFT DDR A35 B05 D25 E16 (A14) *DL -133-790
Degrading fluorinated polymer to oligomers of controlled chain length - 26137B/14

DECI- 10.12.75 DEC INT INC D13 =US 4145-453
Machine for pneumatically conveying finely milled cheese particles - 19730A/11

*DENK 02.08.77 TDK ELECTRONICS KK D15 J03 *J5 4027-259
Waste water treatment - 27122B/14

DIAL 19.04.71 DIAMALT AG A97 D25 (A12 D17) =J4 7039-181
Carboxymethylstarch - 69239T/43

DIAL 19.04.71 DIAMALT AG A97 D25 (A12 D17) =J7 9004-963
Carboxymethylstarch - 69239T/43

DIEP- 16.03.77 DIEPA S A D11 =PT --67-730
Double-screw extruder outlet for paste strips - 51657A/29

DIEP- 16.03.77 DIEPAL D11 =ZA 7801-231
Double-screw extruder outlet for paste strips - 51657A/29

*DIEP- 27.06.77 DIEPAL D13 *FR 2395-709
Mfr. of instant flour flakes for baby food, soups, etc. - 26483B/14

*DOHN/ 11.03.77 DOHNALEK R C03 D13 *CS 7701-645
Phosphorus-urea concentrates for feeding ruminants - B/14

DOUW 19.03.77 DOUWE EGBERTS KON D16 =PT --67-785
Alcoholic beverages concentration - 69211A/39

DOUW 19.03.77 DOUWE EGBERTS KON D16 =ZA A781-432
Alcoholic beverages concentration - 69211A/39

DRAG- 27.06.77 DRAGOCO GERBERDING D22 E17 (D21) =FR 2395-752
Compsn. contg. 3,7,11-tri:methyl-dodeca-2,6,10 trien-1-ol - 00432B/01

DRAG- 27.06.77 DRAGOCO GERBERDING D21 E17 =FR 2395-980
Glycerine:tri-3,5,5-tri:methyl-hexanoate - 06187B/04

EART- 06.06.77 EARTH CHEMICAL CO C03 D22 =BR 7803-648
Insecticidal and fungicidal fumigation without combustion - 72820A/41

EAST 06.12.76 EASTMAN KODAK CO A23 D18 F01 =US 4145-518
Non-crystalline polyester fibres prodn. from terephthalic acid - 42517A/24

*EBAI 29.07.77 EBARA INFILCO KK D15 *J5 4025-268
Coagulation of waste sludge contg. organic cpds. - 26617B/14

EFAE- 03.07.72 EFA ENTWICKLUNGS D15 =DS 2232-510
Effluent treatment plant - 09462V/06

EFFE- 15.08.77 EFFEM FOODS PTY LTD C03 D13 =DK 7803-551
Animal food, esp. for cats and dogs, based on animal blood - 14161B/08

EGYE 06.10.77 EGYT GYOGYSZERVEGYESZETI A11 B04 D13 E12 (A96 A97 B03) #DL -133-669
Metal oligo- and poly-galacturonate complexes - 75406Y/42

EISA 14.02.75 EISAI KK A96 D22 (A11) =GB 1543-788
Water dispersible absorption material - 67288X/36

ELIL 01.02.73 ELI LILLY & CO B04 C03 D13 (D16) =CS 7400-699
Poultry and cattle food additive - 59392V/33

ELIL 01.07.77 ELI LILLY & CO B04 D16 =FR 2396-081
Mfr. of Streptomyces protoplast which regenerates viable cells - 01894B/02

ELIL 01.07.77 ELI LILLY & CO A97 B04 D16 =FR 2396-082
Genetic exchange in Streptomyces and Nocardia - 01895B/02

*ELSP/ 26.09.77 ELSPASS R D23 *DL -133-686
Rotary solid-liquid extractor - 26116B/14

EMEY 21.09.77 EMERY INDUSTRIES INC A35 D23 E13 (A23) =DT 2840-905
Hetero-macrocyclic perfume ingredients - 08055B/05

EMEY 21.09.77 EMERY INDUSTRIES INC A35 D23 E13 (A23) =GB 2004-552
Hetero-macrocyclic perfume ingredients - 08055B/05

EMEY 21.09.77 EMERY INDUSTRIES INC A35 D23 E13 (A23) =NL 7809-609
Hetero-macrocyclic perfume ingredients - 08055B/05

ESMI- 13.09.77 ESMIL BV D15 =DT 2839-896
Appts. for distilling water esp. sea water - 24314B/13

ETHI 28.06.76 ETHICON INC A96 D22 =ZA 7703-851
Surgical needle with suture thread detachable at predetermined tension - 02021A/02

ETHI 10.06.77 ETHICON INC A87 D22 F06 (A25) =BR 7803-712
Poly:alkylene oxalate coating for sutures - 92755A/51

EVER/ 22.08.77 EVERS H C A D22 E19 (E37) =SW 7709-348
Disinfecting and cleaning contact lenses without allergic reaction - 18333B/10

*FADE/ 20.09.77 FADER W D23 J04 *DL -133-406
Prodn. of free-flowing paraffin wax granules - 26017B/14

FARB 14.10.71 BAYER AG B04 D16 (B02) =DS 2151-236
Pure, crystalline penicillinacylase prodn - 24338U/18

FARB 05.06.76 BAYER AG A60 D22 E13 G03 (G02) =GB 1543-521
Microbicidal methyl-(2)-benzimidazolyl carbamate derivs. - 59405Y/34

FARB 31.08.76 BAYER AG A41 D21 E17 G04 (A60 A97 D16) =DL -133-678
Low molecular wt. poly:ol used as antifreeze and in polymer prodn. 17987A/10

FARB 09.11.76 BAYER AG A96 D22 (A25) =DL -133-519
Orthopaedic medical or veterinary dressing - 35142A/20

FARB 01.07.77 BAYER AG D18 E12 (E16) =FR 2395-715
Smokable prods. based on cellulose and combustion modifiers 02458B/02

FARB 19.08.77 BAYER AG A93 D22 E13 G04 (A26) =DK 7803-675
Silicone sealant compsns. contg. benzimidazolyl carbamate cpds. 18204B/10

FARB 13.09.77 BAYER AG C03 D16 E13 (D13 D17) =DT 2741-197
Continuous sucrose conversion to iso:maltulose - 22393B/12

FARB 16.09.77 BAYER AG A88 D15 J01 (A14) =EP ---1-233
Semipermeable membranes for reverse osmosis and ultrafiltration 24128B/13

FARH 17.12.73 HOECHST AG A11 D12 E19 F01 =CA 1051-256
Cellulose derivs with urea or triazinone derivs - 44357W/27

FARH 23.07.74 HOECHST AG A97 B04 D16 =CS 7505-177
Moenomycin fermentation prodn. - 11415X/07

FARH 05.03.75 HOECHST AG A60 D25 E23 F06 (F09) =GB 1543-368
Benzofuran derivs used as optical brighteners - 72355X/39

FARH 24.10.75 HOECHST AG A96 D22 F07 =US 4144-886
Absorbant laminates for use as napkins etc. - 29118Y/17

FARH 27.02.76 HOECHST AG D25 E34 =GB 1543-522
Alkali metal phosphate soln. prepn. - 61192Y/35

FARH 02.03.76 HOECHST AG D16 J02 (D15) =CS 7701-315
Mass transfer in liq. medium improved by inert solid particle
63043Y/36

FARH 16.12.76 HOECHST AG D15 E14 =US 4145-283
Purifying aq. liquor from caustic fusion of arylsulphonic acid
44075A/25

FARH 19.08.77 HOECHST AG A97 D25 E11 (E34) = DK 7803-678
Detergent additive contg. sodium sulphate and/or tri:poly:phosphate - 11931B/07
FARH 19.08.77 HOECHST AG A97 D25 E11 (E34) = SW 7808-776
Detergent additive contg. sodium sulphate and/or tri:poly:phosphate - 11931B/07
FARH 20.08.77 HOECHST AG D13 E17 (D21 E16) = DK 7803-679
Simultaneous prepn. of fatty acid nitrile(s) and glycerol - 18378B/10
FARH 19.09.77 HOECHST AG D15 E19 M14 = DT 2840-112
Anticorrosion compsn. for ferrous metals - 22078B/12
FARH 19.09.77 HOECHST AG D15 E19 M14 = NL 7809-500
Anticorrosion compsn. for ferrous metals - 22078B/12
*FIED/ 31.10.77 FIEDLER H D23 H07 J01 *DL -133-525
Two-layer filtering arrangement - 26058B/14
*FILM= 31.12.75 FILM MAT SYNTH FIBR D18 J01 *SU -607-606
Leather fibre separation from impurities - 27424B/14
FINN- 14.01.77 KY FINNPIPET B04 D16 J04 = DL -133-863
Immunological determn. and enzymatic reactions - 51646A/29
FIRM 28.06.77 FIRMENICH SA D23 E13 = FR 2396-007
3-Methyl-2-(3-methyl-but-2-en-1-yl)-furan prepn. - 04549B/03
FIRM 15.09.77 FIRMENICH SA B07 D13 E13 (B05 D23) = NL 7809-359
2-Formyl-bi:cyclo-heptane-3-carboxylate derivs. prodn. - 24225B/13
FMCC 02.09.76 FMC CORP D15 = GB 1543-464
Aq. waste material treatment using activated sludge process - 21824A/12
FMCC 28.03.77 FMC CORP D25 E19 F06 (D22) = PT --67-817
Crystalline percarboxylic acids prepn. from carboxylic acids - 68934A/39
FMCC 03.10.77 FMC CORP D25 E19 = BE -870-939
Di:sulphone derivs. - 78106A/43
FMCC 03.10.77 FMC CORP D25 E19 F06 = BE -870-940
Low temp. fabric bleaching with per-oxygen cpds. - 25655B/13
FMCC 03.10.77 FMC CORP D25 E12 F06 = BE -870-941
Low temp. bleaching of fabrics with peroxy cpds. - 07600B/04
FMCC 03.10.77 FMC CORP D25 E11 F06 = BE -870-942
Organo:phosphorus azide per:oxygen textile bleach activators - 83827A/46
*FMCC 03.10.77 FMC CORP D25 E19 *BE -870-943
Activator for per:oxygenated bleach - 25936B/14
FMCC 03.10.77 FMC CORP D25 E23 F06 (E14) = BE -870-944
Aromatic sulphonyl azide(s) - 78107A/43
FMCC 03.10.77 FMC CORP D25 E14 F06 (E13) = BE -870-945
Low temp. bleaching of soiled and/or stained fabrics - 70479A/39
FMCC 03.10.77 FMC CORP D25 E13 F06 = BE -870-946
Bleaching compsns. contg. (N)-sulphonyl-imidazole(s) - 70480A/39
*FODA 27.06.76 FOREMOST-MCKESSON D15 *US 4145-291
Water dispenser with inverted storage bottle - 27704B/14
FONT/ 01.07.76 FONTAINE A M D11 J02 M22 = US 4145-143
Mixing foundry sand to obtain specific properties - 02015A/02
FRRR 21.09.77 FERRERO P & CIA SPA D13 = NL 7809-240
Filled floatable spherical food prod. - 08058B/05
*FRTW 15.09.77 FORTUNA-W MASCHFAB AG D18 *DT 2741-648
Hide splitting machine feed rolls - 26236B/14
*FUJC 29.07.77 FUJI CHEMICAL IND KK D21 E19 *J5 4026-340
Nail lacquer remover - 26859B/14
FUJF 03.08.77 FUJI PHOTO FILM KK A89 D22 E13 G06 = J5 4027-424
Preserving solns. of hydrophilic colloid contg. viscosity improver - 14634B/08
FUJI 27.07.76 FUJISAWA PHARM IND KK B05 D16 = ZA 7704-528
Hydroxyamino-alk(en)yl-phosphonic acid (derivs.) - 84781Y/48
FUKO 04.04.75 FUJI OIL KK D16 (D13) = US 4145-455
Novel modified protein compsns. prepn. - 89396X/48

GALL- 16.09.77 GALLAHER LTD A97 D18 = DT 2839-958
Preparing wrappings for smoking prods., esp. cigarette paper - 22053B/12
GALL- 16.09.77 GALLAHER LTD A97 D18 = NL 7809-495
Preparing wrappings for smoking prods., esp. cigarette paper - 22053B/12
*GARU- 16.11.77 INST GARUNGS GETRAN D16 *DL -133-820
Brewery mashing process - 26151B/14
GENE= 29.06.77 GENETICS IND MICROO B05 D16 E16 = FR 2396-080
Fermentative prodn. of L-isoleucine - 10185B/06
GENO 13.05.74 GENERAL FOODS CORP A97 D13 = CA 1051-253
Dry acidulent powder compsns. useful in foodstuffs - 36173Y/20
GENO 21.05.75 GENERAL FOODS CORP D13 = CA 1051-254
Freezing coffee extract to give dark brown product - 54135X/28
GENO 25.08.77 GENERAL FOODS LTD D13 = SW 7808-531
Sepn. and recovery of aroma constituents - 18350B/10
*GENO 30.11.77 GEN FOODS FRANCE D13 *BE -872-379
chewing gum prepn. - 25987B/14
*GIFU- 27.07.77 GIFU-KEN D16 *J5 4026-399
Clear peach wine prodn. without using wild yeast - 26877B/14
*GILL 15.08.77 GILLETTE CO D21 E32 (E14) *US 4145-413
Artificial sun tanning compsn. - 27754B/14
GIVA 27.06.77 GIVAUDAN L & CIE SA D13 E15 (D21 D23) = FR 2395-751
Perfoume and flavouring compsn. for food, drink, tobacco etc. - 04386B/03
GIVA 04.08.77 GIVAUDAN L & CIE SA D23 E17 = J5 4027-506
Tri:methyl-octanol(s) and di:methyl-nonanol(s) odorants - 12500B/07
*GODE/ 28.06.77 GODEFROY L G D21 *FR 2395-756
Lotion for promoting hair growth - 26488B/14
*GREC 28.07.77 GREEN CROSS CORP D12 (D13) *J5 4026-370
Liquid medicinal food - 26869B/14
*GRIS/ 02.08.74 GRISHIN P M D14 J04 *SU -607-109
Slurry proportionator with storage tank - 27381B/14
*GUIL/ 30.06.77 GUILLER J D14 *FR 2396-248
Cryogenic immersion freezing plant partic. for food prods. - 26526B/14
*GYUN- 01.08.77 GYUNYU SEKKENKYOS D21 E17 (D24) *J5 4026-807
Pearl white soap having grain-like pattern - 26903B/14

*HAMP/ 14.12.77 HAMPEL H D22 E36 *DL -133-518
Permanent implant - 26056B/14
HANS/ 09.08.74 HANSON D R D11 = US 4144-615
Appts. for cleaning bakery bun pans - 64599Y/36
*HART- 22.06.76 HARTEL CORP D13 *US 4145-450
Controlling butterfat content in milk - 27768B/14
HAYA/ 09.11.69 HAYASHIBARA K D16 E13 (D13 D17) = DS 2055-028
Starch syrups contng oligoglucoside fruc- - 34092S/20
HEBE- 15.10.74 HEBENSTREIT GMBH D11 = DS 2448-902
Flame fired baking oven for waffles - 54314X/29
*HELL/ 04.11.77 HELLERT B D16 *DL -133-574
Grape freezing for ice wine mfr. - 26081B/14
HENK 16.05.70 HENKEL KG AUF AKTIEN D25 E16 = DS 2024-050
Prepn of monoesters of alkylene glycols - 73612S/46
HENK 27.06.77 HENKEL KG AUF AKTIEN B03 C02 D13 (C03) = FR 2395-708
Animal feeds contg. the antibiotic tylosin - 05435B/03
HENK 27.06.77 HENKEL KG AUF AKTIEN A97 D18 E33 (D25) = FR 2396-086
Use of alkali metal aluminosilicate(s) for cleaning crude skins - 01896B/02
HENK 29.07.77 HENKEL KG AUF AKTIEN D25 E33 = J5 4026-299
Prepn. of cation-exchanging aluminosilicate(s) - 08024B/05
HENK 29.07.77 HENKEL KG AUF AKTIEN D23 E13 (D21) = J5 4027-576
2,2,5-Tri:methyl-5-phenyl-1,3-dioxan - 12190B/07
*HIEJ 01.08.77 HITACHI PLANT ENG CONST D15 *J5 4027-258
Treating waste liquor from domestic refuse - 27121B/14
*HITA 29.07.77 HITACHI KK A97 D25 K07 *J5 4025-287
Defoaming agent used in concn. nuclear plant laundry water - 26632B/14
*HITA 09.09.77 HITACHI KK D15 K07 *DT 2838-677
Radioactive waste disposal control - 26366B/14
*HLAV/ 10.04.78 HLAVINKA J D12 *CS 7802-326
System for automatic singeing of pigs - B/14
*HODO 03.08.77 HODOGAYA CHEM IND KK D15 *J5 4026-959
Treatment of waste liquor produced in washing of boiler - 27017B/14
HOFF 26.07.77 HOFFMANN-LA ROCHE AG B05 D16 E19 = J5 4026-397
Optically active alpha-hydroxy-carboxylic acid prepn. from racemate - 10296B/06
HOFF 14.09.77 HOFFMANN-LA ROCHE AG D21 E16 (E13) = DT 2748-463
Cosmetic compsn. having anti-seborrhoea activity - 22379B/12
HOFF/ 17.01.72 HOFFMAN H A D13 = DS 2244-692
Imitation meat - 18188U/13
*HORI- 27.07.77 HORIUCHI ITARO SHOT B04 D13 *J5 4026-366
Extracting sweet substance from Periandra plants - 26866B/14
*HORI- 27.07.77 HORIUCHI ITARO SHOT B04 D13 *J5 4026-367
Refining aq. extract of Periandra plant roots - 26867B/14
*HORI- 27.07.77 HORIUCHI ITARO SHOT B04 D13 *J5 4026-368
Sweet extract prepn. from Periandra plant - 26868B/14
*HORN/ 24.08.77 HORN F F D15 M25 *SW 7709-508
Purificn. of water contg. heavy metal salts - B/14
HOWA- 01.09.76 HOWARD MACH LTD D15 #US 4145-383
Farm yard sewage aeration system - 17978A/10
HULE- 12.09.77 HULETTS SUGAR CORP D17 = ZA 7705-459
Vertical cylindrical continuous vacuum crystalliser esp. for sugar pro - 06105B/04
HYUG- 02.09.76 HYUGA SEIRENSHO KK D15 E14 = J7 9005-228
Lowering COD of aq. effluent contg. phenol(s) - 32648A/18

ICIL 21.07.70 IMPERIAL CHEM INDS LTD D15 H04 = SU -607-555
Aerobic fermentation - 07991T/05
ICIL 27.07.77 IMPERIAL CHEM INDS LTD D15 J01 = J5 4025-276
Removing oil from oil in water emulsion - 10454B/06
ICIL 08.09.77 IMPERIAL CHEM INDS LTD D16 (D13) = DT 2839-052
Microbiological prodn. of single cell protein - 18028B/10
*ICIL 19.09.77 IMPERIAL CHEM INDS LTD A32 D21 (A88) *DT 2840-274
Extruder for high-friction pastes for mfr. of dental fillings - 26394B/14
*IMPT 20.09.77 IMPERIAL GROUP LTD D18 J02 *DT 2839-707
Homogenisation of tobacco slurries etc. - 26381B/14
*INDE/ 20.09.77 INDERBIETHEN H D23 *DT 2742-206
Paraffin coating for candles - 26276B/14

INFL 19.02.75 INT FLAVORS & FRAGR INC C02 D13 E13 =GB 1543-653
3-Furyl alkyl sulphide cpds. - 68138X/36
INFL 07.10.76 INT FLAVORS & FRAGR INC D23 E13 #DT 2759-502
Substd.-(4,5)-(di)methyl thiazoline cpd. perfume and cologne compsns. - 59207Y/33
INFL 17.03.78 INT FLAVORS & FRAGR INC B07 D23 E13 (B03 D13 D18) =US 4145-354
5-Alkanoyl-2-furfuryl-thio-di:hydro-2,5-di:alkyl- 2H)furan-3-one(s) - 53306A/29
*INLE- 16.02.77 INST IND LEMNULUI D13 *CS 7701-027
Vegetable hydrolysate neutralisation - B/14
*INLE- 16.02.77 INST IND LEMNULUI D13 *CS 7701-028
Vegetable hydrolysate neutralisation - B/14
INMR 30.06.77 INST MERIEUX B04 C03 D16 =FR 2396-083
Bulk culture of viruses in suspension of cells and collagen fibres - 01906B/02
INRG 07.06.77 INST NAT RECH AGRON C03 D13 (D16) =BR 7803-635
Nutritional protein prodn. from Trichoderma album - 89622A/50
INTE- 08.04.77 INTEROX D25 E34 =PT --67-858
Super-oxidised sodium perborate mfr. in fluid bed - 72728A/41
INTE- 08.04.77 INTEROX D25 E34 =PT --67-859
Mono-hydrated sodium perborate granules - 72729A/41
*INTT 25.11.75 STANDARD TELEP CABL D15 H03 J04 *GB 1543-320
Detector for measuring amt. of oil in water - 26534B/14

*JAOR 28.07.77 JAPAN ORGANO KK A91 D15 J01 *J5 4025-272
Single column ion exchange appts. for treatment of liquids - 26620B/14
*JAPC 29.07.77 NIPPON SHOKUBAI KAGAKU D25 E12 *J5 4025-286
High purity anionic surfactant with good detergency effect - 26631B/14
JAPG 30.06.77 NIPPON ZEON KK A32 D15 F01 J01 (A18) =FR 2396-104
Hollow filaments for ultrafiltration and reverse osmosis - 20624B/11
*JOHJ 29.09.75 JOHNSON & JOHNSON A96 D22 *US 4144-887
Adhesive fastener for disposable diaper - 27627B/14
*JOHN- 02.08.77 JOHNSON KK D25 E16 *J5 4026-808
Powdery detergent compsn. contg. fatty acid di:ethanolamide(s) - 26904B/14
JUNG- 04.02.72 JUNGBUNZLAUER SPIRI D16 E12 =J7 9004-930
Trisodium or tripotassium citrate - 45330U/32

*KANE 26.07.77 KANEBO KK D13 *J5 4026-350
Seasoned instant fried bean curd prepn. - 26863B/14
*KANE 28.07.77 KANEBO KK D21 E17 *J5 4026-337
Water-in-oil cream or milk lotion - 26857B/14
*KANE 29.07.77 KANEBO KK A96 D21 E19 *J5 4025-906
Two layer-type liq. shampoo - 26674B/14
*KANE 31.07.77 KANEBO KK D21 E33 *J5 4026-336
Basic cosmetic compsn. e.g. face lotion - 26856B/14
*KAWA- 29.07.77 KAWAKEN FINE CHEM K D21 E19 *J5 4026-340
Nail lacquer remover - 26859B/14
KAWS 24.06.75 KAWASAKI KASEI CHEM D13 E12 =J7 9004-935
Hydated alkali metal malate prepn. - 13536Y/08
KEND 15.09.75 KENDALL CO D22 #CA 1051-303
Bandage to prevent local haematoma - 37700X/20
KEND 01.07.77 KENDALL CO D22 F07 =FR 2395-741
Full length therapeutic elastic stockings - 78453A/44
*KIFO= 06.06.72 KIEV FOOD IND TECH D11 *SU -607-183
Bread baking oven humidity and temperature automatic regulator - 27397B/14
KIMB 01.07.77 KIMBERLY CLARK CORP A96 D22 (A25) =FR 2395-746
Polyurethane foam type tampon enclosed in jacket - 05446B/03
*KIMI- 29.07.77 KIMIZU KAGAKU KENKY A96 D21 *J5 4026-092
Japanese gelatin dental impression material - 26752B/14
*KIMU/ 28.07.77 KIMURA K D13 (D16) *J5 4026-353
Konjak food contg. vitamin(s) and other nutrients - 26864B/14
*KIRC/ 28.09.77 KIRCHGASSNER E C03 D13 H09 (D16) *DT 2743-618
Fuel, oil, fat and single cell protein recovery - 26334B/14
KLEI- 03.07.73 KLEIN A KG D15 =US 4144-807
Dewatering of sludge after pretreatment - 00922W/01
*KOBM 27.07.77 KOBE STEEL KK D15 J01 *J5 4025-279
Tubular membrane separator for waste water treatment - 26624B/14
KOLL/ 30.06.77 KOLLROSS G D12 =FR 2395-893
Machine to fold sausage casings while inflated - 78454A/44
*KORE/ 09.01.76 KORENKOV V N A97 D15 E36 *SU -607-785
Removal of surfactants from waste water - 27488B/14
*KOSA/ 13.06.77 KOSAR J D17 *CS 7703-892
Sugar beet chips preservation - B/14
KRFT 27.04.77 KRAFT INC D13 =US 4145-451
Salad dressing protection against yeasts and moulds - 61931A/35
*KRFT 30.11.77 KRAFT INC D13 *BE -872-434
Cheese-making process using concentrate of protein fat and salts - 25998B/14
*KROF/ 10.01.78 KROFCHAK D D15 *ZA 7800-141
Soil-like material prodn. from sewage sludge - 27842B/14

*KSPO= 10.10.72 KISH POLY D15 E36 J03 *SU -606-818
Removing fluorine from natural water by rapid electrolysis - 27259B/1
KUBI 28.04.76 KUBOTA KK D15 E36 J01 =J7 9004-701
Desulphurising device for deodorising gases for digesting tank
22416A/12
KURE 22.07.76 KUREHA CHEM IND KK B04 D16 =DL -133-444
Prodn. of polysaccharide with antitumour activity - 06341A/04
*KURE 16.09.77 KUREHA KAGAKU KOGYO C03 D16 *DT 2840-036
Nitrogen-contg. polysaccharide active against plant viruses - 26389B/1
*KURS 01.08.77 KURARAY KK A14 D15 F01 J01 (A32) *J5 4027-025
PVA-based hollow filament membrane prodn. - 27069B/14
*KURS 04.08.77 KURARAY KK B04 C03 D16 F09 (D13 D15 D21) *J5 4027-
517
Polysaccharide contg. glucose, galactose, mannose and fructos
27160B/14
*KUSY/ 30.01.76 KUSY S D13 *CS 7600-585
Sub-zero cooling of agricultural produce - B/14
*KYOW 28.07.77 KYOWA FERMENTATION KK A96 B04 D16 *J5 4026-
396
Malate dehydrogenase for use in liver function diagnosis - 26875B/14
KYOY 24.08.77 KYORITSU YUKI KK A91 D15 (A21) =GB 2004-556
Cationic flocculant esp. for treating effluents - 20258B/11

LARS/ 19.08.77 LARSSON K D13 E11 (E13) =SW 7709-374
Sepg. polar lipid(s) from non-polar lipid(s) for use as food additive
18322B/10
*LCAS 01.07.77 LAB CASSENNE B04 D16 *FR 2396-018
acetylated water soluble gluco-peptide prepn. from escherichia co
26507B/14
*LCAS 01.07.77 LAB CASSENNE B04 D16 *FR 2396-019
Acetylated water soluble gluco-peptide prepn. - 26508B/14
*LCAS 01.07.77 LAB CASSENNE B04 D16 *FR 2396-020
Acetylated water soluble gluco-peptide prepn. - 26509B/14
*LEME= 15.09.76 LENGD MED INST A96 D21 *SU -607-570
Filling material used in dentistry - 27404B/14
LEPE 29.06.76 GRUPPO LEPETIT SPA B04 D16 =DL -133-573
Antibiotic L13365 from Actinoplanes sarveparensis CBS 305.76
02040A/02
LEUC/ 15.02.74 LEUCHTENBERGER A D16 =CS 7501-001
Nutrient medium for proteolytically-active enzymes prodn. - 17041X/1
*LINM 17.09.77 LINDE AG D16 (D13) *DT 2741-940
Aerobic fermentation control - 26251B/14
*LIOC 28.07.77 LION DENTIFRICE KK B05 D13 E19 *J5 4026-339
Saccharin substitute for oral compsn. e.g. dentifrice - 26858B/14
LIOT- 15.10.76 LIOT SA D13 =GB 1543-512
Preserving liquid egg prod. with salt, sugar, or both - 28783A/16
LIPT- 06.10.76 LIPTON T J INC D13 =US 4145-454
Ice cream compsn. contg. caroub and/or tara gum - 25249A/14
*LOHM 16.09.77 LOHMANN GMBH D22 F07 *DT 2741-826
Elastic net bandage - 26246B/14
*LOHM- 16.09.77 LOHMANN GMBH & CO D22 F07 *DT 2741-826
Elastic net bandage - 26246B/14
LOHM- 16.09.77 LOHMANN GMBH & CO D22 F07 =EP ---1-256
Elastic net bandage - 26246B/14
*LOTT 27.07.77 LOTTE KK D13 *J5 4026-363
Refrigerated confectionery contg. ice cake - 26865B/14

MARL 22.12.75 MARION LABS INC B04 D16 =DS 2636-462
Anaerobic culture collecting and transporting appts. - 25064Y/14
MASW 24.08.77 MASCH BUCKAU R WOLF D17 =SW 7808-553
Flat-bottom sugar centrifuge - 18235B/10
*MATT/ 02.08.77 MATTHEWS J W D15 *ZA 7704-661
Water treatment system - 27825B/14
MAYR/ 01.04.77 MAYR A B04 C03 D16 =PT --67-829
Compsn. for treatment of Herpes zoster - 55129A/31
MCDD 02.12.74 MCDONNELL DOUGLAS CORP B04 D16 J04 #CA 1051-
328
Antibiotic susceptibility testing of clinical specimen - 41761X/22
MEAC 22.08.77 MEAD CORP A92 D13 =SW 7808-791
Aseptic packaging of acid foodstuffs - 15978B/09
MECA- 08.10.76 MECAFINA SA D15 =GB 1543-670
Mechanical biological sewage treatment drum - 38731A/22
MEGG 19.09.77 MEGGLE MILCHIND D13 =NL 7809-528
Protein-rich snack-like foamed food prepn. - 24140B/13
MEIJ 30.06.77 MEIJI SEIKA KAISHA D13 =FR 2396-079
Starch hydrolysate for use as mild sweetener in foodstuffs - 06466B/04
MERE 22.05.75 MERCK PATENT GMBH A60 D21 E32 G01 (G02) =C
7603-334
Nacreous pigments based on mica - 90645X/49
MERE 11.11.76 MERCK PATENT GMBH A96 B05 D22 G03 =DL -133-521
Compsn. contg. polyacrylate or polymethacrylate and antibioti
34958A/20
MERI 09.02.77 MERCK & CO INC B04 D16 =US 4145-252
Syncytial respiratory virus vaccine prepn. - 60477A/34
MERI 10.05.77 MERCK & CO INC D11 =FR 2395-706
Yeast fermentable dough contg. soft wheat flour - 88070A/49
*MERI 18.07.77 MERCK & CO INC C02 D22 E13 *US 4145-426
Antimicrobial piperidino-butan-2-one(s) - 27759B/14

MERI 19.08.77 MERCK & CO INC B02 D16 =DK 7803-654
Thienamycin prepn. from an N-acyl or N-di:acyl deriv. - 18387B/10
MERI 19.08.77 MERCK & CO INC B02 D16 =DK 7803-655
(N)-Acyl-thienamycin cpds. prepn. - 09813B/05
*MERI 15.09.77 MERCK & CO INC B02 C02 D22 E13 *EP ---1-264
(N)-Methylene-thienamycin S-oxide and S-di:oxide derivs. - 26432B/14
*MERI 15.09.77 MERCK & CO INC B02 C02 D22 E13 *EP ---1-265
N-Substd.-thienamycin S-oxide and S-di:oxide derivs. - 26433B/14
*MERI 19.09.77 MERCK & CO INC B04 C03 D16 *EP ---1-365
Prepn. of antigenic and immunogenic herpes virus sub-unit - 26475B/14
METT 14.04.69 M & T CHEMICALS INC D15 E37 J01 =DS 2017-041
Removal of heavy metals from effluent - 76964R/42
*MICH/ 07.11.77 MICHAELS E B C03 D21 E16 (C02 E13) *US 4145-436
Body deodorising antimicrobial compsns. - 27762B/14
MIFI 04.04.75 MILLIPORE CORP A88 D15 J01 (D22) =GB 1543-404
Microporous membrane filter - 81526X/44
MILD 17.01.72 INST MILCHFORSCH DER DDR D13 =DS 2241-236
Low-fat butter prodn - 44453U/32
MINN 08.03.71 MINNESOTA MINING CO A97 D25 E19 G04 =US 4145-303
Imparting water and oil repellency - 60209W/36
MITC 28.06.77 MITSUI PETROCHEM IND KK A81 D21 G03 (A14 A96) =FR 2396-033
Hardenable adhesive compsn. - 04563B/03
*MITC 01.08.77 MITSUI PETROCHEM IND KK A88 D15 J01 (A28 D16) *J5 4026-283
Polysulphone semipermeable membrane prodn. - 26814B/14
*MITO 13.05.68 MITSUBISHI HEAVY IND KK D15 E36 J01 *J7 9004-905
Flash evaporator for brine - 27215B/14
*MITO 03.08.77 MITSUBISHI HEAVY IND KK D22 J01 *J5 4026-968
Gas cleaning appts. - 27026B/14
*MITP 26.07.77 MITSUBISHI PETROCH KK C03 D22 E16 F09 *J5 4026-307
Antiseptic for wood - 26835B/14
*MITR 28.07.77 MITSUBISHI RAYON KK A88 D15 J01 *J5 4026-059
Treating waste washing water - 26745B/14
*MITR 28.07.77 MITSUBISHI RAYON KK A92 D22 *J5 4026-189
Sterilising bag for sterilising medical instruments - 26761B/14
*MITR 28.07.77 MITSUBISHI RAYON KK A92 D22 *J5 4026-190
Complex sheet for sterilising bag mfr. - 26762B/14
*MITR 28.07.77 MITSUBISHI RAYON KK A94 D15 F01 J01 *J5 4027-019
Oil absorbent material for waste water treatment - 27063B/14
*MITR 29.07.77 MITSUBISHI RAYON KK D16 E24 *J5 4025-934
Monascus dyestuffs soln. having high chromaticity - 26697B/14
MITU 24.08.77 MITSUBISHI CHEM IND KK A91 D15 (A21) =GB 2004-556
Cationic flocculant esp. for treating effluents - 20258B/11
MOEB/ 25.08.76 MOEBUS O D13 (D16) =GB 1543-463
Water-soluble extract from protein material esp. whey - 20878A/11
*MOHN/ 01.11.77 MOHNKE H D12 *DL -133-514
On-board fish meal preparation plant - 26054B/14
MOLE- 26.02.76 MOLEKULARBIOLOG GES D16 #GB 1543-612
Recovering unicellular protein grown on methanol - 48211X/26
MOMD 17.08.77 MOSCOW MEAT DAIRY INST D16 (D12 D15) #DK 7703-669
Nutritious medium for fodder yeast mfd. from manure, etc. - 66864Y/38
MOME= 19.08.77 MOSKOV MYAS MOLOCH D16 (D12 D15) #SW 7709-362
Nutritious medium for fodder yeast mfd. from manure, etc. - 66864Y/38
*MONS 20.12.76 MONSANTO CO D15 M14 *US 4145-281
Removal of chromium and zinc ions from waters - 27696B/14
MONS 02.09.77 MONSANTO CO D25 E13 =EP ---1-332
(N)-Acetyl-di:glycol:imide - 74391A/41
MOOC 22.02.72 MO OCH DOMSJO AB D22 F07 =SU -607-533
Absorbent product - 46830U/33
*MOPO= 30.12.75 MOSC POWER INST D15 J01 *SU -607-784
Sulphur contg. sodium salts extraction from effluents - 27487B/14
*MORP 28.07.77 MORISHITA PHARM KK B05 D13 *J5 4026-324
Aminoacid compsn. for treating hepatic encephalopathy - 26847B/14
*MOSQ/ 22.08.77 MOSQUEIRA A V D16 *BR 7705-576
Culture medium for Matarrhizium anisopliae - B/14
*MOST/ 30.06.77 MOSTECKY J D13 *CS 7704-352
Grain preservation - B/14
MRSC 09.03.77 MARS LTD D13 (D12) =PT --67-742
Textured food product similar to meat in structure - 65287A/37
MULL/ 21.06.74 MULLER H C03 D16 =SU -607-532
Single cell protein cultivation - 04159X/03
MULL/ 05.09.77 MULLER L D18 =DL -133-969
Chrome-tanning of leather - 22287B/12

NAAR 04.02.69 NAARDEN INT NV D23 E15 =DS 2006-388
New perfumes and preparation of perfume - 55356R/31
NARE- 12.08.77 NATIONAL RES LABS D22 E12 #NO 7702-830
Antimicrobial heavy metal complexes with polyfunctional acids - 79262Y/44
*NATS/ 26.07.77 NATSUI K C03 D16 *J5 4026-328
Controlling diseases of plants, weeds and insects - 26851B/14
*NENG 07.02.77 NICHOLS ENG & RES D15 *US 4145-278
Sepn. of regeneratable lime sludge - 27695B/14
NEST 17.10.72 SOC PROD NESTLE SA D13 =DS 2348-033
NEST 06.08.75 SOC PROD NESTLE SA D13 =CA 1051-255
Coffee solubles extracted from roast ground coffee - 94194X/50
NEST 02.06.76 ASSIS TECH NESTLE S D16 E24 (D13) =US 4145-254
Orange pigment from Monascus species prepn. - 88588Y/50
NEST 29.07.77 SOC PROD NESTLE SA D13 =J5 4026-364
Removing caffeine and/or chlorogenic acid from aq. vegetable extracts - 86149A/48
*NICH- 29.07.77 NICHIZO KK D25 *J5 4025-905
Prodn. of non-foaming detergent compsn. - 26673B/14
*NIOF 28.07.77 NIPPON OILS & FATS KK D11 *J5 4026-345
Rice-contg. bread prodn. - 26861B/14
*NIPK 28.07.77 NIPPON KAYAKU KK A96 D22 *J5 4026-326
High temp. stable gelatin cataplasm - 26849B/14
*NIPK 18.08.77 NIPPON KAYAKU KK B03 D16 *DK 7802-674
3-((S)-1′-Phenyl-ethyl-amino) propyl-amino bleomycin prodn. - B/14
NIPS 25.03.76 NIPPON SODA KK D15 E33 =US 4145-306
Stable granular calcium hypochlorite compsn. - 69236Y/39
*NIRA 29.07.77 UNITIKA KK A96 B04 D16 *J5 4026-394
Fixing an enzyme on a solid surface - 26873B/14
*NITA- 30.07.77 NIPPON TANSUI KOGYO D15 *J5 4027-255
Treating high BOD waste water from food processing - 27118B/14
*NITL 29.07.77 NITTO ELECTRIC IND KK A96 D22 F07 *J5 4026-091
Composite absorbing member for surgical use - 26751B/14
NITN 20.09.76 NIHON TOKUSHU NOYAKU SEI B05 C01 D22 =CS 7706-014
(N)-Sulphamoyl phosphoric acid ester amide derivs. - 23602A/13
NITN 20.09.76 NIHON TOKUSHU NOYAKU SEI B05 C01 D22 =CS 7706-015
(N)-Sulphonyl phosphoric acid ester amide derivs. - 23603A/13
NITN 20.09.76 NIHON TOKUSHU NOYAK B05 C01 D22 =CS 7803-756
(N)-Sulphamoyl phosphoric acid ester amide derivs. - 23602A/13
NITN 20.09.76 NIHON TOKUSHU NOYAK B05 C01 D22 =CS 7803-757
(N)-Sulphonyl phosphoric acid ester amide derivs. - 23603A/13
NMHB 16.12.77 NORDISCH MASCH R BAADER D12 #DL -133-754
Fish fillet skinning machine - 38622A/22
*NMHB 28.07.78 NORDISCHER MASCHINE D12 *DS 2833-097
Fish side scale removing cutter - 26212B/14
NOVE- 26.02.76 NOVENYOLAJIPARI MOS C03 D13 #US 4145-446
Urea and fatty acid addn. prod for animal feeds - 56102X/30
NOVO 23.08.77 NOVO INDUSTRI AS D16 (D17) =SW 7808-865
Glucose isomerase activated by water-soluble iron salt - 15971B/09

*OLIN 08.09.76 OLIN CORP D22 E12 *US 4145-543
Sodium di:chloro-isocyanurate compsns. - 27802B/14
OMUK- 29.02.72 OMUKO KK D15 J03 =J4 8089-550
Device for drinking water prodn. - 27216B/14
*OMUK- 29.02.72 OMUKO KK D15 J03 *J7 9004-911
Device for drinking water prodn. - 27216B/14
*ONLI- 12.10.76 ON-LINE INSTRUMENTA D13 *US 4144-804
Controlling butterfat content in reconstituted milk - 27621B/14
OREA 02.08.68 L'OREAL SA D21 E14 E24 F06 =DT 1967-226
Oxidation dyes for keratin fibres (particularly hair) and - 23105R/14
OREA 14.08.68 L'OREAL SA D21 E14 =DS 1967-172
2,6-dimethyl-3-aminophenol coupling agents for hair - 10689R/07
OREA 11.06.69 L'OREAL SA D21 E14 (E24) =DS 2066-044
Indoaniline dyeing compositions for ketatirnic - 92054R/49
OREA 20.08.76 L'OREAL SA D21 E14 =DS 2737-291
(N)-alkoxyethyl or alkoxy-propyl para phenylenediamine cpds. - 14036A/08
OREA 28.07.77 L'OREAL SA B03 D21 E12 (D22) =J5 4027-569
Aluminium tris-2-pyridine-thiol-N-oxide - 08016B/05
*OREA 14.09.77 L'OREAL SA A23 D21 (A96) *DT 2839-869
Hair cosmetic compsns. contg. poly:aspartic acid derivs. - 26385B/14
OREA 20.09.77 L'OREAL SA A96 D21 =NL 7809-517
Cosmetic compsn. for hair or skin contg. cationic polymers - 22076B/12
OREA 23.09.77 L'OREAL SA A96 D21 =DT 2841-377
Aminated polymers used in hair and skin care products - 23958B/13
*ORIE- 28.07.77 ORIENTAL ASBESTOS K A82 D18 F08 *J5 4026-301
Leather board prepn. - 26829B/14
OSAY 01.07.77 ENSO GUTZEIT OY D15 E14 F09 =FR 2395-957
Purifying waste waters, esp. sulphate pulp bleaching waters - 04344B/03

PALM- 06.06.77 SOC PALMIER HUILE D14 =BR 7803-601
Fluidised bed to dry coconut kernel for copra - 20324B/11
*PALM/ 18.08.77 PALMA S M P D12 *BR 7705-499
Fish drying process - B/14
PANL- 31.03.77 PANLABS INC B02 C02 D22 (D13) =PT --67-848
De:thia-penicillin derivs. from new Streptomyces species - 72706A/41
PANL- 31.03.77 PANLABS INC B02 C02 D22 (D13) =ZA 7800-915
De:thia-penicillin derivs. from new Streptomyces species - 72706A/41
*PARK 31.07.75 PARKE DAVIS & CO B03 D22 *US 4145-529
Antibacterial 3′-deoxy butirosin A prepn. - 27797B/14
*PAUW/ 24.11.78 PAUWELS S B04 D16 J04 *BE -872-264
Pure anti cyclo:pentano:hexane 2,4-carbonate prodn. - 25947B/14
PENN 15.07.69 PENNWALT CORP A18 D11 E15 G02 (A51) =DS 2034-922
Di (3,3,6-trimethyl cyclo hexyl) peroxydicar - 07614S/04

*PERS 16.09.77 PERSONAL PRODUCTS CO A96 D22 *DT 2840-340
Absorbent, comfortable cellulose sponge tampon prodn. - 26396B/14
*PEST= 22.10.75 PESTICIDES POLYMERS D15 E16 *SU -607-783
Detoxification of aq. waste contg. thiram fungicide - 27486B/14
*PETL 27 09.72 PETROLITE CORP C02 D22 E13 M14 *US 4145-545
2,3,4,5-Tetra:hydro-pyrimidine - 27804B/14
PETZ- 26.09.77 MASCH PETZHOLDT J S D13 =DT 2743-246
Continuous cocoa paste roasting process - 08081B/05
PFEI 10.04.75 PFEIFFER & LANGEN B05 D17 E16 =GB 1543-765
Amino acids extn. from sugar beet - 65050X/35
PFIZ 17.10.73 PFIZER INC B02 C02 D22 E13 =CS 7407-099
6-Amino-2,2-dimethyl-3-(tetrazol-5-yl)-penam derivs. - 29076W/18
PFIZ 17.10.73 PFIZER INC B02 C02 D13 (D22) #CS 7702-901
7-Amino-4-(tetrazol-5-yl or carbamoyl)-ceph-2 or 3-ems - 30564W/19
PFIZ 28.08.75 PFIZER INC B03 C02 D13 E13 (D23) =CS 7604-886
(3)-Hydroxy gamma:pyrones prepn. - 11094Y/07
PFIZ 28.08.75 PFIZER INC B03 C02 D13 E13 (D23) =CS 7706-588
(3)-Hydroxy gamma:pyrones prepn. - 11094Y/07
PFIZ 28.08.75 PFIZER INC B03 C02 D13 E13 (D23) =CS 7803-022
(3)-Hydroxy gamma:pyrones prepn. - 11094Y/07
PFIZ 26.11.76 PFIZER INC B02 D16 =DL -133-674
6-APA prepn. by enzymatic deacylation of penicillin cpds. - 38479A/22
PFIZ 23 03.77 PFIZER INC A14 D15 (A97) =PT --67-793
Insoluble granular maleic anhydride terpolymers for scale control - 04071A/02
PFIZ 18.08.77 PFIZER INC B04 D16 =DK 7803-641
Antibacterial antibiotic **47444** - 18411B/10
PHIM 30.07.73 PHILIP MORRIS INC A14 D18 (A97) =CA 1051-453
Low polymers e.g. of 1-menthyl 1,1 dimethylalkenyl-carbonates - 11988W/07
*PHIP 10.09.76 PHILLIPS PETROLEUM CO D16 (D13) *US 4145-445
Integrated protein prodn. system - 27765B/14
PIKO- 09.06.77 PIKOK INT TRADING A96 D22 =BR 7803-698
Porous wound dressing mfd. from collagen gel - 74475A/42
PILL 03.01.75 PILLSBURY CO D13 #CA 1051-261
Dehydrated potato prod. prepn. - 09077W/05
*POLA 21.01.75 POLAK'S FRUTAL WORKS INC D13 E13 *CA 1051-441
Heterocyclic thioether(s) useful as flavouring agents - 26007B/14
PROC 06.05.74 PROCTER & GAMBLE CO D21 =CA 1051-312
Solid cosmetic-detergent compsn for skin treatment - 77090W/47
PROC 09.09.74 PROCTER & GAMBLE CO D25 E12 =CA 1051-311
Household abrasive cleanser compsn. - 72285Y/40
PROC 30.05.75 PROCTER & GAMBLE CO D22 F09 =GB 1543-346
Two ply tissue paper has plies separated in distinct zones - 92423X/50
PROC 28.11.75 PROCTER & GAMBLE CO A97 D25 =US 4145-184
Detergent for washing textiles - 40311Y/23
PROC 28.03.77 PROCTER & GAMBLE CO A97 D25 E23 F06 =FR 2396-077
Bleach compsn. contg. sulphonated zinc phthalocyanine photoactivator - 74412A/42
*PROC 21.09.77 PROCTER & GAMBLE CO D13 E19 *EP ---1-309
Meat aroma precursor compsn. - 26453B/14
PROC 23.09.77 PROCTER & GAMBLE CO A97 D25 E19 =EP ---1-305
Laundry detergent for removing oily dirt from hydrophobic fibres - 72508A/40
*PROC 26.09.77 PROCTER & GAMBLE CO A97 D25 E19 *EP ---1-310
Low phosphate built detergent compsn. - 26454B/14
*PROC 26.09.77 PROCTER & GAMBLE CO D25 E19 F06 *EP ---1-315
Antistatic, fabric-softening detergent compsn. - 26457B/14
PROC- 11.10.76 PROCESS ENG CO D16 =DL -133-524
Foam separator at outlet of fermentation vessel - 21639A/12
PROC- 08.03.77 PROCESS ENG CO C03 D13 =ZA 7801-282
Animal feed prodn. by yeast fermentation of sugar contg. hydrolysates - 67339A/38
PROJ- 17.08.77 PROJEKT CHEM VERFA D17 =DK 7803-609
Sugars and opt. cellulose and lignin extn. from vegetable material - 14176B/08
PURE- 24.01.77 PURE CYCLE CORP D15 =US 4145-279
Closed circle domestic waste water recycling - 55424A/31

*QUAK 02.08 76 QUAKER OATS CO D13 *US 4145-448
Protein fortified marshmallow bar - 27767B/14

RAIK= 17.08.77 RAIKOLKHOZZHNPROM D16 (D12 D15) #DK 7703-669
Nutritious medium for fodder yeast mfd. from manure, etc. - 66864Y/38
RAIK= 19 08.77 RAIKOLKHOZZHIVPROM D16 (D12 D15) #SW 7709-362
Nutritious medium for fodder yeast mfd. from manure, etc. - 66864Y/38
RATI- 19.09.77 VEB RATIONAL HALLE D16 =NL 7809-469
Plant extn. esp. for spirits industry - 24168B/13
REDU- 16 06 75 REDUX CORPORATION D15 =GB 1543-411
Purificn of waste water polluted with synthetic detergent - 77622X/42
*REIN/ 22 11 77 REINHOLD M D12 *DL -133-892
Cooked meat producing machine - 26165B/14
*REPP/ 00.00.76 REPPERT H D15 *DT 2743-580
Storm sewage bar screen - 26331B/14
RHON 23.03.77 RHONE-POULENC INDUSTRIES C03 D13 =PT --67-814
Agglomerated mineral supplement for animals - 68928A/39
RHON 01.07.77 RHONE-POULENC INDUSTRIES D13 =FR 2396-250
Drying process for heat sensitive feedstuffs - 05449B/03
RICT 25.08.77 RICHTER GEDEON VEGY C03 D15 (D13 D15) =DT 2837-066
Sewage sludge used to mfr. nutritious animal feed - 16007B/09
RICT 25.08.77 RICHTER GEDEON VEGY C03 D15 (D13 D15) =SW 7808-864
Sewage sludge used to mfr. nutritious animal feed - 16007B/09
RITP 22.02.71 SYBRON CORP D15 =J7 9004-910
Desalting condensate - 78421T/49
ROGG 28.08.74 ROGER & GALLET A97 B07 D16 =DS 2536-702
Formation of aerosol prods - 85013W/52
ROHM 16.02.73 ROHM GMBH D18 =SU -607-556
One-step enzymatic unhaired hide prepn. - 64786V/37
ROHM 27.06.77 ROHM & HAAS CO A91 B04 D15 E19 (A13 D13 D17) =FR 2396-030
Crosslinked anion-exchange resin - 05441B/03
ROHM 27.06.77 ROHM & HAAS CO A97 D25 E32 (A14 E16 E35) =FR 2396-074
Aq. polymer prepn. used in detergent, esp. carpet shampoo - 06308B/04
ROQF 26.09.72 ROQUETTE FRERES SA B05 D13 E17 =CA 1051-260
Sweetening compsns prepn - 28403V/15

*SAEG/ 02.08.77 SAEGUSA T D22 (D21) *J5 4027-566
Water- and organic solvent-soluble poly:phosphate prodn. - 27182B/14
SAKA 30.06.77 OTSUKA PHARM KK B02 D16 =SW 7805-606
Deca:hydro-naphthalene-spiro-benzofuran derivs. - 84059A/47
*SAND- 28.06.77 SANDVIK BROUSSAUD A35 D18 *FR 2396-085
Stamping tool for leather shoes and fancy goods etc. - 26514B/14
SANO 18.06.74 SANDOZ LTD A60 D25 E13 F06 =CA 1051-440
Diphenyl pyrazoline cpds. contg. sulphonic acid group - 00070X/01
*SANY 27.07.77 SANKYO KK B04 D16 *J5 4026-393
Enzyme deriv. with improved stability and activity - 26872B/14
*SANY- 30.06.77 SANYO MOKUZAI BOFU C03 D22 E19 F09 (C01) *J5 4026-308
Preservative compsn. for wood - 26836B/14
SAOC 31.03.77 SANRAKU OCEAN B02 C02 D22 (D13) =PT --67-848
De:thia-penicillin derivs. from new Streptomyces species - 72706A/41
SAOC 31.03.77 SANRAKU OCEAN B02 C02 D22 (D13) =ZA 7800-915
De:thia-penicillin derivs. from new Streptomyces species - 72706A/41
SASA- 20.04.76 SASAKURA ENG CO D15 J01 =US 4145-245
Transportable double-action vaporiser for distilling sea water - 59448Y/34
*SAUM- 29.06.77 SAUMON P C D12 *FR 2395-707
Slicing smoked salmon - 26482B/14
SCHD 18.09.70 SCHERING AG B01 D16 =DS 2047-071
11-hydroxylated 1-alpha-2-alpha-methylene steroids - 21613T/14
SCHI/ 03.03.77 SCHIRNEKER H L D23 =DT 2742-017
Candle which burns uniformly with flame of constant height - 68199A/38
*SCHR/ 20.10.77 SCHREINERT F D12 *DL -133-630
Synthetic sausage skins prodn. from animal protein - 26096B/14
*SCHR/ 22.10.77 SCHREINERT F A97 D12 *DL -133-629
Synthetic viscose sausage casings - 26095B/14
*SCOP 15.10.76 SCOTT PAPER CO D22 F04 *US 4145-464
Surface particles adhered to nonwoven web - 27772B/14
SEAR 28.03.77 SEARLE G D & CO B04 C03 D16 =PT --67-826
Antimycotic compositions - 74694A/42
*SEKI 29.07.77 SEKISUI CHEMI IND KK B04 C03 D16 (D13) *J5 4026-391
Cultivating Corynebacterium yamanasiensis in nutrient medium 26871B/14
SERV- 04.03.77 SERVAL SA C03 D13 =PT --67-739
Gravity feed hopper for powder, etc., esp. dried milk - 47815A/27
SERV- 08.03.77 SERVAL SA C03 D13 =PT --67-752
Volumetric rotary dispenser for powder etc. esp. dried milk - 47816A/27
SHEL 20.02.73 SHELL INT RES MIJ BV C03 D16 (D13) =CS 7401-175
Methanol-consuming micro-organism cultivation - 61835V/35
SHIO 25.08.77 SHIONOGI KK B02 C02 D22 E13 =SW 7808-950
3-Thiadiazolyl-thiomethyl-oxa-de:thia-cephem derivs. - 01945B/02
*SHIO 19.09.77 SHIONOGI KK B03 C02 D13 E13 (D22) *EP ---1-280
1-Heterocyclyl-carbonyl-amino-glycoside cpds. - 26439B/14
*SHIS/ 08.09.77 SHISHKOVA Z P C03 D16 (D13) *GB 1543-491
Culture media contg. vegetable matter and peat hydrolysates 26539B/14
*SIEL/ 19.07.77 SIELAFF H D12 *DL -133-631
Mechanised flesh stripping for bones - 26097B/14
SNAM 22 03.73 SNAMPROGETTI SPA A96 B04 D16 F01 =CS 7402-101
Enzyme-contg. cellulosic fibres - 58455V/33
SNAM 01.09.76 SNAMPROGETTI SPA D15 H03 =FR 2395-958
Microbiological purification of water contaminated with mineral oil 18159A/10
SNAM 15 03 77 SNAMPROGETTI SPA B05 D16 E19 =ZA 7801-447
Hydrolysis of D,L-hydantoin derivs. to D-(N) carbamoyl-glycine derivs 67054A/38
SNAM 22.03.77 SNAMPROGETTI SPA A96 B07 D22 F01 (B04) =ZA 7801-362
Biocompatible fibres contg. anticoagulant or antithrombotic - 68925A/3
SNOW 02 08.74 SNOW BRAND MILK PRODUCTS D12 =CA 1051-259
Fish meat powder prodn. - 25104X/14

*SOAF- 24.11.77 SOAF SA D15 *BE -872-256
Activated sludge treatment plant for waste water - 25943B/14
*SODE- 29.06.77 SODETE D15 *FR 2396-181
Controlled pressure air displacement for discharging liq. reservoir - 26524B/14
SOLV 10.01.77 SOLVAY & CIE A97 D25 (A14 A35) = US 4145-526
Depolymerising hydroxy:carboxylic polymers to lower polymers - 49681A/28
SORA- 19.07.77 SORAIN CECCHINI SPA D16 = BR 7802-402
Mechanised digester used to produce fertiliser from organic waste - 84173A/47
SORG/ 11.08.77 SORG E C03 D16 (D13) = GB 2004-555
Protein-rich nutrient material prepn. from cellulose material - 16143B/09
STAM 19.08.77 STAMICARBON BV D16 J04 = DK 7803-443
Reaction column process for enzymatic conversions - 09976B/06
*STAR= 30.06.76 STARCH PRODUCT RES D17 *SU -606-880
Dextrin prodn. line - 27320B/14
STBR 27.06.77 STANDARD BRANDS INC D13 = FR 2395-710
Sauce mix in form of plastic mass - 87773A/48
STED 29.06.77 CENT STEPHANOIS REC MECA D14 = FR 2395-713
Continuous peeling of vegetable products - 02462B/02
STEF/ 30.06.76 STEFFENS B D22 F04 = US 4144-623
Feminine hygiene tampon mfr. - 04361A/03
*STEM 28.09.77 STEINMULLER L & C GMBH D15 J01 *DT 2743-608
Exchanger resin regeneration - 26332B/14
STER 21.04.75 STERLING DRUG INC D15 F09 = GB 1543-337
Installation for effluent oxidation with wet air - 84376X/45
STER 22.09.75 STERLING DRUG INC B03 D16 = GB 1543-518
Aminocyclitol antibiotics of the streptamine type - 67317X/36
STER 06.09.77 STERLING DRUG INC B05 C03 D22 (B03 C02) = GB 2004-542
4-Benzyl or cyclohexyl or 2-furfuryl heptane-3,5 di:one derivs. - 18014B/10
STER 15.09.77 STERLING DRUG INC D22 J01 (D15) = DT 2839-173
Purifying odorous waste gases, esp. from water treatment - 20017B/11
STER 15.09.77 STERLING DRUG INC D22 J01 (D15) = NL 7809-138
Purifying odorous waste gases, esp. from water treatment - 20017B/11
STER 19.09.77 STERLING DRUG INC D15 = DT 2840-041
Treating aq. effluent contg. organic matter with oxygen - 20019B/11
STER 19.09.77 STERLING DRUG INC D15 = DT 2840-764
Treating waste water using rotating biological contactor - 22060B/12
STER 19.09.77 STERLING DRUG INC D15 = GB 2004-532
Treating aq. effluent contg. organic matter with oxygen - 20019B/11
STER 19.09.77 STERLING DRUG INC D15 = GB 2004-533
Treating waste water using rotating biological contactor - 22060B/12
STER 19.09.77 STERLING DRUG INC D15 = NL 7809-242
Treating aq. effluent contg. organic matter with oxygen - 20019B/11
STER 19.09.77 STERLING DRUG INC D15 = NL 7809-523
Treating waste water using rotating biological contactor - 22060B/12
*STER 30.01.78 STERLING DRUG INC C02 D22 E13 *ZA 7800-537
Heterocyclic methylene-bis:aza-oxa cpds. - 27844B/14
*STOP- 01.12.77 STOPPANI L SPA A41 D18 E13 G06 (A60 E31) *BE -872-394
Pyridine di:carboxylic acid prepn. from di:methyl pyridine - 25990B/14
*STUR/ 12.02.76 STURCH M D15 *CS 7600-912
Detoxification of concentrated cyanide waste - B/14
*SUGY 27.07.77 SUGIYAMA SANGYO KAG D13 *J5 4026-347
Protein extn. from defatted soybean - 26862B/14
*SUKO/ 02.06.77 SUKOVATY J D13 *CS 7703-740
Ultra-pasteurisation of fruit juice - B/14
SULZ 04.05.77 GEBRUDER SULZER AG D15 = J5 4025-269
Raw sludge irradiation control - 82470A/46
SUMB 28.12.74 SUMITOMO BAKELITE KK A97 D13 = J7 9004-746
Edible amylose compsn. - 64052X/34
SUME 01.07.77 SUMITOMO ELEC IND KK A96 B07 D22 (A14) = FR 2395-740
Vascular PTFE prosthesis - 78441A/44
SUMO 26.05.75 SUMITOMO CHEMICAL KK A12 D21 E17 (A96) = CA 1051-464
Hydrogenated polyisoprene oil of low molecular wt. - 92893X/50
SUMO 17.06.75 SUMITOMO CHEMICAL KK A11 B07 C03 D17 = GB 1543-750
Starch paste for granulations - 02371Y/02
*SUND/ 25.08.77 SUNDBERG H M D15 *SW 7709-551
Treatment of effluent liquor - B/14
*SYNT 15.09.75 SYNTEX (USA) INC D15 *US 4144-841
Aeration and filtration appts. for aquaria - 27626B/14
*SYNT= 23.09.76 SYNTH NAT PERFUME D23 E15 *SU -606-851
D-Limonene used for mfr. of perfumes - 27292B/14

TAKE 04.08.77 TAKEDA CHEMICAL IND KK B04 D16 (D22) = J5 4027-501
Antibiotic C-14482 A1, antibacterial and antitumour agent - 12493B/07
*TAKG 27.01.68 TAKI KAGAKU KK D21 E36 L02 *J7 9004-919
Silica powder abrasive with high apparent density - 27217B/14
*TAKI- 01.08.77 TAKIRON KK D15 *J5 4026-280
Treating waste liq. of high BOD - 26812B/14
*TARA/ 13.05.77 TARANT J D13 *CS 7703-150
Non-alcoholic malt liquor prodn. - B/14
TERE- 17.08.77 TECHN RES AFFILIATE B04 D16 #DK 7703-664
Rheumatoid factor immuno-agglutination detection - 18133B/10
TIVE- 13.09.78 TIVET DEV LTD D12 = GB 2004-454
Moulding sausages etc. with coherent skin-like surfaces - 22039B/12
*TOHS 03.08.77 TOHO RAYON LTD D15 (D12) *J5 4026-961
Dehydrating sludge formed from slaughterhouse waste blood water - 27019B/14
*TOHS 03.08.77 TOHO RAYON LTD D15 (D12) *J5 4027-260
Treating blood-contg. waste water from slaughterhouse - 27123B/14
*TOKR- 02.08.77 TOKYO RIKA KIKAI KK D16 J01 *J5 4026-972
Gas-liq. contact device used in culturing microbes and enzymes - 27030B/14
*TOOM/ 13.07.76 TOOMEL KH A D13 *SU -607-567
Centrifugal extruder for chopped vegetables - 27402B/14
*TORA 29.07.77 TORAY INDS INC A94 D15 F01 (A14) *J5 4027-018
Fibrous adsorbent used e.g. for water purificn. - 27062B/14
*TOXW 28.07.77 TOYO INK MFG KK A97 D14 (A11 A17) *J5 4026-342
Sterilisation of food e.g. boiled fish paste - 26860B/14
*TSCH/ 27.09.77 TSCHEUSCHNER H D D11 *DL -133-891
Sliced bread packaging - 26164B/14
TSUB 28.10.75 KUMIAI CHEM IND KK B04 C03 D13 (D16) = GB 1543-353
Multhiomycin prepn. by culture of Streptomyces 8446-CC1 - 30918Y/18
*TSUM 01.08.77 TSURUMI SODA KK D22 E14 (E13) *J5 4026-334
Deodorant for urine and excrement - 26855B/14
TURN- 28.05.75 MASCHINENFAB TURNER D18 = DS 2523-555
Continuous handling of hides and skins - 95567X/51

UBEI 28.06.77 UBE INDUSTRIES KK D15 E36 J09 (J04 J08) = FR 2395-951
Regenerator for spent activated carbon - 02517B/02
*UFPL= 26.12.72 UFA PLANT PROTECT D15 E34 *SU -606-820
Rapid removal of hypochlorite from waste water - 27261B/14
UGIN 04.06.76 UGINE KUHLMANN D21 E11 F06 M14 (D22) = US 4145-305
Tris-acetoxymethyl phosphine oxide as per cpd. activator - 86526Y/49
UGIN 29.07.77 UGINE KUHLMANN D15 J01 = J5 4026-298
Continuous prepn. of zeolite-A of uniform quality - 06080B/04
ULVE/ 03.11.75 ULVESTAD O P C03 D13 = GB 1543-632
Foodstuff treatment tank - 34800Y/20
UNIC 27.06.77 UNION CARBIDE CORP D15 = FR 2395-775
Sequestration of calcium and magnesium ions - 58574A/32
UNIC 28.06.77 UNION CARBIDE CORP A97 D12 = FR 2395-912
Food casings providing brown smoke colour - 02455B/02
UNIC 30.06.77 UNION CARBIDE CORP D12 = FR 2395-892
Stuffing horn assembly with flow control device - 02456B/02
UNIC 25.08.77 UNION CARBIDE CORP D22 = SW 7808-967
Shrink wrapped stick of concertina folded tubular sausage casing - 15999B/09
UNIL 31.01.72 UNILEVER NV D13 = DS 2304-073
Black tea prodn - 48941U/35
*UNIL 04.03.75 UNILEVER LTD D13 *GB 1543-553
Palm based fat prods. - 26540B/14
UNIL 21.06.76 UNILEVER LTD A96 D21 E17 = ZA 7703-674
Hair conditioning shampoo contg. cationic cellulosic resin - 90077Y/51
UNIL 14.07.76 UNILEVER LTD D13 = ZA 7704-203
Aromatising additive for a fat product - 06758A/04
UNIL 10.09.76 UNILEVER NV C03 D23 = PT --67-020
Purifying tri:glyceride cpds. by adding hydratable phosphatide - 19676A/11
UNIL 24.09.76 UNILEVER NV D13 = PT --67-073
Water-in-oil margarine contg. proteose-peptone - 23360A/13
UNIL 01.07.77 UNILEVER NV A97 D25 E19 (A25) = FR 2396-075
Nonionic washing compsns. suppressing colour transfer - 01918B/02
UNIL 28.07.77 UNILEVER NV A96 D21 = J5 4026-338
Sprayable hair lacquer compsn. - 08019B/05
UNIL 22.08.77 UNILEVER NV D25 E34 = SW 7808-818
Aq. liq. detergent compsn. prepn. for washing clothes etc. - 14186B/08
UNIL 15.09.77 UNILEVER NV D24 E17 = DT 2839-862
Soap tablets contg. at least one per cent free carboxylic acid - 20034B/11
UNIL 15.09.77 UNILEVER NV D24 E17 = NL 7809-353
Soap tablets contg. at least one per cent free carboxylic acid - 20034B/11
*UNIL 05.10.77 UNILEVER NV D25 E12 (D21 E17) *BE -870-913
Liq. soap prod. contg. specified potassium soaps - 25934B/14
UNIL 13.09.78 UNILEVER NV D24 E17 = GB 2004-564
Soap tablets contg. at least one per cent free carboxylic acid - 20034B/11
UNIO 25.05.76 UCB SA B02 C02 D13 = US 4145-343
Antibacterial (6)-substd. amino-spiro-cycloalkane penicillins - 84684Y/48
UNIX 15.04.76 UNISEARCH LTD D15 = GB 1543-532
Waste water treatment - 87105Y/49
UNTC 05.07.74 ECODYNE CORP D15 = CA 1051-564
Compact apparatus for sewage treatment - 10115A/05

UNVO 09.12.75 UNIVERSAL OIL PROD D22 #J7 9004-700
Electric light bulb with oxidn. catalyst covering - 05210X/03
UPJO 19.09.77 UPJOHN CO B04 C03 D16 (D22) =NL 7809-302
Antibiotic 354 and its salts and derivs. - 09910B/05
USAS 22.08.73 NAT AERO & SPACE ADMIN D15 =CA 1051-566
Waste water purification using active carbon and ash - 17896W/11
• USAS 25.02.77 NAT AERO & SPACE ADMIN D16 E14 J04 *US 4145-255
Selective determination of phenol and related phenol(s) - 27683B/14
• USOL= 10.03.75 USOLKA CHEM COMBINE A35 D15 (A14) *SU -606-821
Removal of polymers and surfactants from waste water - 27262B/14
USRU 08.07.75 UNIROYAL LTD A97 D15 E19 J01 (A25) =GB 1543-434
Absorbing weakly acidic organic cpds. from aq. solns. - 06048Y/04

• VACC= 11.05.76 VACCINE SERUM RES B04 C03 D16 *SU -607-572
Tick encephalitis virus antibodies - 27406B/14
VCAP- 08.03.77 GEBR VAN CAPELLEVE D11 =ZA 7801-332
Conveyor for baking forms during rising process - 65290A/37
• VELW 10.10.77 VEB LEUNA-WERK W ULBRICH A97 D13 (A17) *DL -133-395
Wax dispersions for preserving fruit etc. - 26012B/14
• VELW 08.11.77 VEB LEUNA-WERK W ULBRICH D15 E19 (D25) *DL -133-562
Extraction of sulphonate(s) from aq. solns. - 26075B/14
VEOS 28.06.77 VER OSTERR EISEN & STAHL D15 J02 =FR 2395-773
Sewage aeration device - 02213B/02
• VESE/ 25.11.76 VESELY S D15 *CS 7607-634
Connection for neutralisation and detoxification station reactor - B/14
• VGEE/ 19.09.77 VAN GEEST C H J D15 *NL 7710-273
Ground or surface water distillation - 27238B/14
VHAG/ 09.03.77 VON HAGENS G A96 D22 (D16) =ZA 7801-330
Preserving human, animal or plant specimens - 44137A/25
• VIPO- 14.02.77 VIPONT CHEMICAL CO D21 *US 4145-412
Oral compsns. contg. Sanguinaria canadensis extract - 27753B/14
• VLEN- 30.07.71 MASCH VAN LENGERICH D14 *BE -872-377
Tractor mounted cutter box for blocks of ensilaged material - 25986B/14
VOJT/ 11.08.77 VOJTISEK V B04 D16 =CS 7705-321
Microbial cell aggregate with penicillin acylase activity - 18306B/10
VROL 17.05.76 VON ROLL AG C03 D15 =GB 1543-288
Disposal of industrial effluent contg. salts and organic matter - 66940Y/38
VSCO/ 07.09.76 VAN SCOTT E J A96 B05 D21 =PT --67-007
Topical treatment of dry skin - 17668A/10
VYSO- 23.12.75 VYSOKA SKOLA CHEMIC D16 =GB 1543-399
Continuous prodn. of biomass from ethanolic substrates - 49004Y/28

WACK 12.08.77 WACKER CHEMIE GMBH A96 D21 (A26) =GB 2004-558
Dental casts and casting spoons prepn. - 16163B/09
WAKP 29.07.77 WAKO PURE CHEM IND KK B04 D13 E13 J04 =J5 4025-892
Hydrogen peroxide determination - 12313B/07
• WALK/ 17.01.77 WALKER H L D15 *US 4145-287
Recovering grease from waste effluent water - 27700B/14
• WARN 21.09.77 WARNER-LAMBERT CO A96 D21 *GB 2004-466
Prosthetic denture - 26559B/14
• WEIN/ 22.03.73 WEINRICH B W C03 D13 *US 4145-447
Chew resistant animal food prod. - 27766B/14
WINT- 15.09.77 WINTERHALTER K KG D14 =DT 2741-871
Washing machine to clean vegetables with circulated water - 40419A/23
WINT- 15.09.77 WINTERHALTER K KG D14 =NL 7711-383
Washing machine to clean vegetables with circulated water - 40419A/23
WOBI 29.06.77 WORTHINGTON BIOCHEM CORP B04 D16 #FR 2396-298
Turbidity test for endotoxins - 55574Y/31
WOLF 13.08.77 WOLFF WALSRODE AG A97 D15 F09 (A23) =NO 7802-730
Water-soluble basic polymer with polyethylene glycol units - 14411B/08
WRIL 26.09.77 WRIGLEY W JR CO D13 E17 =DT 2811-816
Chewing gum for stimulating saliva flow, esp. for athletes - 65304A/37
• WRUC/ 11.11.77 WRUCK S D12 *DL -133-753
Fish processing line transfer device - 26130B/14

• YAKU- 21.06.68 YAKULT SEI KAGAKU K D22 F04 (D16 F06) *J7 9005-237
Absorbent cotton mfr. - 27234B/14
• YAMS 27.07.77 YAMASA SHOYU KK B04 D13 *J5 4026-366
Extracting sweet substance from Periandra plants - 26866B/14
• YAMS 27.07.77 YAMASA SHOYU KK B04 D13 *J5 4026-367
Refining aq. extract of Periandra plant roots - 26867B/14
• YAMS 27.07.77 YAMASA SHOYU KK B04 D13 *J5 4026-368
Sweet extract prepn. from Periandra plant - 26868B/14
• YOSH 27.07.77 YOSHITOMI PHARM IND KK C03 D22 E34 F09 (E19) *J5 4026-311
Agent for treating wood to prevent discolouration - 26839B/14
• YOSH/ 28.07.77 YOSHIKAWA Y D13 *J5 4026-371
Deodorising garlic - 26870B/14

ZAID 29.06.77 ZH BISEIBUTSU KAGAKU KEN B04 D16 =FR 2396-078
Beta-lactamase inhibitor prodn. - 20527B/11

• ZAND/ 20.10.77 ZANDER D D12 *DL -133-427
Carcass transporter for abattoirs - 26028B/14
• ZORK/ 09.11.76 ZORKALTSEV V N D23 *SU -606-878
Fat and crackling separator - 27318B/14.

0689-R DE
BE -737-378 R07
DT 1939-063 R08
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CH -573-713 X19
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GB 1417-436 W50
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CA 1008-639 Y18
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58455-V ABDF
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CA 1012-911 Y28
CH -594-052 A02
CS 7401-175 B14

64786-V D
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DL -108-555 V48+
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CA 1005-772 Y09+
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CA 1048-854 B10
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09077-W D
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11988-W AD
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J5 0064-295 W30+
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OE 7508-843 Y44
DK 7702-690 Y46+
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DK 7405-421 W29
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DL -114-266 W36
PT --62-798 W37
FR 2257-298 W44
J5 0121-293 W47
ZA 7406-544 W51
OE 7408-364 Y18+
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CS 7702-901 B14

44357-W ADEF
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SW 7415-570 W32+
NO 7404-524 W33+
J5 0092-956 W38+
SF 7403-601 W40+
DK 7406-536 W41+
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DT 2416-892 W45+
ZA 7408-028 X06
DL -119-794 X28+
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FR 2299-365 X49+
US 4002-712 Y04+
FR 2313-420 Y12+
GB 1493-367 Y48+
IT 1024-454 A33+
OE 7410-009 B13+
CA 1051-256 B14+

47687-W D
BE -824-057 W29
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NL 7500-254 W31
J5 0102-603 W41
DK 7500-058 W42
FR 2282-809 X24
GB 1496-213 A01
CH -603-064 A37
OE 7500-196 A40
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60209-W ADEG
US 3901-727 W36+
US 4145-303 B14+

62629-W D
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77090-W D
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SW 7504-845 W51
FR 2269-080 X07
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GB 1491-313 Y45
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SW 7803-067 A33
CA 1051-326 B14

85013-W ABD
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NL 7509-947 X12
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GB 1502-893 A10
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00070-X ADEF
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DT 2524-927 X01
NL 7507-067 X02
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FR 2275-463 X15
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J5 2098-735 Y39+
GB 1512-435 A22
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CH -602-659 A33
CH -603-590 A37+
J7 8037-252 A44+
CA 1051-440 B14

04159-X CD
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SW 7506-666 X08
J5 1015-691 X12
FR 2275-553 X15
US 4018-593 Y17+
OE 7504-767 Y31
GB 1491-263 Y45
CH -606-422 A48
SU -607-532 B14

05210-X D
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J5 2071-371 Y30+
GB 1527-516 A40+
J7 9004-700 B14+

11415-X ABD
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NL 7508-629 X07
BE -831-648 X08
NO 7502-622 X12
DK 7503-320 X18
J5 1035-497 X19
SF 7502-090 X19
FR 2279-846 X20
DL -119-436 X24
DS 2435-260 X34
PT --64-090 X41
US 3992-263 X48
OE 7505-662 Y05
HU T013-288 Y23
GB 1514-219 A24
IL --47-728 B08
SU -603-347 B10
CS 7505-177 B14

17041-X D
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HU T014-959 A23
CS 7501-001 B14

25104-X D
J5 1019-162 X14
ZA 7501-588 X17
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CA 1051-259 B14

37700-X D
US 3954-109 X20
CA 1051-303 B14+

41761-X BDJ
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BE -839-465 X40+
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BR 7601-476 Y39+
NL 7602-699 Y40+
NO 7600-728 Y43+
SW 7603-183 Y43+
SF 7600-632 Y46+
GB 1492-353 Y46+
DK 7601-094 Y48+
FR 2344-840 A02
CA 1051-328 B14

48211-X D
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DS 2458-851 Y27
US 4048-013 Y38+
SW 7602-422 Y40+
J5 2117-482 Y45+
FR 2346-446 A04+
GB 1543-612 B14+

54135-X D
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CA 1051-254 B14

54314-X D
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DS 2448-902 B14

54368-X AD
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GB 1543-326 B14

56102-X CD
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NL 7602-182 X40
DT 2610-025 X40
SW 7601-381 X44
J5 1118-726 X49
DK 7601-019 X49
HU T012-764 Y07
DL -125-187 Y25
GB 1494-821 Y50
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64052-X AD
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US 4076-846 A11+
J7 9004-746 B14

65050-X BDE
BE -840-396 X35+
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DT 2515-621 X45
SF 7600-945 X52+
SW 7604-244 X52+
J5 1131-822 Y01+
DK 7601-487 Y01+
FR 2307-039 Y06+
OE 7602-602 A22+
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GB 1543-765 B14+

65270-X BD
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BE -838-342 X35
NL 7601-226 X35
DK 7600-489 X43
J5 1104-023 X44
SW 7601-261 Y06
FR 2313-078 Y12
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67288-X AD
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J5 1093-590 X40
FR 2300-575 X51
US 4084-591 A23
GB 1543-788 B14

67317-X BD
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BE -838-630 X36+
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PT --64-816 A12+
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SF 7800-197 A24
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GB 1543-518 B14

68138-X CDE
NL 7601-172 X36+
DT 2605-286 Y26+
GB 1543-653 B14+

72355-X ADEF
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BE -839-251 X39
NL 7602-057 X39
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DK 7600-931 X48
FR 2303-013 Y02
GB 1543-368 B14

77622-X D
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GB 1543-404 B14

84376-X DF
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SW 7604-602 X49
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GB 1543-337 B14

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DT 2608-408 X48
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FR 2309-478 Y09
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88927-X D
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GB 1543-382 B14

89396-X D
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GB 1506-551 A14
US 4145-455 B14

90645-X ADEG
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BR 7601-188 Y07
FR 2311-824 Y11
DL -125-932 Y33
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GB 1533-430 A47
CS 7603-334 B14

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92423-X
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SF 7601-521 Y08
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GB 1543-346 B14

92893-X ADE
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FR 2312-556 Y11+
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94194-X D
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CA 1051-255 B14

95567-X D
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BR 7603-428 Y02
FR 2312-564 Y11
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DS 2523-555 B14

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FR 2314-898 Y14
ZA 7603-568 Y26
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02371-Y ABCD
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GB 1543-750 B14

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FR 2316-992 Y16
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11094-Y BCDE
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CS 7803-022 B14
CS 7706-588 B14

13536-Y DE
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J7 9004-935 B14

25064-Y BD
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28485-Y DE
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28486-Y DE
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29118-Y ADF
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30918-Y BCD
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34800-Y CD
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DK 7604-943 Y29
SF 7603-103 Y30
FR 2329-337 Y31
GB 1543-632 B14

36173-Y AD
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DT 2712-520 A40+
NL 7703-510 A42+
SW 7703-224 A44+
FR 2385-339 B02+
CA 1051-253 B14

40311-Y AD
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NL 7613-204 Y24
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FR 2333-041 Y36
US 4145-184 B14

49004-Y D
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SW 7611-876 Y31+
SF 7603-126 Y38+
FR 2336-476 Y43+
DL -126-959 Y45+
CS 7601-436 Y47
CS 7508-812 A41
GB 1543-399 B14+

55574-Y BD
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GB 1530-748 A44+
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SW 7705-186 A50+
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55841-Y D
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GB 1543-528 B14

59207-Y DE
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SU -607
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Food Science & Technology
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28 AUG 79
C.F.T.R.I., MYSORE

WEEK B15
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CENTRAL PATENTS INDEX
CLASSIFIED ALERTING BULLETIN

Section D:

FOOD
DETERGENTS

ABSTRACTS

INDEXES

- **II – PATENTEE**
- **V – BASIC NUMBER**
- **VII – PATENT NUMBER**
- **VIII – PRIORITY CONCORDANCE**

COUNTRY	PUB. DATE(S)	NUMBER RANGE
BELGIUM		
-Delayed	3 APR - 9 APR 79	870,961 - 871,117
-Non Delayed	30 MAR 79	872,456 - 872,645
BRAZIL	16 JAN 79	7,703,978 - 7,806,540
	27 MAR 79	7,703,858 - 7,806,474
CANADA	13 MAR 79	1,050,201 - 1,050,700
CZECHOSLOVAKIA	28 FEB 79	6,902,395 - 7,804,494
DENMARK	19 MAR 79	7,703,719 - 7,803,780
W.GERMANY		
-DAS	5 APR 79	1,495,446 - 2,834,095
-OLS	5 APR 79	2,253,500 - 2,845,686
FRANCE*	2 FEB 79	2,396,495 - 2,397,136
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UNITED KINGDOM	11 APR 79	1,543,811 - 1,544,210
		2,004,721 - 2,005,120
HUNGARY	28 MAR 79	H002.413 - H002.423
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JAPAN		
-Unexamined	—	47,019,204 - 52,149,979
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-Examined	15 MAR - 21 MAR 79	79,005,241 - 79,005,800
NETHERLANDS	26 MAR - 27 MAR 79	7,710,381 - 7,809,706
NORWAY	19 MAR 79	7,701,671 - 7,900,360
PORTUGAL	23 MAR 79	59,779 - 67,969
SOVIET UNION	—	607,983 - 609,191
SWEDEN	26 MAR 79	7,706,954 - 7,813,063
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-Reissues	27 MAR 79	Re29,944 - Re29,948
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-Defensives	3 APR 79	T981,001 - T981,004
-Patents	27 MAR 79	4,145,762 - 4,146,931
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Arrangement of Abstracts

See Appendix I for definition of 'Major' and 'Minor' Countries.

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'MINOR' COUNTRIES – Basic headings are included in sequence with the entries from the 'Major' countries.

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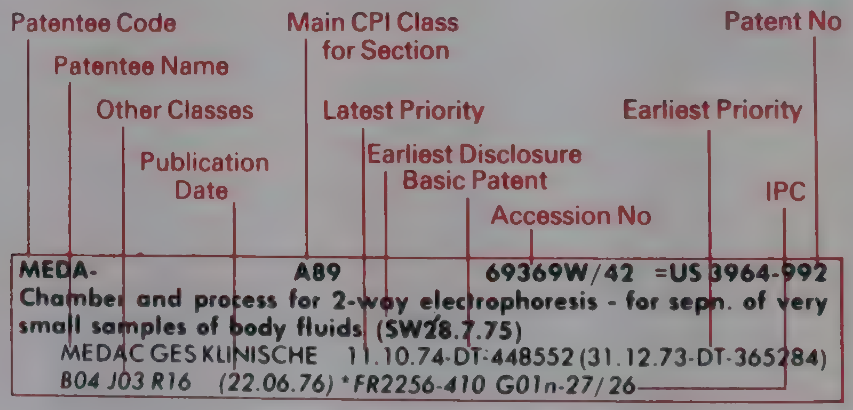
Patentee Code
Patentee Name
Other Classes
Publication Date
Main CPI Class for Section
Latest Priority
Earliest Disclosure
Basic Patent
Accession No
Patent No
Earliest Priority
IPC

MEDA- A89 69369W/42 =US 3964-992
Chamber and process for 2-way electrophoresis - for sepn. of very small samples of body fluids (SW28.7.75)
MEDAC GES KLINISCHE 11.10.74-DT-448552 (31.12.73-DT-365284)
*B04 J03 R16 (22.06.76) *FR2256-410 G01n-27/26*

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6/79

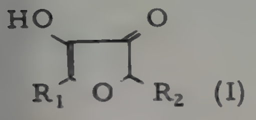
D1: FOOD; FERMENTATION

D11 : BAKING

BOHU/ ★ D11 B/15 ★CS 7707-636
Confectionery products fermentation progress evaluation
BOHUNICKY K 21.11.77-CS-007636
(28.02.79) A21d-02/40

UNIL D11 62885Z/00 =DS 1915-788
2,5-Diethyl-4-hydroxy-2,3-dihydrofuran-3-one - imparts caramel flavour to foodstuffs
UNILEVER NV 28.03.68-NL-004336
*E13 (05.04.79) *BE-730-500 +A21d-13*

The use is claimed of 4-hydroxy-2, 3-dihydro-furan-3-ones of formula (I):-



(I)

(where R_1 and R_2 are (m)ethyl) or their lower acyl esters in enol form, ketals or lower alkyl ethers as organoleptics for baked products in amts. of 0.2-200 (0.5-50)ppm. In particular (I) give a "fresh" taste. 27.3.69 as 915788 (7pp922)

KILI/ ★ D11 27954B/15 ★DT 2741-503
Baking oven hearth plane - with scraper blades and suction connection on hollow metal block
KILIAN T 15.09.77-DT-741503
(05.04.79) A21b-03/16

A plane to clean the hearth of commercial baking ovens consists of a cast iron or steel block with a cavity on one side. A suction tube at the other side can be connected to the suction tube of a large vacuum cleaner. Two of the sides of the block are fitted with adjustable scraper blades which can be raised and lowered in elongated slots. The crust, broken off by the scraper blades, is removed by suction from the oven.

This saves the manual labour of scraping the baking oven hearths clean. 15.9.77 as 741503 (5pp39)

GRUB/ ★ D11 27994B/15 ★DT 2743-217
Dough stretch rolling machine - with two roll stations in common frame above each other
GRUBELNIK H 26.09.77-DT-743217
(05.04.79) A21c-11/06

A dough stretch roller machine for the prodn. of pancake-shaped bread consists of a triple stepped belt conveyor and a feed conveyor for a first roller station and a second triple stepped belt conveyor for the conveyor feeding a second roller station. The roll gap of the second station is adjustable.

The arrangement of both stretch roller stations above each other results in space savings. There is even space in the frame to include an intermediate raising cabinet.
26.9.77 as 743217 (12pp39)

FIND- ★ D11 28140B/15 ★DT 2841-398
Pizza bottom mfr. - without rolling by flat pressing without prior raising
PRODUITS FINDUS SA 20.07.78-FR-021508 (29.09.77-FR-029289)
(05.04.79) A21c-11 A21d-13/08

Base plates for pizzas or torte are made of bread dough which is kneaded, subdivided, pressed flat, raised once and baked. The press-flat operation is undertaken directly without stretching it out by rolling and without prior raising.

The roll stretching operations and the long periods of rest subsequent to it are eliminated. 22.9.78 as 841398. (18pp39)

FRIT- ★ D11 29274B/15 ★US 4108-033
Rotary cutting device - for forming strips of shaped article preforms
FRITO-LAY INC 04.05.76-US-682904
P54 (04.05.76) B23d-25/12

Appts. for cutting shaped articles (e.g. preforms) from thin material (e.g. uncooked dough) is claimed.

A rotary cutter includes a first roller having a cylindrical surface with article cutters positioned around and projecting outwardly from the cylindrical surface. A second roller has trim cutters positioned around and projecting outwardly from its cylindrical surface. As the two rollers are rotated, the article cutters and the trim cutters are brought sequentially into shearing engagement to cut the material into articles and trim. Stripping fingers adjacent the outlet of the cutter bite, strip the articles and trim from the rollers for further processing.

Pref. the material is fed to the rollers as a ribbon, and the cutters cut the material into ≥1 ribbons of articles and ribbons of trim. The ribbons of articles can then be advanced for further processing and subsequent sepn. Pressurised gas streams can be used to insure the removal of trim from the edges of the first roller.

The preforms may be further processed into snack food chips. 4.5.76 as 682904 (12pp).

GROT- ★ D11 29310B/15 ★US 4145-990
Depositing grated cheese on pizza shell - by applying cheese to stationary transfer belt then moving belt
GROTE PEPP-A-MATIC 26.10.77-US-845736
P42 (27.03.79) B05c-19

Appts. for applying a coating to a food prod. e.g. cheese to a pizza includes a conveyor which advances the pizza beneath the application station. The application station has a horizontal transfer conveyor which is initially stationary and receives grated cheese in the required pattern from a grater assembly mounted above the transfer belt.

When a pizza passes beneath the application station a photodetector senses the pizza and activates the transfer conveyor to discharge the grated cheese onto the pizza as it passes beneath its discharge end. Pref. the transfer conveyor includes a scraper blade at its discharge end and the downstream roll of the conveyor is of small dia. to assist in removal of the cheese.

The shape of the cheese layer is accurately defined by the pattern applied to the transfer conveyor while stationary. 26.10.77 as 845736 (23pp295).

ZIEG/ D11 90463Y/51 =US 4146-067
Dough extracting and metering device - with suction tube and metering cylinder sliding on bed over dough trough
ZIEGLER R 09.05.77-CH-005793 (03.06.76-CH-007005)
*+Q31 Q56 R13 (27.03.79) *DT2723-557 +B65b-03/12*

Dough is portioned using appts. which includes a downwardly extending suction tube on a support, the upper end opening being flush with the support; a carrier movable on the support and having a cylinder, in which a suction-piston is displaceable, which is alignable with the opening; a fluid control to move the piston to draw dough into the cylinder for subsequent discharge at a discharge station; and a device for evacuating gas from the dough through capilliary channels in the piston. Gas is forced through the piston to expel the dough.

The carrier pref. has two diametrically opposed cylinders, rotatable about a central axis. 2.6.77 as 803114 (+ 30.8.76 - CH - 010956) (12pp1376).

BIAL- ★ D11 29339B/15 ★US 4146-333
Domestic dough mixer - with horizontal shaft withdrawable axially after detaching beating rods to facilitate cleaning
BIALETTI R & C SPA 14.03.77-IT-021185 (14.03.77-IT-U20870)
(27.03.79) B01f-07/02

A mixer, e.g. for making spaghetti or noodles, comprises a housing holding a semicylindrical vessel with an axial horizontal shaft carrying axially spaced and angularly offset radial rods for beating dough. A shaft free end is rotatably journalled in a bearing mounted in a housing seat aper

ture, and a drive in the housing is positively coupled to the
other shaft end.

The shaft can be disengaged from the drive and with-
drawn axially from the housing through the seat after de-
taching the rods. A removable cover gives access to the
vessel. There may be a screw at the housing bottom to ex-
trude dough through a normally closed bottom slot. 14.3.78
as 886357 (8pp1358).

TOPS- ★ D11 29425B/15 ★US 4146-548
Acyl lactylate salts used as bakery additives - prepd. by
esterification of lactylic acids using stearin cpd. as catalyst
TOP-SCOR PRODUCTS I 27.01.78-US-873001
E17 (27.03.79) C09f-05/08 C09k-03 C11c-03

Acyl lactylate salts RCO-(O-CHMe-CO)$_n$-OH (I) are prepd.
by esterification of a lactylic acid H-(OCHMe-CO)$_n$-OH (II)
with an acyl fatty acid RCOOH (III) in the presence of 2-30
% of a stearin (IV). (IV) contains $\nless$50% (by wt. of fatty acid)
of 18C fatty acid. Where R is a 13-21C hydrogenated C
chain; n is 1-11.

(IV) is pref. fully hydrogenated, having I_2 value <7,
pref. <6. Suitable (IV) include stearin of castor, cotton-
seed, corn, herring, kapok, linseed, palm, peanut, olive,
safflower, rapeseed, sardine, sunflower or tung oil, lard,
or tallow, pref. of fully hydrogenated palm oil or soybean
oil. (IV) is pref. added immediately (II) and (III) are mixed

Addn. of (IV) considerably increases
above esterification and/or allows the reaction to be effect-
ed at lower temps. (I) are known bakery additives, etc.
27.1.78 as 873001 (6pp478).

THOM- ★ D11 29682B/15 ★US 4147-809
Dividing dough into individual portions - moved along mandril by
dies to create toroidal bagels
THOMPSON BAGEL MACH 14.11.77-US-851217 (22.02.77-US-
770694)
(03.04.79) A21c-11 A21d-06

An apparatus for forming toroidal bagels comprises an
auger which advances dough to a discharge end. At this
end the dough is typically discharged from an annular aper-
ture associated with a reciprocating cylindrical cutter
which slides over the discharge aperture to sever the
dough into product-sized pieces.

The dough pieces are received by a mandril which is
surrounded by a series of dough forming moulds. Each
mould is carried by a conveyor which moves the dough
piece along the mandril which works the dough so that at
the downstream end of the mandril the dough has assumed
a toroidal shape. 14.11.77 as 851217 (22pp295).

See Also

D13 DS 2644621

D12 : MEAT ; FISH PROCESSING

LANG- ★ D12 B/15 ★BR 7703-858
Meat processing appts. - has rotatable tank contg. carving devices with longitudinal guides for sour brine
LANGEN H J ZONEN 14.06.77-BR-003858
(27.03.79) A22c-17 A23b-04

NOVA/ ★ D12 B/15 ★CS 7602-593
Meat product casings based on fibrous substrates
NOVAK V 21.04.76-CS-002593
(28.02.79) A22c-13

HLAV/ ★ D12 B/15 ★CS 7800-939
Mechanical skinning of animals
HLAVINKA J 14.02.78-CS-000939
(28.02.79) A22b-05/16

BECK- D12 46971Y/27 =DS 2559-318
Polyurethane films for sausage casings - contain a high proportion of 6C linear aliphatic gps.
NATURIN-W BECKER 31.12.75-DT-559318
*A97 +P73 (A25) (05.04.79) *BE-850-017 A22c-13*

Elastomeric polyurethane with mol. wt. >5000 is prepd. from high polyols, diisocyanates and lower chain lengtheners (pref. glycol), with a significant proportion of linear aliphatic C_6 units. Materials are used to produced sausage skins, opt. stretched biaxially. 31.12.75 as 559318 (7pp)

BANS- ★ D12 28011B/15 ★DT 2743-521
Pigs carcass bristle removing machine - with power actuated tilting chute for charging carcass rear legs first
BANSS MASCH KG 28.09.77-DT-743521
(05.04.79) A22b-05/08

A machine to scrape the bristles of pigs carcasses is equipped at the charging end with a trough which can be swivelled around a transverse axis across and below its centre through 270°. In one extreme position, the carcass is deposited in it from a monorail; in the other extreme position it discharges the carcass into the bristle removing machine.

This requires a min. of height in the clear above the machine. The carcass enters the machine with the rear legs leading so that the pig's head cannot become caught between the ribs of the machine. 28.9.77 as 743521 (9pp39)

BANS- ★ D12 28012B/15 ★DT 2743-522
Conveying rack for empty animal hooks in slaughter house - has conveyor chain with pick/ups guided in tube slots
BANSS MASCH KG 28.09.77-DT-743522
Q35 (05.04.79) B65g-17/20

The device is for conveying empty animal hooks back to the start of the conveyor path in slaughterhouses or freeze plants. The empty hooks are transported on a return rail by a conveyor chain, which is guided in a tube provided with a continuous longitudinal slot and has regularly spaced pick-ups.

The conveyor chain with its guide tube is arranged abov the return rail. The pick-ups are in the form of spring plates, which are replaceably fixed to pick-up carriers which project downwards from the guide tube and are made of reinforced rubber. 28.9.77 as 743522 (9pp0168)

VEMA- ★ D12 28050B/15 ★DT 2744-35
Sausage link looping machine - with hooks on roller chain crossin path of sausage link strand
VEMAG VERDENER MASC 01.10.77-DT-744350
(05.04.79) A22c-15

Appts. for suspending endless links of sausages into loop e.g. for prepn. to charging into smoking chambers, includes a roller chain with hooks which runs in a horizonta plane, and a grooved sausage link feed pulley which runs a vertical plane to let the links cross the path of the hook Sensing devices for the twisted sausage link ends are use to control the drive of the chain or pulley.

The need for manual labour to fold the sausage links into loops before feeding them in the smoking chamber, i eliminated. 1.10.77 as 744350 (17pp39)

GUIL/ ★ D12 28190B/15 ★FR 2396-5
Prepn. of pork meat excluding ham - by cutting carcass a centering rib chops in mould surrounded by crown of breast meat
GUILLEMOT H 07.07.77-FR-020995
(09.03.79) A22c-17

The carcass is cut level with the chine and right around the breast bone, separating off the hair. The cut piece i -des both rib and breast which is carefully trimmed of f and boned, as well as pref. skinned and salted. The cut piece is pressed in a mould to form a prod. which has t rib chops centred in a surrounding crown of breast mea

The combination of rib and breast is pref. cooked in imilar fashion to ham e.g. smoked, glazed etc. and can e served as hors d'oeuvre or as meat for a main course. 7.7.77 as 020995 (4pp448)

FUKO D12 16720A/09 #GB 1544-155

Protein-coated cellophane film prodn. - for marine and livestock prods., by coating with water dispersion contg. denatured soybean protein, other protein and plasticiser

FUJI OIL KK 05.07.76-JA-080225 (24.08.77-GB-035483)
*A11 P73 (A97) (11.04.79) *J53005-278 B32b-23 +A22c-11 B32b-09/02*

Protein coated films are made by coating a regenerated ellulose film with an aq. dispersion contg. (i) a polyhydric alcohol, (ii) ⩾40 wt.% soy protein, at least part of which is denatured and opt. (iii) other protein and/or polysaccharide(s), and then drying the coating. Pref. the soy protein is the only protein present and no polysaccharide s present.

The films are esp. used for packaging foodstuffs, e.g. ish meat or animal meat paste. 24.8.77 as 035483 (7pp974)

BRBE- ★ D12 28273B/15 ★GB 2004-831

Conveyor system for animal carcasses - having upper support allowing pelt and scalp removal in one piece

BRIT BEEF CO LTD 30.09.77-AU-001891
Q35 (11.04.79) B65g-15/16

In the skinning system, a sheep that has previously been tunned slides down a chute onto an endless conveyor, formed by transverse slats between chains. The slats are transversely inclined.

A shackle is connected to the right hind leg and hooked onto a rail above. The shackle is towed along the rail by an overhead endless chain. While on the conveyor, the animal is slaughtered and its windpipe tied.

Towards the end of the conveyor, the carcass is lifted away by a rising part of the rail. The slatted conveyor is driven slightly faster than the overhead chain to keep the animal under tension. A waterspray under the return run cleans the slats. 29.9.78 as 038603 (5pp84)

NAKA- ★ D12 28597B/15 ★J5 4028-854

Salting guts to preserve them - by adding sodium poly:phosphate with a vinegar soln. contg. egg shell, sodium bi:carbonate and/or sodium hydroxide

NAKANO SU-MISE KK 06.08.77-JA-093760
(03.03.79) A23b-04/02 A23l-01/32

The method comprises adding 0.05-1% (of total wt. of salted guts) sodium polyphosphate and then adding vinegar soln. prepd. by adding egg shell, sodium bircarbonate and/or sodium hydroxide to vinegar in the ratio of acetic acid to above substance of 1:0.29-1.1 so that the acetic acid concn. in the salted guts is 0.05-0.4%. When egg shell or sodium bicarbonate is used the ratio is 1:0.6-1.1 and when sodium hydroxide is used the ratio if 1:0.29-0.53.

The preservative property of the salted guts is improved, and sourness can hardly be detected. The salt concn. in the guts can be decreased with maintaining good preservation. A delicious taste can be obtd. By adding sodium polyphosphate, sepn. of water from the salted guts can be prevented. 6.8.77 as 093760 (4pp5)

KYOW ★ D12 28598B/15 ★J5 4028-855

Improving the elasticity of marine paste foods - by adding ascorbic acid and ascorbic oxidase

KYOWA FERMENTATION KK 08.08.77-JA-094830
(D16) (03.03.79) A23l-01/32

Method for prepn. of marine pasty food by combining ascorbic acid or its salt in a pasty dough is described where ascorbic oxidase is combined in the dough.

Elasticity of marine pasty foods is important. Ascorbic acid is a known improving agent, but to give sufficient effect as much as ca. 1 wt. % is required on mashed fish meat of moisture content 80%. Now, however, effect can be intensified remarkably by adding ascorbic oxidase with the ascorbic acid (salt). Amt. of ascorbic acid can be decreased. 8.8.77 as 094830 (3pp5)

KYOW ★ D12 28599B/15 ★J5 4028-856

Prepn. of marine paste with improved elasticity - by adding tyrosinase to the dough

KYOWA FERMENTATION KK 08.08.77-JA-094831
(D16) (03.03.79) A23l-01/32

In the prepn. of marine pasty food, tyrosinase is combined in the dough.

Elasticity is an important property of marine paste foods. Tyrosinase (also called polyphenoloxidase) shows excellent improving effect on the elasticity.

Generally tyrosinase of specific activity 250 unit/mg is combined 0.002-0.02 wt.% in the mashed fish meat of moisture content 80%. When the marine pasty food having high whiteness is required, it is desirable to decrease the amt. of tyrosinase below 0.01 wt.% to avoid enzymic browning. 8/8.77 as 094831 (3pp5)

NMHB ★ D12 B/15 ★SW 7713-780

Fish filleting appts. - comprising pair of parallel cutting tools rotating in vertical plane

NORDISCH MASCH R BAADER 29.08.77-DT-738845
(26.03.79) A22c-25/16

Appts. for cutting away parts of bones in a fish filleting process, comprises a pair of parallel cutting tools which rotate in the vertical plane, which tools are sepd. from each other by an intermediate space in the horizontal position. In front of the cutting tools extends a horizontal feed surface as far as the work position. This surface incorporates a gap which issues into the intermediate space, and is limited on its sides by a support surface. 5.12.77 as 013780 (1161)

JARV- ★ D12 29291B/15 ★US 4145-811

Reciprocating blade butchery saw - powered by rotary motor driving crank with second crank carrying reciprocating counterweight

JARVIS PRODS CORP 31.10.77-US-846684
P54 (27.03.79) A22b-05/20 B23d-49/12

Motor-driven saw comprises a housing with a rotary hydraulic motor driving a vertical shaft. The shaft has a main crank which drives a reciprocating saw blade via a connecting rod and in addn. the motor shaft carries a pair of sec. cranks offset by 180° from the main crank. A counterweight is carried by a crosspiece which is attached to connecting rods linking with the offset cranks so that the counterweight is moved in opposition to the saw blade.

The mass of the counterweight balances the mass of the saw blade to minimise vibration of the tool. The saw is hand held. 31.10.77 as 846684 (6pp295).

KOHL- D12 12425A/07 =US 4145-894

Carbon di:oxide snow machine - having box with coil with liq. carbon di:oxide feed discharging via nozzle and rotating brush outlet

KOHLENSAURE-W BUSE 29.07.76-DT-634164
*J07 Q75 (27.03.79) *DT2634-164 +F25c-05/18*

CO_2 snow is dispersed using appts. which include a insulated storage container for the snow, heat transfer pipes in the container for liquid CO_2, a nozzle in the container of the pipes for the release of CO_2 snow from the pipes to the container, a dispenser for snow at the bottom of the container, and an outlet for gaseous CO_2 at the top of the container.

Pref. a conveyor is provided below the dispenser for the articles on which snow is dispersed. A control valve is pref. provided at the nozzle and is operated in response to the snow level and the presence of an article on the conveyor. Low CO_2 consumption is achieved. 25.7.77 as 818763 (4pp1376).

HYCO- ★ D12 29403B/15 ★US 4146-484

Doctor blade cleaning assembly - has blade cleaner for removing material which becomes attached to doctor blade

HYCOR CORP 26.09.77-US-836531
+P43 (27.03.79) B01d-33/36 B08b-01

Doctor blade assembly for use with a rotating cylinder comprises a doctor blade extending axially adjacent the cylinder outer surface and a blade cleaner parallel to and adjacent the doctor blade. The blade cleaner is supported for intermittent movement in a path across the outer surface of the doctor blade adjacent the cylinder to remove material from the outer surface of the doctor blade.

Used in poultry processing where parts of the poultry, e.g. feathers, which become "stapled" or hairpinned" to the doctor blade are removed by the blade cleaner. The blade cleaner can be operated intermittently at any desired frequency by rotation of the cylinder. 20.9.77 as 836531 (4pp67).

HOTA/ ★ D12 29506B/15 ★US 4146-945
Simultaneously splitting pair of suspended carcasses - by horizontal band saw in frame moved vertically
HOTARD S R 20.09.77-US-834985
(03.04.79) A22b-05/20

Carcasses are advanced to a splitting station by an overhead conveyor which includes a pair of vertical slots with in the station. A framework has vertical guide rails whic support a horizontal carriage which can be moved vertic- ally through the splitting station under the control of a motor. A horizontal bandsaw rotates on the carriage to create a pair of cutting surfaces.

A pair of carcasses are supported by the conveyor and the carriage is lowered so that the blade passes through the slots in the conveyor and then makes vertical cuts through the carcasses. Pref. the carcasses are held against a swinging movement during cutting by supports. 20.9.77 as 834985 (9pp295).

See Also

D13 BE 871112 D13 DT 2842266

D13: OTHER FOODSTUFFS

DEJI- ★ D13 27848B/15 ★BE -870-964
Prim. extn. of coffee from ground roast coffee beans - using two/stage process for removing water soluble and aromatic components
DEJ INT RES CO 06.10.77-GB-041570
(03.04.79) A23f

Process takes place in two steps; in the first, the coffee is subjected to a couterstream of aq. extn. fluid in just sufficient quantity to extract near enough all the soluble dry components in the coffee grounds, and, in the second step, the coffee grounds are subjected to a second extn. process in which the hydrophobic aromatic components are removed.

The prod. stream from the second step passes through a stripper in which the aromatic components are removed by steam and then recondensed. The recondensed stream of the aromatic components from the second extn. step are then mixed with the soluble prods. obtd. from the first step, the prod. closely approaching the compsn. and aroma of fresh coffee. To reduce the energy requirement of the extn. process, the hot water discharge from the stripper can be fed back to feed the extn. steps.

The process enables an instant coffee to be economically produced which contains most of the aromatic components of fresh coffee without the necessity for freeze drying. 3.10.78 as 870964 (18pp1370) (F1)

TECD ★ D13 27851B/15 ★BE -870-979
Analytically determining uric acid esp. in food samples - by differential method using uricase in control test
TECHNICON INSTRUMEN 14.10.77-US-842162
A89 E13 J04 R16 (03.04.79) G01n

The process comprises (a) putting a portion of a sample in contact with a uric acid indicator and determining the uric acid content and (b) treating a further portion of a sample by contacting it with a medium contg. uricase (which decomposes uric acid), treating it with a uric acid indicator and then determining the uric acid content colorimetrically. The difference between (a) and (b) gives the true uric acid content.

The process is esp. for foods and food products; uric acid excreted by insects gives a measure of the degree of food infestation. The process is simple, sensitive and specific and overcomes errors of previous analytical processes. 3.10.77 as 870979 (9pp597)

MRSC ★ D13 27884B/15 ★BE -871-112
Reducing odour of fish-based food prods. - by adding reducing agent, sealing and sterilising
MARS LTD 10.10.77-GB-042132
(D12) (09.04.79) A23l

The fish smell of a wrapped food product contg. an ingredient based on fish is reduced by mixing a non-toxic reducing agent with the other ingredients comprising the fish based material to prepare a food product which is then hermetically sealed in a receiver and heat sterilised.

The reducing agent is pref. organic, esp. a reducing sugar. Specified are ribose, glucose, xylose, lactose, galactose, fructose, maltose, arabinose, mannose, rhamnose; cysteine, butylated hydroxyanisole and lecith The amt. of agent is pref. 0.1-5%.

The products are protein foods for human or animal consumption. The reduction of the disagreeable smell e ables both a longer amt. of fish ingredient and also a larger variety of fish based materials. 9.10.78 as 871 (15pp597)

MARG- ★ D13 27904B/15 ★BE -872
Producing solid cooking fat as flakes, granules, powder etc. - easier melting and elimination of spluttering hazard
MARGARINERIE AIGREM 05.12.78-BE-872537
(30.03.79) A23d C11b

Liq. fat is cooled to just below its m.pt. so that it bec pasty and can be spread in a thin layer on the circumfe ences of a drum rotated at a constant speed. The inter of the drum is maintained at a very low temp., pref. about -20° C, and a doctor blade is used to peel away t chilled layer as discrete fragments. The fragments a stored at a temp. only slighly above freezing point, i. about 1-2° C, until packaged or used.

After the liq. fat has been cooled to below its melti point, but before spreading on the rotary drum, the pasty fat is pref. held for a period in a tempering ves in which the temp. is maintained constantly just below m. pt. of the fat. 5.12.78 as 872537 (8pp448)

MULL/ ★ D13 B/15 ★BR 770
Fruit from Japanese cashew-nut tree - used as raw materi alcohol, vegetable oil, animal feed, and fertiliser
MULLER G L 25.08.77-BR-005805
C03 (C04 D16) (27.03.79) A23l-01/20 C11b-01/04

SWAN/ ★ D13 27935B/15 ★CA 10
Handling process for prepd. foods - involves freezing, rem sepd. satd. and unsatd. fatty from food, packaging in plasti etc.
SWANSON A S 03.06.75-CA-228361
Q31 (13.03.79) A23b-04/06 B65b-55

Prepn. of cooked foods before consumption comprise freezing the cooked food in a compartmented ice tray moving the upper layer of each cube of frozen food s formed, which layer is high in saturated and unsatu fatty acids, and storing the resultant cubes in a free in plastics bags until required for cooking.

The satd. acids include palmitic, lauric, myristic stearic, caproic, caprylic, butyric and/or capric a The unsatd. acid includes linolenic, oleic petroseli erucic, nervonic, linoleic, gadoleic and/or cetoleic

Provides easy removal of the fatty acid compone leaving food with only a small amt. of cholesterol. 3.6.75 as 228361 (10pp525)

RM/ ★ D13 B/15 ★CS 7608-033
ter-based spread prodn.
FORMAN L 08.12.76-CS-008033
(28.02.79) A23c-15/12

ARV/ ★ D13 B/15 ★CS 7702-527
getable products protection and treatment
MARVAL E 18.04.77-CS-002527
(28.02.79) A23k-03/03

ARV/ ★ D13 B/15 ★CS 7702-543
getable products protection and treatment
MARVAL E 18.04.77-CS-002543
(28.02.79) A23k-03/03

OHN/ ★ D13 B/15 ★CS 7702-938
aw processing
DOHNALEK R 04.05.77-CS-002938
C03 (28.02.79) A23k-01/22

KO/ ★ D13 B/15 ★CS 7703-861
lcium-sodium phosphate feedstuff additive
LAKOTA V 13.06.77-CS-003861
C03 (28.02.79) A23k-01/17

RT/ ★ D13 B/15 ★CS 7704-201
gricultural products hydrolysate processing, particularly
crement
BARTAK R 27.06.77-CS-004201
C03 (D15) (28.02.79) A23k-01/18

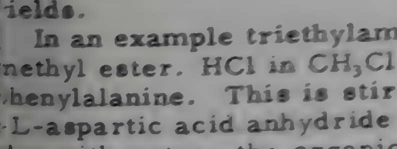
ANO/ ★ D13 B/15 ★CS 7708-392
dhesives processing
JANOUCH F 15.12.77-CS-008392
(28.02.79) A23j-01/10 C11b-01/10

ARA/ ★ D13 B/15 ★CS 7801-210
airy cream stabilisation
BARABAS J 27.02.78-CS-001210
(28.02.79) A23c-23

UZA/ ★ D13 B/15 ★CS 7802-519
quare cheese maturing, salting and storage
HUZA F 19.04.78-CS-002519
P13 (28.02.79) A01j-25/16

JIN ✓ D13 23731S/14 #DS 2053-188
sspartyl phenyl alanine esters as sweet - ening agents
AJINOMOTO KK (SEAR) 30.04.69-JA-033349 (29.10.70-DT-053188)
*B05 E14 (05.04.79) *FR2040-473 C07c-103/52*

ower alkyl esters of α-L-asparagyl-L-phenylalanine of ormula (I) where R is lower alkyl. are prepd. by (a) reacting N-formyl-, N-benzoyl -oxycarbonyl- or N-(4-meth-oxybenzoyloxycarbonyl)-L-aspartic acid anhydride with a lower alkyl ester of L-phenylalanine in inert organ-c solvent at < 60°C; (b) the N-acyl protecting gp. of the ower alkyl ester of N-acyl-α-L-asparagyl-L-phenylaline btd. is removed in known ways and (c) (I) is isolated from he mixt.



$$H_2N\text{-}CH(CH_2COOH)\text{-}CO\text{-}NH\text{-}CH(CH_2C_6H_5)\text{-}COOR$$

(I) are known sweetening agents and are obtd. in high ields.

In an example triethylamine is added to L-phenylaline nethyl ester. HCl in CH_3Cl to give the methyl ester of L-henylalanine. This is stirred with N-benzoyloxycarbonyl -L-aspartic acid anhydride in ethylacetate. After extraction with water, the organic layer is evaporated, the residue hydrogenated to give α-L-asparagyl-L-phenylalanine nethyl ester. 29.10.70 as 053188 (5pp279)

PFIZ D13 27160Y/16 =DS 2644-621
ow-calorie flour based on modified polydextrose - contg. protein material, cellulose and natural flour
PFIZER INC 23.07.76-US-707983 (20.10.75-US-624026)
*A97 (A11 D11) (05.04.79) *BE-847-315 A23l-01/30*

A low-calorie flow substitute comprises 20-75 wt. % modified polydextrose, 2-20 wt. % proteinaceous material (as albumen, milk solids, Na caseimate, Ca caseinate, soy bean isolate, gluten or yeast), 10-40 wt. % cellulose derivs. (as α-cellulose or microcrystalline cellulose) and [illegible] rye or soy bean flow.

The polydextrose is a water-soluble, strongly branched (1,6-)having a mol. wt. of 1500-18000 and contg. (a) 0.5-5 mol. % citric, fumaric, tartaric, succinic, itaconic or malonic acid ester gps. and (b) 5-20 wt. % chemically bonded nutritions polyol (sorbitol, glycerin, erythritol, xylitol, mannitol or galacititol). It is mixed with the proteinaceous material in aqs. dispn., the cellulose deriv. and the flow added and the resulting mixt. dried. The flow is used to make doughts, pancakes and other baked products. 2.10.76 as 644621 (6pp922)

MITA ✓ D13 72836Y/41 =DS 2714-396
Precooked rice prepn. - by gelatinising surface; adding oil and/or fat and surfactant and expanding by heating compression and relaxation
MITSUI & CO LTD 02.04.76-JA-036125
*(05.04.79) *DT2714-396 A23l-01/18*

Precooked rice is produced by (a) gelatinising the surface layer of the rice granules (i.e. 25-50% of their radii) by heating with water or steam at > 65°C (> 90°C) (b) adjusting the granules water content to 8-25% by heating and then applying additives (e.g. oil either in ethanolic soln. or in aqs. suspension and (c) heating and compressing the granules and then suddenly releasing the pressure so as to expand them.

Process gives a rapidly prepa. rice prod. which has not been completely gelatinised. 31.3.77 as 714396 (6pp922)

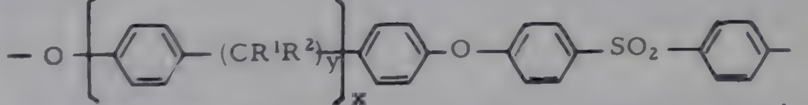
VOGT/ ★ ✓ D13 27995B/15 ★DT 2743-230
Potato crisps - made of blanched raw potato shapes made hollow with crisp skin by hot air treatment
VOGT H 26.09.77-DT-743230
(05.04.79) A23l-01/21

A new potato crisps product is made of raw potatoes which are cut into small chips, squares or spheres and are blanched at 60-80°C in water for a few minutes. Drying in hot air converts these chips into a thin crisp outer shell with a large void inside. This treatment must avoid the Maillard reaction. The final crisps are coated with flavours and aromas, pulverised meat or other tasty substances.

This creates an attractive new snack which can also be combined to resemble slices of bread. 26.9.77 as 743230 (12pp39)

DASU- ★ D13 ✓ 28122B/15 ★DT 2840-926
Anion exchanger resins for purificn. of fruit juice - based on polyaryl-ether sulphone(s) giving improved heat stability
DANSKE SUKKERFABRIK 21.09.77-GB-039276
A91 (A25 A97) (05.04.79) C08g-75/20 C13d-03/14

New anion exchange resins contain poly (aryl ether sulphone) units of formula (I).



In (I), R^1 and R^2 are H, 1-6C alkyl or phenyl; x is 1, 2 or 3; y is 0 or 1. The aromatic rings are sepd. from the SO_2 gp. by at least one aromatic ring substd. with $-C_nH_{2n}NR^3R^4$ or $-C_nH_{2n}N^+R_3R_4R_5Y^-$, in which R^3 R^4 and R^5 are 1-6C alkyl opt. substd. with OH; n is a whole number; Y^- is an anion.

Used for purificn. of sugar-contg. fruit juices contg. coloured degradation products resulting from heat treatment, and other applicns. involving heat and alkalis.

Improved heat stability is achieved with heat deformation temp. around 200°C compared with around 95°C for usual polystyrene ion exchanger resins, allowing use in hot solns. Increased resistance to hot bases used to regenerate the resin. 20.9.78 as 840926 (15pp195)

KURS ★ ✓ D13 28172B/15 ★DT 2842-266
Stable, elastic, chewable fibrous milk protein meat substitute - stabilised with aq. soln. contg. salt and aldehyde-type crosslinking agent
KURARAY KK (MNKN) 30.09.77-JA-118480
(D12) (05.04.79) A23j-03

Fibrous milk protein foodstuff contains or consists of a bundle of milk protein fibres having dia. < 10 μ, elasticity 115-380 (160-380)% and which resists 4 min. boiling in hot water at 135°C without melting.

Prodn. comprises (i) working an initial milk protein to a fibrous mass and (ii) treating the fibrous compsn. in an aq. soln. contg. (a) $\geqslant$ 1 Na-, K- and/or Ca salt in concn. $\geqslant$ 1 g. equiv./l and (b) 5-200 g/l cpd., (I) contg. an aldehyde-type gp. in which ratio mol. wt. (M) to aldehyde gp. no. (n) in mol is 120-360 (180-360). Treatment takes place at pH 2.5-6.5, 100-140 (104-140)°C, for 20 min. to 3 hrs.

The foods can replace meat, e.g. in hamburger steak prodn.

Fibrous prod. elasticity increases with M/n. Stabilisation improves chewability, elasticity and stability to boiling. In an example, stabilisation using lactose (as I) and NaCl improved chewability from 3- to 53 g/mm^2. Replacement, in control, of lactose by oxidised starch of dialdehyde type, reduced chewability from 53- to 7 g/mm^2 and elasticity from 170- to 22%. 28.9.78 as 842266 (34pp200)

UNCO- ★ D13 28191B/15 ★FR 2396-512
Treating gruyere type cheeses having a surface flora - by cooling, drying, then coating with fungistatic and emulsifying product
UNION COOP FRUITIER 08.07.77-FR-022004
A97 (09.03.79) A23c-19/16

The process for treating the cheeses having a pitted crust or a surface flora comprises (a) cooling and drying the crust followed by (b) coating it with a fungistatic and emulsifying product.

The process is applied to Gruyere, Comte, and other similar cheeses. In the case of unwrapped cheese the wt. loss is reduced from 5-9% to 1-3%, also the need for handing in cold storage is avoided in the case of wrapped ches cheese the surface marking is preserved for periods over a month. The coating mixt. pref. contains 65-80% polyvinyl acetate and 5-10% emulsifier, the pH being 3-4. 8.7.77 as 022004 (8pp597)

CARL- D13 12571A/07 =GB 1544-194
Appts. for removing chocolates from moulds onto moving belt - after inverting moulds which are then removed by parallel conveyor
CARLE AND MANOTANARI SPA 06.08.76-IT-026108
*+Q35 (11.04.79) *DT2733-843 +B29c-07*

Appts. for discharging moulded prods., e.g. chocolate, comprises a device for lifting filled moulds from the feeding conveyor to a higher level for transfer to another station, and a device for up-turning moulds which have not been transferred by the lifting device, the prods. being removed by a conveyor.

The appts. allows the filled moulds to be discharged directly onto a conveyor, or to be transferred to another mould-unloading station, as circumstances require, and is thus of a simpler nature than previous appts. 11.5.77 as 019697 (6pp1379)

UNIL D13 70473X/38 =GB 1544-200
Co-trans-esterified olein fat fraction used in margarine prepn - contg 30-46 per cent palmitic radicals and 42-62 percent 18-C cis unsatd acids
UNILEVER LTD 04.03.75-GB-008938
*(D23) (11.04.79) *BE-839-108 A23d-03 +A23d-05*

A fat prod. for use in preparing shortenings and emulsified food spreads (margarines etc.) comprises a fraction of a corandomised fat blend. The fraction contains 30-46 (36-40)% palmitic acid residues and 52-62 (50-55)% unsatd. fatty acid residues with a chain length of 18C atoms contg. only cis double bonds and $\not>$5% triglycerides of satd. fatty acids with a chain length of $\geqslant$16C atoms.

Pref. the fat prod. comprises 55-95 (70-90)% of the fat blend. The food spreads obtd. have improved butter-like properties. 3.3.76 (14pp992)

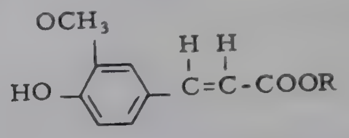
VAJD/ ★ D13 B/15 ★HU T016-174
Confectionery cream product, opt with reduced calorie content - is easily whippable and has good shelf life
VAJDA G 12.01.78-HU-VA1516
(28.03.79) A23g-03 A23g-09/02

IPAR- ★ D13
Protein-enriched fodder product - made from animal scraps and starchy vegetable materials
IPARSZERU SERTESTAR 14.11.75-HU-IA0743
C03 (28.03.79) A23k-01/10

LENI- ★ D13 B/15 ★HU T016-177
Processing poultry droppings for recycle - by sterilising in steam, dehydrating and mixing with fodder additives
LENIN MEZOGAZDASAGI 31.10.75-HU-LE0783
C03 (28.03.79) A23k-01/22

TSUC/ ★ D13 28307B/15 ★ J5 3130-633
Fungicide and rancidity preventing agent - contg. ferulic acid, or its ester(s)
TSUCHIYA T 20.04.77-JA-045577
C03 (14.11.78) A23l-03/34 C07c-65/02 C07c-69/76

Fungicide and rancidity preventing agent contains as active agent a cpd. of formula (I) (where R is H, alkyl or aryl).



(I)

Cpd. shows the excellent fungicidal effect and is effective in the prevention of hydrolytic rancidity, ketonic rancidity, oxidative rancidity.

20.4.77 as 045577 (3pp108)

NAGA- ★ D13 28590B/15 ★ J5 4028-838
High protein food prepn. - by pasteurising koji with aq. ethanol soln. then mixing with steamed soya bean and maturing
NAGANO MISO KK 02.08.77-JA-092183
(03.03.79) A21d-02/36 A21d-13/06 A23c-15 A23c-19 A23j-03

The method comprises pasteurising 'kofi' with alcohol or aq. ethanol soln., mixing with steamed soy bean and maturing the mixt. Aq. ethanol soln. having ethanol concn. > 15% can be used and inactivation of enzymes in 'kofi' can be suppressed by using aq. ethanol soln. having ethanol concn. > 55%.

Soy bean is sterilised by steaming and proteinous food material can be prepd. without depending on the pasteurising effect of salt. Thus obtd. food material can be used for prepg. various foods having low salt concn., such as 'miso', mayonnaise, sauce, spread, soup, break, confectioneries, etc. 2.8.77 as 092183 (10pp5)

KITA/ ★ D13 28591B/15 ★ J5 4028-839
Prepn. of instant food having fried bean curd like structure - by preparing dough from edible oil and heat coagulating protein moulding dielectric heating and opt. impregnating with seasoning
KITAMURA Y 02.08.77-JA-092199
(03.03.79) A23l-01/34

The method comprises (1) prepg. dough from a mixt. contg. at least edible oil and heat-coagulating protein, so that the moisture content is in the range of colloidal semi bonded water, (2) moulding in the range showing reversib standing phenomenon, (3) dielectric-heating the moulded dough with the power density of microwave output >8 kw on 1 kg of the moulded dough to the structure like fried bean curd, (4) opt. impregnating seasoning and (5) dielectric-heating under the vacuum of 10-100 torr.

Novel instant food can be prepd. without the oil-frying process. 2.8.77 as 092199 (5pp5)

OGAW/ ★ D13 28592B/15 ★ J5 4028-8
Preserving plants and foods - by treating with aq. mannan soln.
OGAWA Y 02.08.77-JA-093079
(03.03.79) A23l-01/21 A23l-03/34

The method comprises treating fruits, vegetables, fishe shellfishes, other plants and foods by (1) steeping in aq. soln. of mannan, (2) coating them with the soln. or (3) b adding the soln. to them and mixing.

The inventor has found that the aq. soln. of refined mannan shows insect-proof activity, antiseptic activity anti-mould activity.

Refined mannan can be obtd. by pulverising the crude dry 'konjak' flour in hydrophilic solvent such as methan ethanol, propanol, etc. and sepg. mannan from the mix Mannan is a natural inexpensive polysaccharide and has been used as food. It is used in the form of aq. 0.01-0 soln. and excellent antiseptic and anti-mould effect can e attained by combining refined mannan powder at 2% in oods. 2.8.77 as 093079 (3pp5)

ISP ★ D13 28593B/15 ★J5 4028-842

oodles prepn. using aq. ammonia - added to noodles raw aterial, to modify wheat protein in flour and avoid problems ncountered with brine

NISSIN SHOKUHIN KAISHA 05.08.77-JA-094352

(03.03.79) A23l-01/16

he method comprises adding ammonia water to noodle aterial such as flour, starch, etc. and prepg. noodles s usual. Ammonia can be removed from the noodle in the nitial stage of the heat-treatment. Usually ammonia water (26-30 w/w%) is used 0.1-4.0 ml, pref. 2.0-3.0 ml on lour 1 kg. Gluten may also be combined in noodle to improve the texture, to increase the visco-elasticity of obtd. oodle, and to suppress the dissolving-out of the solid rom obtd. noodle.

Brine has been used to give proper texture and smoothess to noodles, but it often causes browning of noodles on eat-treatment. Ammonia water is used instead of brine nd wheat protein in flour can be denatured with it. Excellent noodles can be prepd. avoiding defects of prior art. 5.8.77 as 094352 (4pp5)

KIBU- ★ D13 28594B/15 ★J5 4028-847

Oil-contg. konjak prepn. - by emulsifying edible oil, adding konjak powder and kneading, adding alkaline gelling agent and coagulating

KIBUN KK 09.08.77-JA-094637

(03.03.79) A23l-01/21

The method comprises emulsifying edible oil with emulsifier or a substance having emulsifying ability, kneading the 'konjak' paste prepd. of refined 'konjak' powder and the emulsion, adding alkaline gelling agent in the mixt. and coagulating it by heating.

The 'konjak' shows the taste and flavour of edible oil as well as original taste and flavour of 'konjak' and has a proper viscosity and soft texture. When it is heat-cooked, crisp cooked food can be obtd. 3.8.77 as 094637 (3pp5)

KANF ★ D13 28595B/15 ★J5 4028-849

Fibrous complex food - prepd. by relaxing wheat protein, mixing with high molecular polysaccharide kneading and fiberising

KANEGAFUCHI CHEM KK 03.08.77-JA-093708

(03.03.79) A23j-03

The food is prepd. by (1) relaxing wheat protein with relaxing agent and common salt, (2) mixing with the high molecular polysaccharide, of which amt. is 40-400% on the solid in wheat protein, (3) kneading the mixt. and (4) fiberising the mixt. by extending and stretching the mixt. with rubbing it at the presence of alkali(ne earth) metal chloride.

The fibrous complex food is excellent in taste and flavour. By combining proper seasoning or flavour in it new snack food, dainty and meat-like food can be obtd.

As wheat gluten raw gluten or the active gluten which is previously hydrated to moisture content 60-70% can be used. As relaxing agent, caustic soda, ammonia, acidic sodium sulphide, glutathione, papain and thermoase can be used. 3.8.77 as 093708 (4pp5)

NISE- ★ D13 28596B/15 ★J5 4028-850

Mfr. of vegetable proteinaceous food for e.g. sausages - by kneading wheat gluten and oil and fat, gelling vegetable protein and regulating moisture content, and kneading the components

NIPPON SEIFUN KK 09.08.77-JA-095286

(03.03.79) A23j-03

The method comprises (i) prepg. the gluten paste by kneading wheat gluten and the oil and fat which is solid at normal temp. at a temp. above m.pt. of the oil and fat, (ii) prepg. the semi-dry fibrous food material by gelling the food material mainly of vegetable protein and regulating the moisture content of the obtd. gelled material to 30-65 w/w% and (iii) kneading the gluten paste obtd. in (i) and the semi-dry fibrous food material obtd. in (ii).

As oil and fat lard, tallow, mutton fat, cacao fat, coconut oil, palm oil, etc. can be used and they are used in an amt. of 15-45 (24-36) w/w% on dry wheat gluten. The gluten paste is composed of wheat gluten (dry wt.) 15-30 w/w %, oil and fat 2.5-12 w/w% and water 30-60 w/w%. The vegetable proteinous food can be prepd. by combining the semi-dry fibrous food material in an amt. of 20-40 w/w% in fluten paste.

The semi-dry fibrous food material obtd.in (ii) is similar to crab meat and that prepd. of wheat gluten is excellent in oil-absorbing property and preservative property. The semi-dry fibrous material is further kneaded with the gluten paste and the obtd. vegetable proteinous food can be used as the material for ham, sausage, instant foods, etc. 9.8.77 as 095286 (6pp5)

MEIJ ★ D13 28600B/15 ★J5 4028-863

Prepn. of cocoa of intensified taste and flavour - by alkali treating unroasted or weakly roasted cocoa nib, adding protein and/or peptone, drying and roasting under alkali and mashing

MEIJI KK 09.08.77-JA-094675

(03.03.79) A23g-01

The method comprises (1) alkali-treating unroasted or weakly roasted cocoa nib, (2) adding ≥1 kind of protein and/or peptone at the beginning, during or after the alkali-treatment, (3) drying and roasting the whole mixt. under alkaline conditions and (4) mashing, oil-pressing and pulverising thus obtd. roasted nib as usual.

Flavouring components are more formed, compared with those formed by simple alkali-treatment. The taste and flavour of obtd. cocoa is partic. well harmonised with milk component.

As protein component casein, sodium casein, egg white, gelatin, soy bean protein, wheat protein, skimmed powdery milk and/or whey powder can be used. 9.8.77 as 094675 (9pp5)

MIYA/ ★ D13 28601B/15 ★J5 4028-865

Salt-contg. powder prodn. - by mixing egg white and sodium glutamate-contg. sea water, whipping and powdering

MIYAI J 03.08.77-JA-093709

(03.03.79) A23b-05/02 A23l-01/22

The powder is prepd. by (1) mixing egg white (100 ml) and sea water soln. (200 ml) in which sodium glutamate (1g) is dissolved, (2) whipping the mixt. (3) spreading the mixt. on a thin plain plate such as plate glass, (4) drying it naturally in air or under sunlight or artificially and (5) grinding it down to a white fine powder.

The powder can be easily dissolved in the mouth. In cold water it floats on the surface and in hot water egg white is easily coagulated and sepd. It can not be used for cooking, but it can be used for sprinkling on food or for mixing with food. 3.8.77 as 093709 (2pp5)

KAWA/ ★ D13 28602B/15 ★J5 4028-866

Healthy seasoning prepn. - by mixing odourless garlic, water-oat powder, chlorella powder, chlorophyll, etc. in e.g. miso, syoyu or sauce

KAWASHIMA Z 03.08.77-JA-093766

(03.03.79) A23l-01/22

The method comprises combining odorless garlic, water-oat powder, chlorella powder, chlorophyll, etc. in seasoning such as 'miso', 'syoyu', sauce, etc. Further proteins muco-polysaccharide, unsatd. fatty acid, nicotiniç acid, carotine, pantothenic acid, vitamin C, vitamin B gp., vitamin E, vitamin H, mineral, xanthophyll, chlorophyll, etc. in above substances improve taste and flavour as well as nitritive value synergically.

Taste and flavour and nutritive value of seasonings can be improved remarkably. 3.8.77 as 093766 (2pp5)

HIJI/ ★ D13 28603B/15 ★J5 4028-867

Non-intestinally absorbed sweeteners - comprising sweet substance to which ligand is attached and non-absorbable material is attached to ligand

HIJI Y 01.08.77-JA-092358

B04 (03.03.79) A23l-01/22

Non-intestine-absorptive sweet substance can be prepd. by (1) adding "spacer arm" to sweet substance to form ligand complex and (2) adding non-intestinally-absorptive substance showing good affinity to living body to the spacer arm of the ligand.

Natural or artificial sweetener can be made non-intest-

ine-absorptive and nontoxic dietic sweetener can be obtd.
As sweet substance glucose, fructose, sucrose, saccharin, dulcin, cyclamate, etc. can be used and as non-intestine-absorptive substance showing good affinity to living body cellulose or its oligomers can be used. As the ligand, o-glucoside, N-acylglucosylamine, N-acylamino sugar, thioglycoside, etc. can be used. 1.8.77 as 092358 (8pp5)

NITO/ ★ D13 28604B/15 ★ J5 4028-868

Low calorie sweetener compsn. - is obtained from liquid extract of Stevia plant and maltose soln.

NITO Y 05.08.77-JA-093404
B03 E13 (03.03.79) A23l-01/22 A61k-31/70

The method comprises (1) adding the decomposing enzyme in the dispersion of starch or polysaccharide; (2) adding the liq. extract of Stevia plant in thedispersion; (3) decolourising, filtering, intermediate concentration, ion exchanging and concentrating the mixt.; and (4) centrifuging, washing and drying the formed crystalline substance.

Stevioside has sweetness 200 times as strong as that of sucrose but it also has bitterness and it is deliquescent. Maltose is a sweet and soluble white crystalline substance and it does not increase the blood pressure value. Hence maltose has been used widely as a medicinal sweetener for patients suffering from diabetes, etc. However, its sweetness is only 1/3 that of sucrose. By the invented method, Stevia extract and maltose are combined to make use of their advantages.

Usually Stevia extract and maltose soln. are used in proportionof 1-30-150 to obtain sweetness similar to sucrose. Pref. the content of Stevia extract in objective sweetener is maintain < 45°C. 5.8.77 as 093404 (2pp5)

HORI- ★ D13 28605B/15 ★ J5 4028-869

Bitter extract removal from Periandra plant - by contacting underground part of plant with hydrophilic organic solvent at specified PH at which sweet extract is not removed

HORIUCHI ITARO SHOT 08.08.77-JA-094159
B04 (03.03.79) A23l-01/22

The underground part of the plant of Periandra or its processed substance is contacted with hydrophilic organic solvent or hydrous hydrophilic organic solvent at pH > 3 for extracting and removing bitter substance. Periandra plants contain bitter as well as sweet substances in their underground parts. At pH > 3, pref. > 5, the bitter substance has high solubility and the sweet substance has low solubility in hydrophilic organic solvent or hydrous hydrophilic organic solvent.

Periandra mediteranea and P. dulcis can be used. As the processed substance of Periandra plants, the concd. extract, its partly refined concentrate or the ppte. contg. the sweet substance which can be obtd. by extracting Periandra plants with water at pH < 3 and adjusting pH of the extract to > 5 can be used. As the hydrophilic organic solvent, ethanol can be used, and as hydrous hydrophilic organic solvent, hydrous ethanol having water content < 15%, pref. < 5%, can be used. 8.8.77 as 094159 (4pp5)

HORI- ★ D13 28606B/15 ★ J5 4028-870

Decolourised, refined sweet extract prepn. - by treating extract from under-soil section of Periandra plant with hydrogen peroxide

HORIUCHI ITARO SHOT 08.08.77-JA-094160
B04 (03.03.79) A23l-01/22

The method is effected by decolourising and refining the sweet substance. contg. extract which is prepd. from the underground part of the plant belonging to Periandra, with hydrogen peroxide.

Periandra mediteranea and P. dulcis can be used. Though the sweet substance has not been identified, it is quite different from glycyrrhizic acid, stevioside, etc. and can give refreshing sweetness. Suitably, aq. 35% hydrogen peroxide soln. is added 1-10 ml on 1 litre of the extract and the treatment is carried out at 0-80°C for 1/6-24 hrs. 8.8.77 as 094160 (4pp5)

AKIY- ★ D13 28607B/15 ★ J5 4028-871

Conc. onion extract-cyclodextrin inclusion cpd. - used e.g. to treat high blood pressure, arteriosclerosis, thrombosis and diabetes

AKIYAMA JOZAI KK 04.08.77-JA-093651
A96 B04 (03.03.79) A23l-01/34

The inclusion cpd. is pr
juice of onion bulbs at 60-90°C and including the concd. extract in cyclodextrin. Any of α-, β- and α-cyclodextrin can be used and the onion extract can be included in the voids of 6-10 Å in cyclodextrin. The inclusion can be practiced by mixing cyclodextrin with 10-100 w/w% of water t make it pasty, kneading it with the extract, of which amt. is 0.5-2 (0.8-1.2) times in wt. on cyclodextrin, for 4-10 (6-8) hrs. and drying the mixt. under reduced pressure.

The onion extract is effective on high blood pressure, arteriosclerosis, thrombosis, diabetes, etc. and gives nutritive effect and healthy effect. By including the concd. onion extract in cyclodextrin the effects can be stably held for > 6 months and the specific odour of onion can be mi igated. 4.8.77 as 093651 (3pp5)

NAKA- ★ D13 28614B/15 ★ J5 4028-89

Prepn. of powdery seasoning for use with sushi - by drying an crushing plum flesh, and combining with sugar, salt sodiu glutamate etc.

NAKANO SU-MISE 09.08.77-JA-094657
(03.03.79) A23l-01/22 C12j-01

Method comprises (1) drying and crushing plum flesh obt by removing kernels from the lees of plum juice and/or plum wine and (2) combining the obtd. powdery plum fles with ≥ 1 powdery seasonings selected from sugar, salt, sodium glutamate, etc. so that the plum flesh content is 25-50 w/w%.

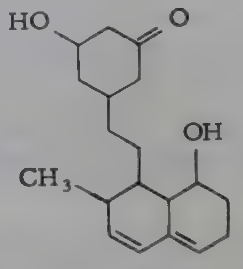
Delicious 'sushi' of excellent taste and flavour of plum can be obtd. 9.8.77 as 094657 (3pp5)

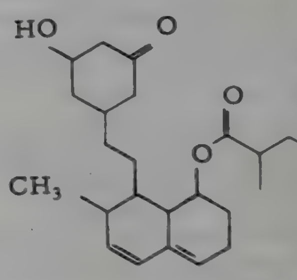
SANY ★ D13 28727B/15 ★ J5 4029-7

Low cholesterol content poultry eggs prodn. - by admin. of ML-236 or ML-236B, or their derivs., to the poultry

SANKYO KK 10.08.77-JA-095812
B05 C03 (05.03.79) A23k-01/16 A61k-31/12

Process comprises administering ML-236A or ML-236B of formula (I) and (II) respectively, or a deriv., to the poultry.


(I)


(II

Admin. of the active cpds. to poultry such as hens p duces low cholesterol content eggs without lowering eg prodn. The active dpds. have low toxicisty and are known lower cholesterol levels in blood in rats, hens, dogs and monkeys. 10.8.77 as 095812 (4pp108)

TANA/ ★ D13 28728B/15 ★ J5 4029-

False fish bait or feed - comprising shaped polymer material co fish attractant etc.

TANAKA T 10.08.77-JA-095829
A97 C03 P14 (05.03.79) A01k-85

An aq. soln. contg. water soluble polymer and/or aq. ymer emulsion is mixed with an agent for attracting fi and a cpd. having ≥ 2 isocyanate gps. per mol. and th mixt. is shaped into a suitable form. The resultant is used as effective false feed and can be used in fishing.

In an example, 100 pts. wt. of 12% aq. soln. of PV having polymerisation degree 1750 and saponification gree 88 mol.% was mixed with 5 pts. wt. of glycerin, pts. wt. fish meal, 0.5 pts. wt. blue pigment and 15 p wt. of TDI-glycol isocyanate, followed by blending ho geneously, and the resultant was poured into a mould sardine-like shape, followed by standing at 30°C. Th sulting sardine like false feed has good appearance an high elasticity and flexibility and thus can be effective used in fishing. 10.8.77 as 095829 (5pp22)

SUGA/ ★ D13 28729B/15 ★J5 4029-783
Fish bait prepn. - by mixing minced fish flesh with paste, powder, e.g. sand, and cement, blending and coagulating to desired shape
SUGA K 03.08.77-JA-090955
A97 C03 P14 (05.03.79) A01k-97 A23k-01/18

Minced flesh of animals such as fish, lobster, shrimp, shellfish, insects, etc. is mixed with protein paste, starch paste, polyvinyl alcohol or other pasting material, and then opt. mixed with clay, stone powder, iron powder, sand, pebbles, etc. and the whole mixt. is mixed with (inorganic) cement, calcined plaster, etc., followed by blending, and it is coagulated into a suitable shape.

In an example, 1 pts. wt. Portland cement, 1 pts. wt. stone powder, 1 pt. wt. talc powder, 2-2.5 pts. wt. minced flesh of sardine and 2 pts. wt. starch paste were mixed and blended homogeneously and the resultant was shaped into a stick 8-10 mm dia. and 20-25 mm long and then coagulated. 3.8.77 as 090955 (4pp22)

SAOK ★ D13 28866B/15 ★J5 4030-199
Purificn. of Stevia sweetening agents - by contacting with non-polar synthetic adsorbent, eluting and treating with calcium hydroxide followed by ion exchange treatment
SANYO KOKUSAKU PULP 08.08.77-JA-094242
B03 E13 (06.03.79) A23l-01/22 C07g-03

Stevia sweetening materials are purified by (i) contacting with non-polar synthetic adsorbent an extract of stevia sweetening materials consisting of stevioside, rebaudioside A and their analogs extracted from leaves of Stevia rebaudiana with water or hot water, (ii) eluting with organic solvent or hydrous organic solvent and recovering the stevia sweetening material adsorbed on the adsorbent, (iii) treating the eluate with calcium hydroxide to remove impurities and treating the prod. with cation exchange resin and anion exchange resin for purification.

Various disadvantages known methods are overcome by treating the eluate of stevioside with calcium hydroxide and treating with a small amt. of ion exchange resin. 8.8.77 as 094242 (8pp104)

TAKE ★ D13 28867B/15 ★J5 4030-200
Stevioside purifcn. - by contact plant extract with active carbon, eluting and opt. concentrating and precipitating stevioside
TAKEDA CHEMICAL IND KK 08.08.77-JA-095407
B03 E13 (06.03.79) A23l-01/22

Stevioside is purified by (1) extracting stevioside-contg. plants with water or hydrous alcohol; (2) contacting the extract with active carbon having a pure volume such that the total volume of pores $< 15\ \mu$ dia. is $\geqslant 1$ cc/g; the total volume of pores < 300 Å dia. $\geqslant 0.6$ cc/g; and average dia. of pores < 300 Å dia. is $\geqslant 25$ Å; (3) eluting the stevioside adsorbed on the active carbon with a hydrophilic organic solvent and (4) opt. concentrating the eluate and precipitating stevioside.

High purity stevioside can be prepd. industrially at low cost. 8.8.77 as 095407 (4pp104)

GONZ/ ★ D13 B/15 ★PT --67-899
Machine for stoning and stuffing olives - has selecting discs above hopper at end of conveyor belt along which are stone removing and stuffing punches
DELSER GONZALEZ C 13.04.78-PT-067899
*(23.03.79) A23n-00/**

MIME= ★ D13 29027B/15 ★SU -608-503
Cheese forming column - has a central section with ultrasonic radiators on the lower of its two cones
MINSK MEAT DAIRY 16.12.76-SU-431608
P13 (16.05.78) A01j-25/12

Accelerated precipitation of cheese grains and increased output of ready prod. are ensured by the three sections of the column. The central section densifies the cheese mass and features two truncated cones with narrow ends facing each other. The lower cone is made of an elastic material and it cincludes an ultrasonic radiator. The unit is fitted with an acoustic filter in the inlet of tube discharging the whey.

Bulikov, S.I., Kabaldin, G.S., Litovko, V.I. et al. Bul. 20/30.5.78. 16.12.76 as 431608 (3pp89)

DAIR= ★ ✓ D13 29029B/15 ★SU -608-513
Prodn. of soured milk drink from skimmed milk - includes curdling with Streptococcus diacetilactis and streptococcus thermophilus enzyme mixt.
DAIRY IND RES INST (MOMO=) 31.01.77-SU-449129
(D16) (27.04.78) A23c-09/12

The strain cultures may be provided as separate ferments or as a combined ferment having an acidity of 70°-90°C. The ferment is added to the milk in two stages: (a) to $^1/_5$-$^1/_6$ of the total amt. of milk at 25°-26°C, and (b) with the remainder of the milk then added at 37°-38°C to give a final mixt. temp. of 35°-36°C; the milk is then curdled to an acidity of 85°-90°C.

The method provides a high quality prod. having good organoleptic props.

Koroleva, N.S., Bannikova, L.A., Pyataitsyna, I.N. et al. Bul. 20/30.5.78. 31.1.77 as 449129 (3pp314)

AMFE= ★ D13 29030B/15 ★SU -608-514
Dry base for artificial human milk mfr. - contg. blended dried milk, vegetable oil, corn oil, fat-soluble vitamin(s) and rice flour
A MEDICINE FEEDS IN 15.12.76-SU-430028
(06.04.78) A23c-11 A23l-01/10

A base for the prepn. of milk resembling human milk even more closely and which is more soluble is made from a milk blend contg. dried reconstituted milk and vegetable oil with fat-soluble vitamins.

The prod. is homogenised, dietary flour, e.g. rice flour is added mixed with water, the mixt. is heated at 80-85°C for 4-6 min. and homogenised.

Pokrovskii, A.A., Korobkina, G.S., Chaplin, M.A. et al. Bul. 20/30.5.78. 15.12.76 as 430028 (2pp835)

UMEA= ★ ✓ D13 29031B/15 ★SU -608-515
Mfr. of long life soured cream products - includes addn.. of buttermilk concentrate with specified sugar and protein content and thermal treatment
UKR MEAT DAIRY IND 01.12.76-SU-426381
(03.04.78) A23c-13/12

Sour cream prods. are made from pasteurised cream which is homogenised, cooled to the souring temp., innoculated with pure cultures of lactic acid streptococci, soured, cooled and matured.

Both food value and storage life are raised by standardising the cream as follows: buttermilk contg. 20-25% dry solids and 4-5% lactose are added until the finished product contains 8-8.2% protein. The mixt. is homogenised at 60-65°C.

Eres'ko, G.A., Tkachuk, S.P., Fedin, F.A. et al. Bul. 20/30.5.78. 1.12.76 as 426381 (2pp835)

BOKU/ ★ ✓ D13 29032B/15 ★SU -608-516
Tea heat treatment appts. - with spreader on imperforate conveyor in thermally insulated chamber following dryer
BOKUCHAVA M A 28.03.74-SU-009003
Q76 (06.04.78) A23f-03 F26b-17/04

The appts. comprises a drying chamber with vertically spaced conveyors and under the chamber a thermally insulated heat-treatment chamber with an imperforate conveyor having an adjustable speed drive and carrying heated tea.

Bokuchava, M.A., Pruidze, V.N., Nadirashvili, Sh.Sh. et al. Bul. 20/30.5.78. 28.3.74 as 009003 (2pp1358)

MOFO= ★ D13 29033B/15 ★SU -608-517
Viscous plastic confectionery compsn. forming appts. - with knives detaching strips from second forming roll, to prevent mechanical damage
MOSC FOOD IND TECHN (MOCO=) 26.01.77-SU-447609
(27.04.78) A23g-03/12

The appts. includes a supply hopper at the top of an inclined conveyor belt section followed by a horizontal section. A roll at the hopper outlet sets the layer thickness and a forming roll at the junction between the sections has knives to detach strips from the roll and deposit them on the horizontal section without mechanical pressure. The arrangement minimises mechanical damage to compns.

Machikhin, Yu.A., Chuvakhin, S.V., Leontev, A.P. et al Bul. 20/30.5.78. 26.1.77 as 447609 (2pp1358)

SYRD= ★ D13 29034B/15 ★SU -608-518
Feedstuffs prodn. from cotton cleaning wastes - with additional sieving to eliminate mineral contaminants before drying and comminution
SYRDARIN ZAGOTKHLOP 02.08.74-SU-050806
C03 F01 (27.04.78) A23k-01

In order to improve feedstuff nutritive value and to reduce its toxicity, wastes are cleaned from mineral contaminants and then are dried at 100-120°C. for 10-15 min., before comminution. The wastes are pref. cleaned on reciprocat-ing or vibratory sieves.
Shadiev, K.Sh., Sharasulov, N.S., Popov, B.N. Bul. 16/30.5.78. 2.8.74 as 050806 (3pp1358)

POLY/ ★ D13 29035B/15 ★SU -608-519
Improved granulation of urea phosphate feed additive - is obtd. by addn. of mono:ammonium phosphate to urea and phosphoric acid reaction mixt.
POLYAKOV E V 26.11.74-SU-078044
C03 (13.04.78) A23k-01/22 C05c-09

Granulation of urea phosphate feed additives obtd. by fusing urea with phosphoric acid is improved by adding mono-ammonium phosphate before fusion or the melt in amt. 1-30% by melt wt.
Polyakov, E.V., Gerbert, G.P., Polyakova, Z.A. et al. Bul. 20/30.5.78. 26.11.74 as 078044 (2pp1347)

HETO ★ D13 29036B/15 ★SU -608-520
Producing textured fibrous meat substitutes - by thawing aq. polymer soln. in medium contg. cross-linking agent or precipitant
HETEROORG CPDS AS USSR 06.12.76-SU-427112
A97 (27.04.78) A23l-01/31

Porous textured fibrous products for use as meat substitutes or diluents are made by preparing an aqueous soln. of polymers, freezing and then thawing in a medium contg. a cross-linking agent and/or precipitant, the medium being miscible with the solvent.

The polymers are e.g. starch, alginates, pectinates, collagen, gelatin, myosin, sodium alginate complexes with casein and soya proteins, polycarboxymethylcellulose or polyvinylpyrrolidone, and the medium may contain Ca, Al or Fe salts, ethanol, butanol, mineral acids, sodium chlor-ide or sulphate, or buffer salts.
Bikbov, T.M., Vainerman, E.S., Tolstoguzov, V.B. Bul. 20/30.5.78. 6.12.76 as 427112 (3pp1358)

GPOL= ★ D13 29112B/15 ★SU -608-738
Sealed tea container - has a shell with cut/outs for samplers featuring partitions between the closed and open parts
GEOR POLY 22.07.76-SU-390977
Q37 (10.05.78) B65j-01/02

Easy sampling of tea particles from the container is due to cutouts in the wall with sealed-in samplers. The latter are in the shape of semi-cylindrical boxes turned around their axes and partly open at the top.

The open and closed parts are separated by partitions, and the inner surfaces of the housing carry guides for the covered part of the samplers. Bridging of the tea particles when turning over the sampler is prevented by the guide cone below them, attached to the inside of the housing.
Dvali, V.S., Zaldastanishvili, N.K., Dvali, B.S. Bul. 20/30.5.78. 22.7.76 as 390977 (3pp89)

LIBU= ★ D13 29260B/15 ★SU -609-090
Milk albumin condensate portable tester - uses detachable immersion probe with flashing light, beam splitting mirror and two photosensors
LITH BR BUTTER CHEE (KUPO=) 21.07.76-SU-391575
R16 (12.05.78) G01n-33/04

Condensed milk-albumin products portable tester uses flashing light beam splitting mirror, two photosensitive elements with measuring and comparison channels, amplifier and comparator.

In order to make theinstrument compact, the probe is made detachable and consists of two sealed cylinders made from transparent material.
Butkus, K.D., Kzimidavichyus, V.S., Shestokas, K.I. et al. Bul. 20/30.5.78. 21.7.76 as 391575 (3pp847)

IONI ★ D13 29388B/15 ★US 4146-455
Concn. of whey protein - by electrodialysis and forced flow electrophoresis
IONICS INC 19.04.78-US-897834
(27.03.79) B01d-13/02

Liq. whey is first demineralised by electrodialysis and is then subjected to forced flow electrophoresis to remove lactose and some water, forming a whey of increased protein solids content. The electrodialysis is pref. carried out at 35-40°C, and is continued until the whey has a resistivity of >600 ohm.cm^2.

The method requires less equipment than lactose removal by crystallisation, and avoids protein denaturation. 19.4.78 as 897834 (5pp955).

SNOW D13 48161A/27 =US 4146-456
demineralisation of milk by electrodialysis in two stages - using minerals sepd. in first stage to adjust mineral equilibrium
SNOW BRAND MILK PRODUCTS (TOKU) 23.12.76-JA-154269
*J03 (27.03.79) *DT2757-496 +B01d-13/02 C25c-21*

The ash balance of milk and/or its analogues is adjusted and minerals are removed from the same using ion-exchange membranes by (i) demineralising milk and/or its analogues using >1 electrodialysis stack at a demineralisation rate of $<50\%$; (ii) further demineralising the milk and/or its analogues using >1 electrodialysis stack at a demineralisation rate of $>60\%$; (iii) transferring the treated milk and/or its analogues to the concentration side of ≥ 1 electrodialysis stack of stage (i); and (iv) discharging the milk and/or its analogues which have had the ash balance adjusted from the concentration side.

The method is used to treated cows' milk, goats' milk, milk of other cattle, skimmed milk or whey, or soyabean milk. Pref. cation and anion exchange membranes are used alternatively. 19.12.77 as 861711 (5pp990).

ROSA/ ★ D13 29408B/15 ★US 4146-49
Oil in water microemulsion prepn. - for dispersion of dyestuffs polymers, drugs, pharmaceuticals, oily foods, fats, cosmetics etc.
ROSANO H L 25.07.77-US-818965 (18.09.76-US-721448)
A97 B07 J04 (D21) (27.03.79) B01j-13/02

Water-immiscible liq. (I) is dispersed in an aq. phase as a microemulsion by dissolving a prim. surfactant (II) in (I), sufficient (II) being used so that on dispersion of the liq. in water as a microemulsion, a monomolecular laye of surfactant is formed around the individual droplets. The soln. is dispersed in water and a sec. surfactant (II is added to the aq. phase to disperse the soln. in the aq. phase as a microemulsion.

(II) is an amphiphatic substance with a hydrophilic-lipophilic balance not much lower than the balance suffic ient to render it sol. in (I), and which is capable of form ing a lactescent emulsion of (I) in the aq. phase. (III) ha a higher hydrophilic-lipophilic balance than (II). 25.7.7 as 818965 (-pp1249).

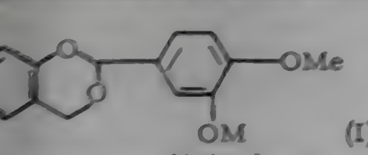
RALS ★ D13 29419B/15 ★US 4146-5
Vegetable protein concentrate prodn. - by hydrocyclone sepn. o suspension of finely ground vegetable matter (SW 6.11.78)
RALSTON PURINA CO 14.04.77-US-787404
(27.03.79) A23j-01/14

Protein is recovered from proteinaceous vegetable mat by (a) grinding to particle size $<40\mu$; (b) dispersing the particles in an aq. soln. at pH 4-6 so the particles sep ate into cellular debris and intact protein bodies in the soln., (c) hydrocyclone treating the dispersion to yield underflow and overflow streams, and (d) recovering pr tein from the streams.

The protein is not dissolved and re-pptd. but is rec ered as intact protein bodies, thus avoiding denaturatio High yields of protein concentrate of acceptable colour taste are obtd. 14.4.77 as 787404 (10pp955).

USDA ★ D13 29455B/15 ★US 4146
2-Hydroxy:methoxy-phenyl-1,3-benzodioxan and salts - usefu non-cariogenic dietary sweetening agents
US SEC OF AGRICULTURE 26.04.78-US-900373
B02 E13 (27.03.79) A23g-03/30 C07d-319/08

Phenols and their salts of formula (I) (where M is H o metal cation) are new.



(I)

(I) are dietary sweetening agents that are mimics of phyllodulcin; non-cariogenic and generally harmless. Useful in foods, beverages, chew- gums, medicinal prepns. etc. They are about 3000 nes sweeter than sucrose. 26.4.78 as 900373 (4pp1248).

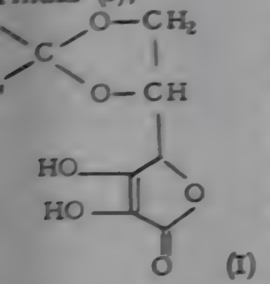
NP D13 84037A/46 =US 4146-651

corbic acid acetal and ketal derivs. - used in anti-nitrosamine mpsns.

CANADA PACKERS LTD 20.05.77-US-799093

*E13 (27.03.79) *ZA7707-321 A23b-04/12*

trosamine levels are controlled in nitrite cured meats by eating with compsn. contg. deriv. of ascorbic acid of rmula (I),



(I)

where R' is H or 4-7C hydrocarbon and R" is 6-20C straight or branched chain alkyl or alkenyl such that R'+ R" $\geqslant$10C. Alternatively, R" is 1-14C hydrocarbon, substd. by a mono- or bicyclic hydrocarbon contg. 5-6-membered ring. Each ring may contain $\ngtr$3 1-7C alkyl or alkenyl gps. Curing compsn. may also be edible salt of (I), in amt. to reduce quantity nitrosamines formed when cured meat is cured at frying mps.

Used esp. in the treatment of bacon, to reduce nitrosnine formation during subsequent frying or cooking operions. 20.5.77 as 799093 (7pp931).

CH- D13 57151A/32 =US 4146-652

od stabilised against microbial decay - contains dextrose and uctose, at least equal sugar and water content and smaller fat ntent (BE 27.7.78)

RICH PRODUCTS CORP 28.01.77-US-763613

*(27.03.79) *DT2803-634 A23g-09 +A23c-11*

microbiologically stable, whippable food prod. suitable r prepg. whipped confections comprises an oil-in-water mulsion contg. 14-45% water, sugar in a ratio to water f 1-2:1, 2.5-30% fat and minor amts. of salt, emulsifier, abiliser and flavouring.

If the amt. of fat is less than the amt. of water, solutes ontent is adequate to provide prod. with water activity of .8-0.9. Sugar contains dextrose plus fructose to $\geqslant$50 wt. w.r.t. total sugar content. The ingredients must include uctose and/or unsatd. fat and the prod. is spoonable at 0°F.

The prod. is used in foods kept at freezer temp. Upon emoval from the freezer, the foods can be readily handld and used because of flexible consistency of the prod. 8.1.77 as 763613 (17pp931).

EK D13 52614Y/30 =US 4146-706

el-forming polysaccharide prepd. by Arthrobacter cultivation - ontains glucose, mannose, dihydrostreptose and carboxyethyl amnose

IDEMITSU INDUSTRIES KK 05.04.76-JA-037224 (19.01.76-JA-004051)

*A11 B07 C03 (A96 A97 D16) (27.03.79) *DT2701-312 +A61k-31/70 C07h-15/04*

ovel polysaccharides have gel forming properties. They ontain 8-14 wt.% (as acetic acid) of O-acetyl gps. and omprise in molar pts. 10 pts. glucose, 10 pts. mannose, -3 pts. dihydrostreptose and 3-8 pts. 3-0-(1'-carboxythyl)-L-rhamnose.

The polysaccharides are e.g. produced by cultivating a nicroorganism such as Arthrobacter carbazolum, FERM 574, in a suitable medium. The polysaccharides are used .g. as thickeners and gelling agents. 17.1.77 as 759627 19pp974).

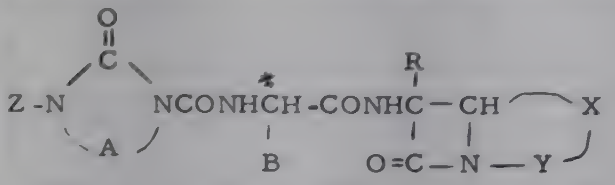
ARB D13 46019X/25 =US 4147-693

lpha-(imidazolidinonyl carbonylamino) penicillins and ephalosporins - active against gram negative species and useful .g. as feed additives

BAYER AG 07.06.75-DT-525541 (28.11.74-DT-456307)

*B02 C02 (03.04.79) *BE-836-022 A61k-31/54 C07d-499/46 C07d-501/34*

-Lactams (I) and their salts are new. In the formula R is H or OCH_3; A is ethylene, trimethylene or benzo; B is phenyl opt. substd. by halo, OH, lower alkyl, CN or methylsulphonyl or is cyclohexenyl or cyclohexadienyl;



(I)

X is S, O, SO, SO_2 or CH_2; Y is $-C(COOH)H-C(CH_3)_2-$ or $-C(COOH)=C(CH_2T)-CH_2-$ where T is H, lower alkanoyloxy, OH, pyridinium, carbamoyloxy, azido, -CN, -SPh or -SHet where Het is a 5-6 member heterocycle which is opt. substd.; and Z is R^1-CH=N- where R^1 is 3-10C cycloalk(en)yl, pyridyl, styryl, (un)substd. phenyl, (un)substd. thienyl, (un)substd. furyl or opt. methyl substd. isoxazolyl.

The cpds. are antibiotics having broad spectrum activity against Gram positive and Gram negative bacteria coupled with low toxicity. They are used as preservatives for paper, timber, leather, paints etc.; as animal feed additives; and medicinally against local and systemic infections. Dose is pref. 20-30 mg/kg. 13.11.75 as 631515 (+25.3.75 - DT - 512998) (51pp945).

OLIN ★ D13 29664B/15 ★US 4147-757

Prodn. of ammonium phosphate of low arsenic content - from crude phosphoric acid, using reducing agent to prevent co-pptn. of arsenic

OLIN CORP 18.11.77-US-852649 (13.12.76-US-749856)

C04 E35 (03.04.79) C01b-15/16 C01b-25/26

Arsenic-free ammonium phosphate is made by (a) reacting crude H_3PO_4 contg. dissolved As in the +5 valence state with NH_3 and an As-reducing agent to form ammonium phosphate soln. and to reduce the As to a lower valency state; (b) crystallising the ammonium phosphate from the soln. to leave a mother liquor contg. virtually all the As; and (c) recovering the crystalline prod..

The process employs relatively cheap, crude As-contg. H_3PO_4 made by the wet process, and gives a relatively pure prod. suitable for foodstuff and industrial use and as a fertiliser. Redn. of the As in the soln. prevents co-pptn. of the As with the ammonium phosphate and thus gives a purer prod.. 18.11.77 as 852649 (8pp513).

GREC ★ D13 29674B/15 ★US 4147-779

Preventing intestinal diverticulum - by addn. to the diet of powdered expanded fibre from asparagus stalks

GREEN CROSS CORP 20.10.77-JA-126245

B04 (03.04.79) A61k-35/78

Intestinal diverticulum is prevented by addn. to the diet of $\geqslant$0.5 g per meal of expanded fibre from asparagus stalks and in powder form.

The fibre is a food additive for supplementing the fibre content of the diet so that intestinal diseases, diverticulitis etc. are prevented, and in turn hyperlipemia and arteriosclerosis are reduced. Fibre is tasteless and odourless. 14.6.78 as 915555 (6pp1248).

PROC D13 59128W/36 =US 4147-808

Beverage carbonator - using agglomerated molecular sieve charged with adsorbed carbon dioxide

PROCTER & GAMBLE CO 17.07.74-US-489292 (25.02.74-US-445200)

*+Q34 (03.04.79) *DT2507-442 +B65d-85/72*

Aq. beverages are carbonated at point of consumption by contacting a rigid composite body (I) comprising $\geqslant$40 wt.% crystalline zeolite molecular sieves, the body having absorbed sufficient CO_2 to effect carbonation.

(I) has a surface area to mass ratio of 4-200 cm^2/g and has $\leqslant$6 g of crystalline zeolite molecular sieves distributed uniformly throughout the body. Pref. (I) comprises 65-95 wt.% molecular sieves and 35-5 wt.% binder e.g. a clay. 25.4.78 as 899950 Div.ex. 4007134, 4110255 (+8.11.76 - US - 739663) (16pp963).

CRGI ★ D13 29683B/15 ★US 4147-810

Improving the digestibility of feed vegetable protein - by heating with edible acid to increase hexose content

CARGILL INC 29.10.74-US-518766 (21.08.72-US-282541)
C03 (03.04.79) A23j-03/10

Nutritional value of a particulate vegetable protein is improved by heating with an edible acid at pH 1.0 to 5.0 and at 250 - 450°F for such a time that the hexose level is increased to >3.5% and the PER is >2.0.

The vegetable protein may be derived from soya beans or cotton seed. Edible acids include HCl, phosphoric acid, sulphuric acid, acetic acid, lactic acid, and citric acid. The product may be extruded and then cut into 'pellets'.

The product is used as a feed or food supplement with the enzymes and antigrowth factors removed. The palatibility, nutritional value and digestibility are improved. 29.10.74 as 518766 (6pp916).

TOKL ★ D13 29684B/15 ★US 4147-811

Coarse grained bean curd prepn. - by breaking coagulated soybean milk into lumps and adding to moving cups, adding soybean milk to cups and heating to form bean curd cakes

TOKYO KIKAIKA KOGYO KK 13.12.76-JA-149641 (17.02.76-JA-016795)
(03.04.79) A23l-01/20

Coarse-grained bean curd (I) is into lumps and adding mass of coagulated soybean milk (II) into lumps and adding fluid to a series of successively moving cups; (b) adding fluid (II) to each of the cups so that it mixes with the residual coagulant soln. produced during the breaking in (a); and (c) heating each cup to a temp. high enough so that (II) is coagulated and the lumps are bonded to form a cake of (I).

Process affords (I) of the so-called 'cotton-strained' type, using highly mechanised, stream-lined, mass prodn. techniques and appts. Prepd. (I) is sealed directly into boxes, sterilised by heat, and may be stored for long periods of time. (I) is a known foodstuff. 14.2.77 as 768526 (+ 29.10.76 - JA - 130795) (13pp478).

See Also

D15 J5 4030251
D16 CS 7702263
D16 SU 608835
D22 US 4146633
D23 GB 1543897
D15 US 4147745
D16 DS 2059277
D16 US 4147807
D23 BE 872476
D23 US 4147705
D16 BE 871048
D16 GB 1544034
D17 DS 2003350
D23 BE 872477
D23 US 4147727

D14: FOODSTUFF MACHINERY

HENK ★ D14 27862B/15 ★BE -871-061

Cleaning product for fruit, vegetables and other foods - is an aq. concentrate contg. protein, polymer, sequestrants and preservatives

HENKEL KG AUF AKTIEN 08.10.77-DT-745371
A97 (06.04.79) A23p C11d

The product for cleaning foodstuffs of vegetable or animal origin for human or animal food consists of 0.1-10% of protein substances soluble or dispersible in water. 0.01-3% of water-soluble polymers, 1-15% of sequestrants, and 0.01-1% preservatives and auxiliary products; the product being in the form of an aq. concentrate. Specified polymers are polyvinyl alcohol, polyvinylpyrrolidone and cellulose ethers; sequestrants are citrates, lactates, tartrates, aminoacid salts, phosphates and polyphosphates

The product is used in dil. aq. soln. particularly for cleaning fruit and vegetables but may also be used for meat, fish, eggs, cheeses etc. It has the advantages of being surfactant free; also it does not foam much or cause any skin irritation. 6.10.78 as 871061 (7pp597)

SCHR/ ★ D14 27997B/15 ★DT 2743-308

Ice-cream portioning spoon - with spring loaded hinged lever strip to lift out scraped portion

SCHRODER K W 27.09.77-DT-743308
(05.04.79) A23g-09/28

A spoon to ladle out portions of ice-cream from a container and transfer them to a cornet is fitted with a spring-loaded lifting plate which normally lies flush in a recess at the spoon bottom. The other end protrudes over the spoon handle. When a portion is to be transferred to a cornet, the free end is depressed against the force of a spiral spring, and the other end, which is 1to 2 cm wide, lifts out the ice cream portion.

This is an uncomplicated tool to detach the ice cream portion from the hemispherical spoon. 27.9.77 as 743308 (8pp39)

AMFA- ★ D14 28078B/15 ★DT 2810-040

Potato chip cutter - has blades set at distances increasing towards the perimeter area of the potato

AMFAC FOODS INC 23.09.77-US-836050
P62 (05.04.79) B26d-03/20

The cutter is fitted with blade sets with mutual distances selected in such a way that it produces chips with different cross-sections. The chips cut from the central part of the potatoe are thinner than the ones cut from the peripheral part. By this arrangement the circumstances is compensated that the texture of the central part of the potatoe is denser than the peripheral part. This produces in the frying process a more uniform chip bulk.

The cutter assembly consists of side blades which remove from the basically ball-shaped potatoe the four-calotte-shaped slices. Inside these four blades a system of blades arranged perpendicularly at each other is provi -ed. The blade sets are mounted in a retreating pattern with the sets nearest to the walls uppermost and sets in the central part at the bottom. 8. 3. 78 as 810040 (19pp55

MFEN- ★ D14 28086B/15 ★DT 2831-5

Domestic soft ice appliance - has gear motor for stirring and g capsule for pressurising soft ice mixt. above freezing cartridge

M+F ENG AG 26.09.77-CH-011715
P28 (05.04.79) A23g-09/20 A47j-43/04

A domestic soft ice appliance has in the bottom an interchangeable freezing cartridge. The lid houses an electr gear motor with a paddle mixer which stirs up the soft ice mixt. in the space above the cartridge. It also hold a capsule as used for siphon bottles. The soft ice is dispensed by squeezing a tubular elastic mouthpiece.

The appliance has a minimum of moving parts. It ca be cleaned easily and requires little space. The soft ic produced is of better and more consistent quality than from manually operated appliances. 18. 7. 78 as 831592 (10pp39)

BEAU/ ★ D14 28192B/15 ★FR 2396-

Deaeration of mushrooms, etc. for impregnating with liq. - continuous plant with barometric leg entry and exit for vacu chamber

BEAUVAIS M 06.07.77-FR-020744
(D16) (09.03.79) A23b-07 A23p-01

The vacuum chamber has two hydrostatic, barometric one used as a prod. entry air lock and the other as a p discharge lock. To ensure continuous progress of prod via the legs and traps, advantage is taken of the prod. floating or sinking in the liq. used in the legs wherever this is applicable. Where this is not applicable, mechar conveyors are fitted.

Liq. used in the entry leg is pref. retained in a cir quite separate from a second circuit contg. liq. used i the discharge leg. The discharge leg circuit pref. cont a soln. of ingredients with which the prod. is to be im nated.

Used in deaeration of food prods., esp. mushroom assist impregnation with a conditioning soln. intended to improve prod. taste, appearance or other quality and yield 6. 7. 77 as 020744 (8pp448)

SULZ ★ D14 28267B/15 ★GB 2004-763
Press filter of moving belt type - has pressing belt of foam material having an impervious surface facing press zone
SULZER BROS LTD 02.02.78-CH-001131 (29.09.77-CH-011900)
A88 J01 P71 (11.04.79) B01d-33/04 B30b-09/24

Moving belt press filter has a pressing zone defined between a pressing belt and a screening belt with a feed arrangement for distributing material to be pressed over an inner region of the belt.

The pressing belt comprises a foam material impervious to liq. on the surface which faces the pressing zone. The foam material bears by its edge portions, in the pressing zone, on the edge portions of the belt.

Fine particles do not impair the filtration capacity and the material undergoing pressing is prevented from lateral escape. 27.9.78 as 038327 (3pp1050)

TERL- ★ D14 28992B/15 ★NL 7809-531
scraping heat exchanger of blade and drive design - gives effective scraping at low speeds with minimal damage to prods in the treated medium
MACH FAB TERLET 23.09.77-NL-010447
J08 Q78 (27.03.79) F28d-11

Heat exchanger comprises an annular cylindrical space in which the medium is treated, a vertical drive shaft to which is mounted the scraper device, and hollow walls through which a heating or cooling heat transfer medium is passed. The scraper device consists of a horizontal arm at the top of the cylinder and connected to the drive shaft and vertical scraper shafts positioned in the centre of the annular space and attached to the outer ends of the drive arm.

The scraper blades consist of sheet metal plates with the outer edge in contact with either the inner or outer a wall of the annular space and with the central part wrapped around the shaft to provide a mounting. In motion, the blade is oushed against the wall by the hydraulic pressure or the medium and presents a clean flow surface to the material scraped from the wall.

The device operates effectively at a low rotational speed so that mediums such as jams can be treated without damaging the fruit. The clean flow surfaces prevent the material from being trapped by the agitator blades. 19. 9. 78 as 009531 (13pp1370)

RANC= ★ D14 29037B/15 ★SU -608-521
Feedstuffs and grain steamer - with helically disposed slotted stub pipes from central vertical steam feed shaft for uniform treatment
RANCHES MECH AUTOM 26.12.74-SU-088914
(27.04.78) A23n-17

The steamer comprises a chamber with a steam distributor formed by a hollow shaft from which stub pipes extend laterally. To improve the uniformity of distribution within the chamber interior, the pipe slots enlarge from the shaft towards the chamber wall. Each pipe pref. has a deflector mounted over the slot.

Pilipenko, A. N., Kulakovskii, I. V., Akulinin, A.G. et al. Bul. 20/30.5.78. 26.12.74 as 088919 (2pp1358)

KULL/ D14 65269Y/37 =US 4145-818
Removal of a vaporised liq. from a gas stream - used e.g. in a fluidised bed treatment process
KULLING H 02.03.76-CH-002581
*B07 J04 +Q76 (27.03.79) *DT2707-065 +F26b-03/08*

Granular material is treated by introducing air to fluidise the material and to take up vapour liquid, splitting the air/vapour stream into two, cooling one of the stream parts by condensing to condense the vapour, and then recombining the two streams before recycling through the material. The second part of the stream by-passes the condenser.

After cooling, the first stream part is passed through a droplet catcher. The second stream is pref. heated. Solvent is recovered at reduced energy consumption. 24. 2. 77 as 771491 (5pp1376).

COLE/ ★ D14 29306B/15 ★US 4145-962
Cracking nuts without damage to kernel - using appts. with threaded drive rod moving jaw against stationary jaw contg. nut
COLEMAN E 23.11.76-US-744246
P28 (27.03.79) A23n-05 A47j-43/26

A nut cracker preventing crushing of the kernel comprises a stand with flat base, an integral arm extending upwardly and laterally away from the base at >90°, and a leg extending upwardly from the base spaced from the arm. The leg has a threaded sleeve axially normal to the arm, with an axially movable jaw having a shank threaded in the sleeve and having an operating handle.

The jaw is spaced from the base to cooperate with an opposed axially aligned jaw on the arm. A base recess below and encompassing the jaws receives cracked nut pieces. The jaws are replaceable, and the leg is adjustable by a pin and slot. 23. 11. 76 as 744246 (3pp1358).

STRK D14 65291Y/37 =US 4147-098
Continuous processing esp. sterilising of powder form materials - by pressurised steam and vibratory conveyor in gastight chamber (NL 5.9.77)
STORK AMSTERDAM BV 01.03.76-NL-002123
*J04 +Q76 (03.04.79) *DT2708-168 +A23b-07*

Vegetable materials are continuously sterilised in appts. which includes a tightly closed treatment zone with a gas-tight device for discharging materials and an inlet for treatment to medium, and a material support in the zone having apertures for cooperation with a vibrator, the vibrator cooperating with the inlet to admit medium when the vibrator is active.

The vibrator is vertical. Pref. the zone is in the form of at least one shaking gutter which vibrates at an amplitude of 10 to 40 mm. The inlet is pref. connected to a source of steam. 25.2.77 as 772272 (6pp1376).

INME- ★ D14 29517B/15 ★US 4147-099
Root-crowning appts. comprises carousel with upstanding partitions - along which centrally deposited roots move under centrifugal force into radial guide channels to engage blades
INMEKTOR KY 29.06.77-US-810987
(03.04.79) A23n-15/02

Appts. for trimming the ends of elongate edible roots comprises a carousel having an upwardly diverging frustoconical track and an array of radial ascending channels for conducting a root, when accelerated by centrifugal force, radially outwardly. A cutter is provided beyond the outer ends of the channels for trimming a leading end off an ascending root.

An array of radial descending channels are aligned with the ascending channels beyond the cutter for conducting the root with its other end leading. A further cutter is disposed just beyond the outer ends of the descending channels for trimming the other root end.

Used for cutting off the ends of carrots and other elongate edible roots. The roots are automatically trimmed at both ends without producing much waste. The length of the cut-off end portions is independent of the length or thickness of the roots to be crowned. 29.6.77 as 810987 (9pp1044).

AUTO- ★ D14 29555B/15 ★US 4147-485
Moulding food esp. meat patties, with wt. control - by compensating for temp. of supply by altering mould size
AUTOMATORS INC 01.12.76-US-746403
(03.04.79) A22c-07 A23p-01

A food moulding machine, e.g. for producing hamburger patties, includes a piston which reciprocates to fill a mould at a predetermined pressure. The temp. of the meat supplied to the mould is measured and the pressure applied by the piston is adjusted according to the control of a comparator circuit. The comparator compares an electrical signal related to the temp. with a second signal related to the stroke of the piston. The output of the control circuit drives a rotary actuator which alters the stroke of the piston rod.

The appts. moulds meat patties and the correction procedure ensures a constant prod. wt. despite density changes of the feed as a result of temp. changes. Once set-up the force applied by the piston adjusts automatically to ensure constant product wt.. 1.12.76 as 746403 (11pp295).

D15: WATER TREATMENT

MORA/ ★ D15 B/15 ★CS 7603-520
Elimination or recovery of cpds. - from liquid, solution, suspension or emulsion
MORAVEK O 26.05.76-CS-003520
(28.02.79) C02c-01/26

MACK/ ★ D15 B/15 ★CS 7705-583
Waste water biological purification appts.
MACKRLE S 26.08.77-CS-005583
(28.02.79) C02c-01/06

HORY/ ★ D15 B/15 ★CS 7705-596
Amine continuous elimination from industrial wastes
HORYNA J 26.08.77-CS-005596
(28.02.79) C02c-05/08

SABA/ ★ D15 B/15 ★CS 7707-578
Reduction of toxicity of aq. effluent contg. formaldehyde
SABADOS J 17.11.77-CS-007578
E17 (28.02.79) C02c-05/02

NECE/ ★ D15 B/15 ★CS 7707-720
Waste water purification - and simultaneous prodn. of liquid and/or solid fuel
NECESANY F 14.11.77-CS-007720
H09 (28.02.79) C02c-05 C10l-01/02 C10l-07

HORN- D15 09882U/08 =DS 2137-474
Sand-trap for water treatment plants - using precast concrete components
HORNBACH A & W OHG (HOR -) 27.07.71-DT-137474
*(05.04.79) *DT2137-474 C02c-01/20*

Sand trap for use in sewage farms, is of flat construction and divided into inlet, trap, outlet barrier sections. All sections are self-supporting components, the inlet and outlet ones being of U-shape, while the trap section is V-shaped, a relatively narrow U-section sand trap trough being connected to the base. 27.7.71 as 137474 (6pp160)

AIRP D15 36558V/20 =DS 2362-334
Treatment of industrial waste waters - using activated sludge in which proliferation of filamentous bacteria is inhibited
AIR PRODUCTS & CHEM INC 24.01.73-US-326377
*(05.04.79) *BE-809-510 C02c-01/06*

Biological effluent-treating process comprises ≥ 2 consecutive aeration stages the conditions in the first stage of which are controlled by maintaining the ratio of soluble nutrient to active biomass, expressed as Fs/Ma, at ≥ 4 (where Fs is 1.5 times the wt. of sol. BOD_5 added daily to the mixed liq. and Ma is the amt. of suspended volatiles (I) in the mixed liquid in this stage multiplied by an activity coefficient which is the ratio of the max. specific O_2 uptake rate of (I) during aeration to the max. specific O_2 uptake requirement at that temp.)

Active, non-fibrous biomass is formed which requires the min. O_2 amt. to removed the BOD of the effluent. 14.12.73 as 362334 (8pp922)

ERPA- D15 07546W/05 =DS 2441-238
Compact industrial effluent flotation appts - for sepn of suspended particles and/or colloidal particles and their separate collection
ERPAC 22.10.73-FR-038556
*F09 P41 (05.04.79) *BE-819-334 C02c-01*

The flotation system separates material in suspension in sewage and coloidally dissolved in it. The sewage is directed into a reaction vessel and treated with a flocculation and coagulation agent delivered by a current of water and compressed air. The flaked materials floating to the top are removed.

In a first area of the vessel the flotation materials are sepd. by compressed air, and flocculation of the non-flotation colloidally dissolved materials is initiated by the introduction of coagulation and flocculation agents. The flaked material is transported to a second area of the vess-el, where it is separated in quick-action cells, preferably of the laminar type. 28.8.74 as 441238 (5pp160)

NIDE D15 23801X/13 #DS 2443-942
Removing iron from acid waste liquids by oxidn. - at controlled pH by addn. of base, giving easily sepd. ppt. for large-scale use
NIPPON ELECTRIC KK 10.09.74-NL-011995 (13.09.74-DT-443942)
*E31 G01 M14 (05.04.79) *NL7411-995 C01g-49/02 C02c-05/04 +C09c-01/24*

Crystalline, iron oxides of 1-2 mu dia. are recovered from acid effluents contg. iron ions and used to produce ferrites and pigments by oxidising the effluent at 50-75°C at a constant pH of 3.5-5.2 (4.0-5.2), obtd. by adding a basic substance (pref. NH_4OH), and, after a significant pH jump. sepg. polycrystalline particles coated with fine Fe cpd. particles from the clear, substantially neutral effluent (e.g. by magnetic means).

The oxides are obtd. from effluents of varying concns. (also contg. e.g., halides and sulphides) and pollution-free effluents are produced13.9.74 as 443942 (6pp922)

KERN- D15 28467X/16 =DS 2446-157
Water desalination device using reverse osmosis - has high output rate at low press. and allows ready mechanical cleaning of membranes
GES KERNENERG SCHIF 27.09.74-DT-446157 (00.00.73-DT-353659)
*(05.04.79) *DT2446-157 +C02b-01*

The water desalinisation plant uses reverse osmosis, and has a porous plate coated with membranes on both sides between two similar raw water chambers in series formec by half-cells with slightly conical bases, clamping plate and mambranes between them.

It has a stack of alternate plate-type partitions and membrane-covered porous plates. On one side of each partition the raw water chambers are machined as flat recesses, and on the other the connections between the chambers as channels 27.9.74 as 446157 Add to 2353659 (6pp160)

MIUR D15 42313X/23 =DS 2551-03
Effluent purification - using a magnetic powder and flocculants t coagulate the suspension followed by magnetic sepn.
MIURA ENG INT KK (MIUR-) 10.09.75-JA-110348 (15.11.74-JA 132366)
*+P41 (05.04.79) *DT2551-030 C02c-01*

The sewage cleaning equipment has a device rotating on a horizontal shaft with magnets collecting, as they dip in the sewage flakes generated with ferromagnetic powder. These are transferred to receiving devices as the magne travel through a zone above the water.

The device consists of discs, on each of whose sides there are alternate magnetic and non-magnetic areas. 13.11.75 as 551030 (+27.12.74, 8.3.75-JA-000681, 02831 (7pp160)

HITA D15 00237Y/01 =DS 2604-6
Microbiological oxidn. of waste waters contg. organic material - using activated sludge and high oxygen transfer rate
HITACHI KK 20.06.75-JA-074432 (07.02.75-JA-015398)
*(05.04.79) *DT2604-674 C02c-01/06*

Process subjects sewage contg. organic materials to hi highly effective oxidation treatment by delivering into an aeration vessel, where it is aerated in the presence of a -ivated sludge, oxygen being also introduced into the ve el.

The oxygen transfer rate in the vessel is set to 5-80 mmol O_2/1.h. 6.2.76 as 604674 (9pp160)

OSC D15 14266A/08 =DS 2636-054

on exchange regeneration salt container - with slotted partition etween inlet and outlet channel and salt container

BOSCH-SIEMENS HAUS 11.08.76-DT-636054

*P28 (05.04.79) *DT2636-054 A47l-15/42 C02b-01/76*

salt vessel is for domestic water softeners, particularly n conjunction with washing machines, having a liquid uide channel in the lower part between the fresh water upply and a non-return valve at the outlet connecting to an on exchanger. A partition has one or more ports for the iquid from the inlet to the outlet side of the channel, which s connected on both sides of the partition via ports for liq uid to the salt vessel.

The channel is formed by the vessel bottom, a false ottom, and walls between the two. A slot is provided in he false bottom for the passage of fine granular salt from he vessel into the channel. 11.8.76 as 636054 (4pp160)

EIJ D15 08632A/05 =DS 2731-493

ibre material for breaking of emulsions - consists of vinyl aromatic ibres contg. both hydrophobic and hydrophilic gps.

TEIJIN KK 19.07.76-JA-084938 (19.07.76-JA-084937)

*A97 F01 J01 (A13) (05.04.79) *DT2731-493 C09k-03/32 D01f-06/22 D01f-11/06*

ibre materials suitable for emulsion processing comprises a polymer or polymer mixt. with over 30 wt. % olyvinylarane units, produced from vinylaranes and opt. ther monomers, which is cross-linked with (a) 40-95% based on aromatic polymer units) of gps. of formula $-CH_2C(R)(XSO_2NHR')-$ and (b) 1-30% of gps. of formula $-CH_2C(R)(XSO_2A)-$. In these formulae, X is a benzene ing (opt. with Me or halogen substits), or a naphthalene r thiene ring; R is H or Me; R' is a 2-20C hydrocarbon nd A is Cl, OH, NH_2, $NHNH_2$, $NHCH_2CH_2OH$, $N(CH_2CH_2OH)$, NHMe or NMe_2; such that $0.01 \leqslant [SO_2A]/[SO_2NHR'] \leqslant 0.5$.

Prepn. of these fibres comprises treatment of the corresp. polyvinylarane fibres with H_2SO_4 and/or $ClSO_3H$ until 0.5-40% cross linking is obtd., opt. followed by treatment with cpds. of formula $R'NH_2$ and HA. 12.7.77 as 731493 (13pp047)

RUHL ★ D15 27965B/15 ★DT 2742-680

Granular filter material e.g. for water treatment - prepd. by classifying coal-contg. raw material before pelletising with thermosetting resin and solvent

RUHRKOHLE AG 22.09.77-DT-742680

A81 J01 (05.04.79) B01d-39/02

Granular filter material for processing drinking water and water for industrial use is prepd. from a high C-contg. raw material, e.g. anthracite coal, by grinding the starting material, mixing with a binder and simultaneously pelletising, and then heating to expel volatile components. Novelty consists in narrowly grading the starting material after or during comminution and pelletising only selected grain sizes with the addn. of a thermosetting resin and also of a solvent.

The filters may also be used for processing and purifying other liqs. and gases. Pore vol. can be adjusted to requirements. Energy can be saved by using thermosetting resins hardening at 150°C. Strength and abrasion-resistance can reach those obtd. on using coked pitch or tar pellets. 22.9.77 as 742680 (10pp200)

ALDA/ ★ D15 27976B/15 ★DT 2742-801

Water treatment plant - assembled from containerised units to international standards

ALDAG W 23.09.77-DT-742801 (00.00.76-DT-635670)

(05.04.79) C02b-01 C02c-01/06

Treatment plant for water and other fluids is assembled from tanks which meet the internationally standardised requirements for containers as regards dimensions, weight and strength. They are made of steel sheets, steel sections and/or Al sheets, Al sections and/or reinforced plastics.

Containerised water treatment plants combine the advantages of stationary with those of portable installations. The units can be easily stored and quickly transported on site, specially in countries with an inadequate infrastructure, for military purposes and in emergencies. 23.9.77 as 742801 (18pp39)

BAUE/ ★ D15 27979B/15 ★DT 2742-832

Raw sludge prepn. and mixture with coal dust - in solar cell with felt band conveyors, giving product useful as fertiliser

BAUER O 23.09.77-DT-742832 (00.00.72-DT-260616)

(05.04.79) C02c-03

The Parent Patent described a sewage treatment to produce raw sludge. This is mixed with coal dust and passed into a double-glazed structure with several endless felt band conveyors arranged above each other. The top conveyor is used for predrying by solar radiation. The lower conveyors are exposed to infrared and ultraviolet radiators. Air inlets and outlets provide for ventialation and vapour extraction. The bottom conveyor discharges the prepared sludge.

The coal dust can be produced by carbonising a part of the sludge so that no additives or chemicals need be bought. The end product is suitable for use as fertiliser. The new system needs a minimum of extraneous energy. 23.9.77 as 742832 Add. to 2260616 (26pp39)

VEKE- ★ D15 28032B/15 ★DT 2744-050

Packing for trickling water tower - with corrugation inlets and outlet alternating on every other panel of plastics foils

VER KESSELWERKE 30.09.77-DT-744050

(05.04.79) C02b-01/10 C02c-01/04

The Parent Patent described a packing for trickling towers to be used in the aeration of drinking water and in the biological digestion of organic contents which consisted of corrugated plastic foils, subdivided into panels. The directions of inlet and outlet of each panel are now reversed in every other panel.

This results in a more uniform distribution of the trickling water over the panel width. The original panel tended to drive the water towards one of the longitudinal edges. 30.9.77 as 744050 Add to 1759102 (7pp39)

METG ★ D15 28060B/15 ★DT 2744-437

Processing waste waters from coal degasification or gasification - by solvent extn., stripping and separating ammonia and acid gases

METALLGESELLSCHAFT AG 03.10.77-DT-744437

E35 H09 (E14) (05.04.79) C01c-01/10 C02c-05 C07c-39/04

Waste waters obtd. in degassing or gasifying coals are processed by extracting the organic impurities with an organic solvent which is insoluble or only slightly soluble in water, and working up the extract to crude phenol and fresh solvent; removing solvent residues in the extd. waste waters by stripping with gases; washing the gases to recover the organic solvent; removing NH_3 from the extd. waste water by stripping with steam in a distn. column; condensn. of distn. column head prod. and recycling part of condensate to column head.

Novelty consists in not condensing a part. of distn. column head prod. and transferring the vapours to a wash column, where water, small NH_3 quantities and total acidic gases are condensed in stages in top part of wash column, and pure NH_3 is drawn off overhead. The condensate contg. all acidic gases is drawn off from the upper part of the wash column, transferred to a separate reboiler and heated. A small quantity of cold water is added to wash column head. The wash column sump prod. is drawn off and transferred to a pressure deacidification column, where the acid gases H_2S and CO_2 are drawn off overhead, under pressure. The pressure deacidification column sump prod., consisting of an NH_3-rich soln., is recycled to the distn. column. 3.10.77 as 744437 (14pp200)

GENE ★ D15 28180B/15 ★DT 2842-729

Regenerating spent anionic and cationic exchange resin mixt. - using a device contg. vertically assembled resin separator, ultrasonic purifier and bottom mixer

GENERAL ELECTRIC CO 03.10.77-US-838815

A91 J01 K06 (05.04.79) B01j-01/09

Installation for regenerating a mixt. of spent anionic and cationic exchanger resins contains a resin separator, an ultrasonic resin purifier and a resin mixer, arranged vertically to one another. The resin separator is in the highest position, the purifier is directly below the separator and the mixer is directly below the purifier.

A device is provided for conveying the spent resins to the separator; a device for allowing the resins to fall, by gravity, through ultrasonic purifier down to resin mixer; a device for actuating the ultrasonic purifier while the resins fall through it, so as to remove the impurities from resin; a device for charging a liq. carrier, e.g. water, countercurrently to resin, to carry impurities removed from resin to the separator, and also a device for removing the impurities from the resin separator.

Plant serves partic. for purifying and chemically regenerating resins used in a condensate treatment system, esp. for a nuclear energy plant. Waste water quantity is reduced, e.g. from 38000 l. to 3800 l. Space is saved. Resins can be regenerated in which ratio cationic : anionic resin varies greatly. The separator can be used as anionic resin regenerator tank and the mixer as cationic resin regenerator tank. 30.9.78 as 842729 (24pp200)

SABL- ★ D15 28204B/15 ★FR 2396-727
Biological purificn. of waste water, esp. domestic - using oxidn. stage then decantation and nitrification stage
SABLA 05.07.77-FR-021386
(09.03.79) C02c-05/10

The process comprises, opt. after a primary decantation, a first oxidn. phase in an aerated medium of a substantial part of the organic materials followed by an intermediate decantation and then a second nitrification phase of a substantial part of the nitrogeneous materials. The process is characterised by the fact that (i) the nitrification is carried out on at least one bacterial support, (ii) as a function of the max. BOD5 concn. B at the end of nitrification, the max. concn. A at the start of this stage is determined such that B is 0.35A+9 is satisfied, that for a value of A below 100mg/l and a BOD5 charge at the nitrification stage of at most 6g/m^2/day; (iii) the dimension of the bacterial support is determined from the BOD5 charge x and the nitrification charge y to satisfy the approx. relation y_{10}=-0.25+0.5, x being from 1-4g/m^2/day and the ambient temp. 10°C; the correction for a temp. Θ being $y_\Theta=0.212.1.0725^{\Theta-10}.y_{10}$

The process enables a greater efficiency at both stages and lower plant costs. 5.7.77 as 021386 (11pp597)

IKED- D15 40882Y/23 =GB 1543-836
Materials derived from coconuts for absorbing mineral oils - e.g. in oil slicks, are a by-prod. in mfr. of fibres from coconut shells
IKEDA BUSSAN CO 30.10.75-JA-129882 (14.03.75-JA-030832)
*H03 J01 +Q42 (11.04.79) *J52053-788 +B01d-39/04 C02b-09/02 E02b-15/04*

Oil floating on water is collected using coir dust from the husks of coconuts as an absorbent. Dust particle size is pref. 0.5-3.0 mm. and it is impregnated with surface-active hydrophobic and oleophilic petroleum prod. The absorbent is pref. held in an oil-permeable fibrous sheath supported in a container. The coir dust can be obtd. cheaply in large quantities. 11.3.76 as 009731 (+21.6.75; 18.7.75-JA-076379; 088620)(8pp)

CIAC/ D15 85306X/46 =GB 1543-969
Oxygen demand determn. in a biological system - in which micro-organic culture assimilates organic matter of sample being monitored
CIACCIO L L 21.04.75-US-570089
*R16 (11.04.79) *DT2617-174 +C02c-01/02*

Biological oxidn. appts. comprises a passage contg. a biological growth to which is fed a mixt. of an air-satd. aq. liq. and an aq. liq. contg. organic material. A meter measures the dissolved O_2 content of the mixture exiting from the passage.

The meter pref. includes an integrator to determine the total consumption of dissolved O_2 by the organic material. The appts. may be used to determine the potency of an unknown bactericide, antibiotic or bacteriostat cf. results obtd. with known reagents. The appts. allows fast, reliable measurement of consumed O_2. 21.4.76 as 016223 (10pp1379)

DEGM D15 05743Y/04 =GB 1543-970
Appts. for measuring mobility of colloids in electric field - partic. useful for solns. contg. high proportion of soluble salts
DEGREMONT SA 16.09.75-FR-028334
*J04 R16 (11.04.79) *BE-846-163 G01n-21/02*

The mobility of colloidal particles is measured in an electric field by means of a beam of radiation
phoresis cell, divided by a filtering membrane into two compartments.

The beam is directed through one of the compartments on the side of the membrane from which the particles mov away under the influence of the field, and the luminous intensity of the beam emerging from the compartment is measured, the other compartment being hermetically sea ed. The beam is pref. <500 µ, and may be of visible ligh IR or γ radiation.

The process avoids problems caused by the generation of hydroxyl ions by the current used. 7.9.76 as 036951 (5pp1379)

STEM D15 88846X/48 =GB 1543-97
Continuous ion exchange treatment of liqs. - using turbulent bed for transport of the resin particles
STEINMULLER L & C GMBH 24.07.75-DT-533100
*J01 (11.04.79) *BE-844-041 B01j-01/06*

A liq. is treated in an ion-exchanger bed by sending the liq. through one part of the bed in a direction opposite th in which a second liq. flows through the bed. Charged pa ticles are withdrawn from the first part of the bed, and r generated particles enter the other part so that the bed a a whole moves counter to the flow of liq. in the first part

Layers forming turbulent suspensions are generated i the outer end zones of the bed, the transfer of the charge particles being effected through these layers. The proces allows for continuity of operation. 30.4.76 as 017745 (3pp1379)

BABC- ★ D15 28254B/15 ★GB 1544-0
Water purifying appts. - providing gaseous flotation a flocculation pref. with rotating paddles
BABCOCK WATER TREAT 20.02.75-GB-007125
P41 (11.04.79) B03d-01

Water purifying appts. includes a vertically elongate cha ber having a water inlet spaced slightly below the upper end of the chamber and a liquid outlet adjacent the base the chamber. A gaseous flotation medium source is abou one third of the chamber height from the base of the cha ber. Rotatable paddles are mounted on an upright centra shaft for aiding flocculation. The flocculation medium is discharged from conduits communicating with a lowerm set of paddles which have reduced radial dimensions co pared with superjacent sets of paddles.

A primary flocculation process may be effected on ve dirty water prior to entry to the chamber. 20.2.75 as 007125 (3pp1044)

HITA D15 04745A/03 =GB 1544-
Processing waste water contg. sulphur cpds. - by passing o weakly basic anion exchanger, desorption and decomposition sulphur cpds.
HITACHI KK (HIES) 30.06.76-JA-076395
*E36 J01 (11.04.79) *DT2729-625 C02c-05/02 C02c-05/08*

Waste water contg. S cpds. is treated by contacting wit weak basic anion-exchange resin. Resin is regenerated contacting with regenerating soln., whereby the sulphu cpds. are desorbed from the resin into soln., and deco posing the sulphur cpds. by heating under acid conditio

Pref. anionic exchange is at pH ⩽8. Thionic ions ar desorbed using a desorbing soln. at pH ⩾10 to effect re generation of resin-thionic ion decomposition is at pH and ⩾60°C.

Esp. used in the treatment of a blowdown water prod ed by a wet type desulphurisation apparatus for waste f gas. 29.6.77 as 027252 (6pp931)

NAYL/ ★ D15 28265B/15 ★GB 2004
Water distn. appts. - partic. for purificn. of sea water
NAYLOR L B 18.07.78-GB-030187 (18.04.77-GB-015945)
J01 (11.04.79) B01d-03

A distn. appts. has a first feeder vessel, a second clo vessel the top of which is connected to a heat exchanger the feeder vessel by a conduit, and which has a greate height than a barometric column of water. The conduit open to the vessel and has a closable vent to the atmos and a portion of the conduit between the vent and vesse being connected to an inlet.

A low differential pressure pump is connected to the base of the vessel by a conduit with a valve to close off the conduit. A third, closed vessel has its lower region connected to the vessel by a conduit which is closable by a valve and the tops of vessels are interconnected by a conduit. The pump is operable to evacuate vessel and the conduits. A heat exchanger heats the water in the closed vessel.

Used for purification of naturally occurring masses of water, e.g. sea water. 18.7.78 as 030187 (6pp50)

HOUD ★ D15 28277B/15 ★GB 2004-858

Activated sludge appts. - for treating waste in an oxidn. ditch

HOUDAILLE INDS INC 03.10.77-US-839011

(11.04.79) C02c-01/06

Raw waste is aerated and injected into an oxidn. ditch, defining a continuous closed flow path, under pressure so the waste moves round. Treated waste from the oxidn. ditch is passed to a clarifier where it is sepd. into clarified effluent and sludge, the sludge being aerated and reinjected into the ditch.

Used in the treatment of waste water. The system has reduced energy requirement, and can be adapted to efficiently compensate for diurnal or other variations in sewage flow which are common in medium size treatment plants. 28.9.78 as 038544 (16pp50)

STIG/ ★ D15 28278B/15 ★GB 2004-859

Mobile sludge treatment appts. - using chemical treatment and dewatering to separate sludge and water

STIGEBRANDT A 30.09.77-SW-010986

(11.04.79) C02c-01/18

The sludge water content of a waste water well is transferred into a collecting tank in the mobile appts., where it is treated with ≥1 chemicals. The sludge water or sediment therefrom is sepd. and dewatered, the dewatered sludge and purified water are collected respectively in a sludge container and a purified water tank, during transport of the appts. to the next waste water well to be treated.

The sludge water content of the next waste water well is transferred into the collecting tank while adding more chemicals, and the purified water collected during the tran transport and emanating from the previous well is transferred into the next well, while simultaneously subjecting the new sludge in the collecting tank to floccing and, if necessary, sedimentation.

Used for treatment of waste water from ≥1 residual houses. Previously the whole well content was transferred to a central purification plant, requiring long transports and high capacity in the central plant. Using the mobile plant reduces the transport and central plant requirements. 2.10.78 (7pp50)

ERAP ★ D15 28289B/15 ★GB 2004-997

Sludge incineration process - by inejction of pulverised sludge into a combustion zone

ELF AQUITANE 29.09.77-FR-029264

Q73 (11.04.79) F23g-05/12

A combustible gas with a large amt. of excess air, as an extremely homogeneous mixt. is delivered to plural locations over the lower part of a combustion zone, in which the combustible gas is burnt, while injecting a jet of finely pulverised sludge into the zone. The jet of sludge is produced by injecting sludge into a limited space, while imparting a rotational motion about an axis, and causing the sludge to leave the space as an outlet jet, into which a number of air jets are directed in a tangential direction to finely pulverise the sludge outlet jet.

Used for incineration of industrial or city waste material in the form of partially combustible sludge. The appts. produces a finely distributed dispersion of the sludge in a limited combustion space. The method of pulverisation reduces risk of clogging which occurred in prior appts. 28.9.78 (12pp50)

LAVA- ★ D15 B/15 ★HU T016-217

Appts. for the thermal degassing of boiler feed water

LAVATHERM MOSODAI G 27.08.76-HU-LA0891

J01 (28.03.79) C02b-01

RICT ★ D15 B/15 ★HU T016-284

Appts. for the thermal degassing of boiler feed water

RICHTER GEDEON VEGY 12.08.76-HU-R10594

J01 Q72 (28.03.79) F22d-01

KINO/ ★ D15 28391B/15 ★J5 4028-266

Device for conveying sludge with hardening cement and adhesives - has pump for conveying granular solid slurry and pipes for conveying adhesive

KINOSHITA S 04.08.77-JA-093028

E33 L02 M25 (02.03.79) B01f-07 B01j-01

A pump for pressure conveying a slurry of the granular solid such as red mud consisting of sludge after collecting alumina from bauxite in the alumina prodn. process is followed by conveying pipes connected in series, forming a line. Two-passage pipes, each provided with a pipe for pouring an adhesive agent and pump for forcibly pouring an adhesive solvent, are inserted into several sections of the line. Othertwo-passage pipes having conveyors for mixing a cement, and pipes having blades are inserted into the line.

Device forms a solidified cover layer made of a granular solid, for covering over a deposit layer of sludge on the bottom of a water pool, etc. to efficiently treat the sludge without causing pollution. 4.8.77 as 093028 (3pp)

KURK ★ D15 28392B/15 ★J5 4028-267

Sludge-treating device - giving equal sludge water content at the surface layer and inner layers after dewatering

KURITA WATER IND KK 05.08.77-JA-093333

(02.03.79) B01j-01 C02c-03

The device comprises rotary filter elements in a treating chamber having a water feed port and opposite dewatered sludge drain port. Each filter element has small grooves for introducing water and passages for axially draining the water. The elements are rotated to carry the sludge toward the drain port, while water is drained through the grooves of the elements.

In the improvement, a means is disposed at the drain port to adjust the sludge drain rate in the inner layers relative to the surface layer. 5.8.77 as 093333 (6pp26)

MITQ ★ D15 28393B/15 ★J5 4028-268

Appts. for treating sludge which is difficult to filter - freezes sludge and re-melts to reform into sludge having good dewatering and filtering properties

MITSUBISHI ELECTRIC CORP 04.08.77-JA-093854

(02.03.79) B01d-43 B01j-01 C02c-03

A column contains pipes for contg. the sludge, each having a uniform cross section along the length of the pipe and opening communicating a space at the lower end. Means is connected to the space to pressure feed the sludge into it, and connected to a sludge tank provided with a detector for detecting the weight change of the sludge in the tank.

The sludge can be smoothly fed and drained without detecting the position of the sludges in the columnnor pipe. 4.8.77 as 093854 (4pp26)

MITQ ★ D15 28394B/15 ★J5 4028-269

Sludge treatment appts. - comprising rotating drum semi-immersed in sludge contained in tank, provided with spray nozzles for coolant and heater

MITSUBISHI ELECTRIC CORP 05.08.77-JA-094364

(02.03.79) B01d-43 B01j-01 C02c-03

Appts. for (a) freezing sludge; (b) melting; and (c) sepg. into water and solid components is claimed.

A rotary drum is semi-immersed in the sludge contained in a tank and provided with spray nozzles for spraying a coolant over a specified area of the inner surface of the drum to form a frozen sludge layer over the outer surface of the drum. A heater is disposed in the drum to melt only the frozen sludge layer over the surface of the drum and may be an induction heater utilising the electromagnetic induction or comprises a resistance heater element. 5.8.77 as 094364 (3pp26)

MITQ ★ D15 28395B/15 ★J5 4028-270

Device for treating sludge contg. dirty mud - having an elastic sludge blocking element disposed at the outlet side of inner pipe

MITSUBISHI ELECTRIC CORP 05.08.77-JA-094366

(02.03.79) B01d-43 B01j-01 C02c-03

The sludge flows into inner pipes through one end of each pipe and drains out through the other end, while cooled first by a coolant flowing in a freezing chamber disposed around the pipe and then molten by a heating medium flowing in a heating chamber adjoining to the cooling chamber, thus sepg. into a solid and water components. The object is to prevent the not frozen sludge from leaking through a stopper fitted into the outlet of each pipe.

A sludge blocking element made of an elastic material is disposed in the inner pipe at its outlet side and can radially be expanded by the pressure of the sludge until closely contacting with the inner surface of the pipe to block the sludge. 5.8.77 as 094366 (4pp26)

SUMH ★ D15 28399B/15 ★J5 4028-278

Regenerating organic membrane support - by burning off the membrane support melting temp.

SUMITOMO SHIPBUILD KK 05.08.77-JA-093974

A88 J01 (A11) (02.03.79) B01d-13 B01d-31

The process comprises sepg. the deteriorated organic membrane from the support by burning the organic mem- als having a valency of $\geqslant$ 2. The hydroxides of the at least divalent metals are $Cd(OH)_2$, $Ca(OH)_2$, $Mg(OH)_2$ and $Al(OH)_3$, are present in an amt. of 10-50% (equiv. ratio) of fatty acid resulting. Lipase is added in an amt. of 5-1000 unit per 1g of, and the water in an amt. of 5-20% of fats and oils.

The process decomposes fats and oils with increased rate to produce fatty acids and glycerine. 5.8.77 as 093387 (3pp43)

TERU/ ★ D15 28488B/15 ★J5 4028-443

Activated drinking water prodn. - by adding e.g. granite to a synthetic resin paint, applying paint to vessel, adding water and blowing in air

TERUNUMA Y 04.08.77-JA-092991

A82 (03.03.79) C02b-07

An activated drinking water dissolving a large amt. of bascent oxygen is produced by adding finely powdered natural stone generating a very small amt. of ionising radiant rays, e.g. granite etc. to a synthetic resin paint, coating the paint mixt. on the inner surfaces of a vessel, charging drinking water into the vessel, and subsequently blowing in air e.g. by means of a compressor.

In an example, drinking water is charged into a 100 l vessel, on the inner surface of which is coated an epoxy resin paint mixed with finely powdered ionised radiant rays-generating stone (produced in Niiigata pref.), after which air is admitted at a rate of 20 l/min. from a diffuser by means of a compressor. After 30 mins., the dissolved oxygen content becomes 17.0 ppm, and a drinking water having high activity and very soft touch is obtd. 4.8.77 as 092991 (2pp34)

NIJU- ★ D15 28489B/15 ★J5 4028-446

Treating ammonium ion-contg. sewage - by adding coagulant, treating with chlorine and then passing through activated charcoal

NIPPON JUTAKU KODAN (JAOR) 04.08.77-JA-092998

(03.03.79) C02c-01/40

An ammonium ion-contg. sewage is purified with reduced amt. of chlorine and without formation of H_2S by (1) adding a coagulant, e.g. a combination of polymer coagulant and inorganic coagulant e.g. $AlCl_3$ and alum etc. to remove by flocculation precipitation a portion of organic matters and suspended solids; (2) adding Cl_2 in an amt. of 6-7 ppm per ppm of ammonium ion to convert the greater portion of ammonium ion into a chlorine-binding cpd., e.g. monochloramine and dichloramine etc. also to convert by oxidn. a portion of the ammonium ion into NO_3^- (about 10 ppm); and (3) subsequently passingit through activated charcoal layer(s) to remove organic matters by adsorption and simultaneously to decompose the chlorine-binding cpd. into N_2. The NO_3^- further serves to suppress the generation of H_2SO_4-reducing bacteria in the activated charcoal layers, so that generation of H_2S is prevented. 4.8.77 as 092998 (6pp34)

IHAR ★ D15 28490B/15 ★J5 4028-447

Deodorising phosphine-contg. effluent - by treating with oxidising agent

IHARA CHEM KK 04.08.77-JA-093565

E11 (D22) (03.03.79) C02c-05/04

Treatment of phosphine-evolving effluent, resulting from prodn. of phosphines, e.g. trialkyl phosphine and triarylphosphine, etc. suitable for use as catalyst or reducing agent in organic synthesis is described. Effluent is completely deodorised by treating it with an oxidising agent, e.g. H_2O_2, NaClO, Cl_2, O_3 $KMnO_4$, peracetic acid, perbenzoic acid etc. in a closed vessel at pH $>$ 4, pref. $>$ 9 and 10-30°C under agitation.

In an example, 100 ml of phosphine-smelling effluent (pH = 11.7; phosphine concn. 10 ppm) was charged into a 200 ml conical flask and adjusted to pH of 11.7, after which 0.15% H_2O_2 soln. was added so as to give 30 ppm concn. followed by allowing to stand. After 4 hrs., phosphine-smell is completely removed. 4.8.77 as 093565 (3pp34)

EBAI ★ D15 28491B/15 ★J5 4028-448

Denitrifying biologically polluted water - using a nitrification vessel settling pond and denitrification vessel

EBARA INFILCO KK 04.08.77-JA-093576

(03.03.79) C02c-01/02

Polluted water oozed-out from waste landfill sites contg. a large amt.of BOD components and nitrogen cpds. is subjected to a biological denitrification treatment by introducing it into a nitrification vessel together with a sludge recycled from a settling pond to decompose by oxidation the BOD components and to nitrify NH_3 by nitrifying bacteria; introducing the nitrified mixed liquor into the settling pond to carry-out solid-liq. sepn.; recycling the greater portion of the supernatant liquor to the wastes landfill sites where NOx is decomposed by reduction into N_2 by the action of bacteria and the BOD components.

Further organic matters existing in the landfill sites are decomposed into CO_2 and H_2O by the action of NOx-Ox contained in the circulating liquor, thereby methane generation is decreased, the recycling liquor re-dissolving the BOD components and ammonia on passing through the landfill sites and flowing into the nitrifying vessel together with the sludge.

A remaining portion of thesupernatant liquor is flowed-out into rivers or introduced into the denitrification vessel where NOx is reduced to N_2 and flowed-out into rivers. 4.8.77 as 093576 (4pp34)

KUBI ★ D15 28492B/15 ★J5 4028-44

BOD and ammoniacal nitrogen removal from night soil digeste liquor - by coagulant, flocculating settling and nitrifyin supernatant liquor

KUBOTA KK 03.08.77-JA-094011

(03.03.79) C02c-01/02

Method comprises aerating liquor with an activated sludge without any dilution with H_2O for 2 to 3 days; sending the aerated liquor to a coagulation vessel where it is mixed under agitation with a coagulant, e.g., alum and $Ca(OH)_2$ etc. and flocculated; sending the flocculated liquor to a settling pond where it is sepd. into a sludge and a supernatant liquor which is if necessary adjusted at the pH of about 8 with an alkali.

The BOD components-contg. sepd. liquor is introduce into an aerophilic nitrification vessel equipped with aerating means, where the BOD components are decompose and simultaneously ammoniacal nitrogen is oxidised to NO_3-N and NO_2-N by the action of nitrifying bacteria, followed by solid-liq. sepn. in a final settling pond. 3.8.77 as 094011 (3pp34)

KUBI ★ D15 28493B/15 ★J5 4028-45

Waste water purificn. by denitrification - by heating in a solar wat heating appts. and biological treatment

KUBOTA KK 04.08.77-JA-094331

(03.03.79) C02c-01/02

In biological nitrification and denitrification of a waste water, e.g. sewage, industrial waste water and night so etc. the improvement comprises heating a portion or all of the sec. treated water waste water, e.g. treated with activated sludge up to $\geqslant$ 130°C in heat exchange with the rn. treated water heated to 35-40°C (in winter) or 50-60° (in summer) by solar heat.

The water is subsequently subjected to ternary treatment, i.e., biological nitrification and denitrification, under that temp., so that the nitrificationis carried-out in gh efficiency without any use of heat-generating installations, e.g. a boiler etc. and any consumption of fuel, e.g. etroleum, fuel gas, coal, etc. 4.8.77 as 094331 (3pp34)

OYM ★ D15 28494B/15 ★J5 4028-452

ecolourising waste water contg. e.g. cationic dyestuff - by adding ater-soluble sulphite and/or hydrogen sulphite

TOYOBO KK 08.08.77-JA-095273

(03.03.79) C02c-05/02

oloured waste water, esp. dyeing waste water etc. is decolourised by adding under agitation a water-soluble sulphite and/or hydrogen sulphite, and a water-soluble sulphite or deriv. thereof, e.g. formaldehyde adduct etc. under a slightly elevated temp. The amt. of the water-soluble (hydrogen)sulphite added is 100-10,000 ppm., and the mt. of the water-soluble hydrosulphite is 10-1,000 ppm.

In an example, a dyeing waste water contg. about 20 pm of cationic dyestuff, also contg. surfactant, seizing gent and salt etc. is blended with a boiler waste gas-treated waste water contg. 1,200 ppm of Na_2SO_3 and $NaHSO_3$ and 100 ppm of alum (as Al_2O_3) in vol. ration of bout 2:1, after which 20 ppm of sodium hydrosulphite is dded and treated at 40°C for 10 mins., so that it is decolourised and the dyestuff easily removed by coagulation. .8.77 as 095273 (2pp34)

URK ★ D15 28552B/15 ★J5 4028-775

ppts. for treating liq. waste - in which water content is controlled o prevent dust generation and soot scattering in the furnace

KURITA WATER IND KK 08.08.77-JA-094812

J09 Q73 (03.03.79) C02c-05/04 F23g-07/04

ppts. comprises a liq. waste reservoir; an evaporator or vaporising water from the waste to produce a thickened iq.; a dewatering machine for removing water from the hickened liq.; a mixer for mixing the dewatered waste with metered amt. of water from the evaporator to adjust the ater content to < 80% in the waste; a burning furnace for urning the water-controlled waste; and a waste heat boiler or producing steam to be used as a heating medium in the vaporator. 8.8.77 as 094812 (4pp47)

URB ★ D15 28653B/15 ★J5 4029-337

ndigo dye recovery from waste washing liq. - using activated ludge, reducing adsorbed dye to leuco form and eluting

KURABO IND KK 08.08.77-JA-095319

E24 (05.03.79) C09b-07

ndigo dye is recovered by treating the waste liq. formed y washing indigo-dyed prods. with activated sludge, collecting the deposited sludge, reducing the indigo dye absorbed by the slude to the leuco-form, and eluting the leuco-form, and sepg. the sludge from the eluate.

If desired, the indigo dye-contg. eluate may be purified nd concentrate by exposing the eluate to air and thereby making the indigo dye insoluble, and subjecting the dispersion to microfiltration or ultrafiltration. The low molecular organic and inorganic material dissolved in the eluate are discharged together with the filtrate and the purity of the insoluble indigo dye improved. 8.8.77 as 095319 (3pp136)

IDA/ ★ D15 28768B/15 ★J5 4029-879

Solar energy evaporator for pure water prodn. from sea water - in which heat exchanger has nozzles for introducing air into sea water being heated by hot oil

IIDA T 10.08.77-JA-095797

(06.03.79) B01d-03 C02b-01/06

Multi-stage appts. for producing pure water from sea water, comprises (a) a number of evaporation stages each including a solar energy collecting device where liq. oil is heated by the collected solar energy, (b) a heat exchanger for heating sea water by heat exchange with the heated oil, (c) an evaporator including an ejector for evacuating the evaporation chamber to cause vaporisation of the heated sea water from the heat exchanger and (d) a second heat exchanger for cooling and condensing the vapour while heating the newly supplied sea water.

The heat exchanger includes air nozzles for introducing air bubbles into the sea water being heated by oil tubes to assure more efficient heat transfer to the water. 10.8.77 as 095797 (6pp47)

HIRA/ ★ D15 28771B/15 ★J5 4029-883

Desalination and purificn. of sea water - by drawing into semipermeable fibrous tubes

HIRANO T 09.08.77-JA-095780

(06.03.79) B01d-13

A purified water is produced by dipping a number of cylinders made of fibrous material including pores smaller in opening size than the impurities contained in the sea water, but larger than the size of the water molecule, and conveying the water passing into the cylinders, to a tank on the boat or seashore.

The fibre tubes are connected at their top to a reservoir which incorporates a first switch adapted to operate when the water collected reaches a predetermined level in the reservoir, to actuate the screw feeder for discharging the water from the reservoir through the hose and into the tank described. A second switch is provided near the bottom of thereservoir and is operable to stop the screw feeder when the liq. level is reduced to a predetermined lower limit. 9.8.77 as 095780 (2pp47)

TOYM ★ D15 28784B/15 ★J5 4029-897

Stabilising hydrosulphite reducing agent - by adding ferrous salt

TOYOBO KK 09.08.77-JA-095865

E37 (06.03.79) C01b-17/66 C09k-15/02

Na or K hydrosulphite is stabilised by the addn. of sulphate or ferrous chloride. When the hydrosulphite is used as a reducing agent in the treatment of waste dyeing soln., the extent of decolorisation and coagulation is greatly increased. 9.8.77 as 095865 (2pp51)

TOYO/ ★ D15 28894B/15 ★J5 4030-251

Recovering protein from waste water used in leather treatment - by treating the water simultaneously with ozone contg. air and acid

TOYODA O 10.08.77-JA-096796

(D13 D18) (06.03.79) C08l-89/04

The waste water is treated with ozone by adding ozone-contg. air and oxidising the waste water by adding acid. The ozone-treating and oxidising being performed simultaneously.

Protein is recovered without emitting a bad smell due to H_2S gas, as well as the waste water being changed into purified non-pollution water.

In theprocess waste water is treated with ozone-contg. air and acid wherein emitted H_2S gas is changed into solid sulphur or SO_4^{-2} ions in the presence of ozone. The resulting coagulated protein is removed from the treating vessel into a settling tank while waste gas is further washed in a scrubber. 10.8.77 as 096796 (2pp46)

SAKB ★ D15 28949B/15 ★J7 9005-225

Hydrazine-type deoxygenating agent contg. hydroquinone - is storage stable and used in low pressure boilers

OTSUKA KAGAKU YAKUHIN 13.02.71-JA-006276

(14.03.79) C02b-01/23

A hydrazine-type deoxygenating agent contg. exhibit hydro-quinone larger oxygen (dissolved in water) removability than that of Co chloride or quinone etc. and exhibits no decomposition of hydrazines even in storage in admixt. with hydrazines. The compsn. is suitable for use in low pressure boiler. 13.2.71 as 006276 C02b-1/23 (14.3.79) OTSUKA KAGAKU YAKUHIN (2pp34) (J4 7019204)

ISHI/ ★ D15 28950B/15 ★J7 9005-226

Cleaning water polluted with organic materials - by aerating using rotating blades

ISHIGURO M 30.11.72-JA-120059

(14.03.79) C02c-01/04

The polluted water is subjected to a sec. or tert. treatment by immersing a windmill-type rotating body on the central axis of which are arranged windmill-type blades, in the polluted water almost in horizontal direction in such a manner that the surfaces of the blades oppose almost rectangular against the stream of the polluted water, and supplying oxygen in the air to the stream of the polluted water by the rotation of the windmill-type rotating body, at least a part of which is exposed to the air, by the passing pressure of the stream of the water, so as to stick by growth bacteria, microorganisms and algae etc. to the surfaces of the rotating blades. 30.11.72 as 120059 C02c-1/04 (14.3.79) ISHIGURO, M. (3pp34)

INOZ ★ D15 28964B/15 ★J7 9005-386

Waste fluid treatment appts. - has fluidised bed of electroconductive particles and catalyst particles

INOUE 17.01.73-JA-008068

J03 (16.03.79) B01d-53/34 B01k-01 C02c-05/12

Appts. comprises a powder bed contg. electroconductive particles and catalyst particles and having such packing density that the particles are fluidised by the waste fluid stream introduced into the bed, and a pair of electrodes for conducting an electric current to the electro-conductive particles. 17.1.73 as 008068 B01k-1/00; B01d-53/34; C02c-5/12 (16.3.79) INOUE JAPAX RES. INST. (3pp47) (J4 9095870)

JAOR D15 04303X/03 =J7 9005-389

Desalination of water - contg soluble inorganic salts with ion-exchange resin

JAPAN ORGANO KK 07.02.73-JA-015313

*(16.03.79) *J49103-886 +B01j-01/04 C02b-01/68*

Waters contg. inorg.-acid salts, hydrogen carbonates, and carbonates are desalted with weak-electrolyte ion-exchange resin. In an example, 1,000 ml. each Amberlites IRC-84, IRA-68, and IRC-84 were packed separately as 1,000 mm. high beds in 3 columns. The columns were arranged in series and the last Amberlite IRC-84 column was connected to a decarbonation column. Synthetic water contg. Ca^{2+} 500, Na^+ 1700, total cations 2200, HCO_3^- 1200 Cl^- 1000, and total anions 2200 p.p.m. was passed through the series of columns at 10m/hr. The water yield after running 3 cycles was 30-5 l., whereas that obtd. by a conventional system utilising the same amt. of the same ion-exchange resins was 18.4 l. 7.2.73 as 015313 C02b-1/68; B01j-1/04 (16.3.79) JAPAN ORGANO KK (6pp) (J4 9103886)

MITQ ★ D15 28966B/15 ★J7 9005-391

Appts. for producing plain water from sea water - comprises a condenser contg. a cooling coil, and an evaporator contg. a membrane tube coil

MITSUBISHI ELECTRIC CORP 21.09.72-JA-094987

J01 (16.03.79) B01d-03 B01d-13

Appts. comprises a condenser unit contg. a cooling coil and an evapn. unit contg. a membrane tube coil. Sea water is preheated as it passes through the condenser unit and then introduced to the evapn. unit where pure water penetrating into the membrane tube is vaporised by a hot air passing through the tube, and is then condensed as the vapour carrying air passes through the cooling coil. 21.9.72 as 094987 B01d-13/00; B01d-13/00 (16.3.79) MITSUBISHI ELECTRIC CORP. (3pp47) (J4 9107981)

EBAI ★ D15 28967B/15 ★J7 9005-395

Colloidal impurities sepn. from liq. - by passing a gas through it to float the impurities on the surface

EBARA INFILCO KK 31.01.73-JA-012562

J01 (16.03.79) B01d-13 C02b-01/82 C02c-05

Colloidal impurities are removed from a pressurised liq. which is to be treated by reverse osmosis, by introducing a gas into (part of) the liquid to float the impurities in the liq. 31.3.73 as 012562 B01d-13/00; C02b-1/82; C02c-5/00 (16.3.79) EBARA INFILCO KK (4pp47) (J4 9099970)

INOZ ★ D15 28968B/15 ★J7 9005-396

Appts. for dewatering sludge - includes pressure vessel which receives fabric bag contg. sludge

INOUE 28.06.73-JA-072280

J01 (16.03.79) B01d-13/02

Appts. comprises a pressure vessel including a number of openings in the vessel walls and adapted to receive a fabric bag contg. sludge, a diaphragm adapted to cover the top of the bag, means for applying hydraulic pressure on the diaphragm, and electrodes connected to the vessel wall. 28.6.73 as 072280 B01d-13/02 (16.3.79) INOUJAPAX RES. INST. (4pp47) (J5 0021373)

EBAI D15 06547Y/04 =J7 9005-62

**Diaphragm process for organic waste water treatment - comprise
adding enzyme agent e.g. protease then passing by compressio
through a permeable membrane**

EBARA INFILCO KK (EBAR) 07.01.75-JA-004582

*J01 (19.03.79) *J51142-859 B01d-13 C02c-05/02 +B01d-31*

Enzyme agent is added such as protein-decomposing enz
me, e.g. protease, pepcine etc. a sugar-decomposing
enzyme, e.g. amylase, cellulase, etc. a lipid-decompos
ing enzyme, e.g. lipase etc., thereafter the waste water
is passed by compression through a permeable membran
to separate it into a remaining liquor and a permeated li
uor; if necessary the remaining liquor is passed by com-
pressibly through a reverse-osmotic membrane having
lower desalting ability, a micro-porous membrane or an
ultra-filtration membrane to separate it into a concentra
ed portion and a permeated portion.

It becomes possible to treat effectively for a long per
iod the org. waste water whilse suppressing contaminati
of the surface of the membrane. It becomes also possibl
to resue the recovered additives, and this process is ap
licable for treating a wide variety of biologically treated
org. waster waters and a (secondary treated) sewerage
7.1.75 as 004582 B01d-13/00, 31/00 (19.3.79) EBARA
INFILCO KK (3pp) (J5 1142859)

MITP ★ D15 28972B/15 ★J7 9005-6

**Treating calcium hydroxide-contg. waste water from concrete -
neutralising with phosphoric acid and carbon di:oxide**

MITSUBISHI PETROCH KK (NIEI-) 17.01.75-JA-007523

L02 (19.03.79) C02c-05/02

A $Ca(OH)_2$-contg. alkali concrete waste water is subject
to a neutralising treatment without any use of special pH
controlling apparatus and with a saved amt. of CO_2 by
adding H_3PO_4 and CO_2. 17.1.75 as 007523 C02c-5/02
(19.3.79) NIPPON EIKAN SHIDO CENTER; MITSUBISH
PETROCH KK (5pp34) (J5 1082957)

MORI- D15 89492X/48 =J7 9005-

**Fixing fluorine component in waste liquor contg. borofluoride -
adding aluminium (hydr)oxide, decomposing borofluoride,
adding calcium cpd.**

MORITA KAGAKU KOGYO 03.04.75-JA-041485

*E37 M11 (M23) (19.03.79) *J51116-060 C02c-05/02*

To the borofluoride-contg. waste liquor, adjusted to pH
<7, is added aluminium hydroxide, aluminium oxide,
material which contains it or produces it during the tr
ment; the waste is reacted at 20-100°C to decompose th
borofluoride into boric acid and aluminium fluoride; an
a Ca cpd. is added to the liquor to fix the aluminium fl
ride as CaF_2.

The process allows a borofluoride such as $NaBF_4$,
NH_4BF_4, HBF_4, $Sn(BF_4)_2$ and $Pb(BF_4)_2$, etc., contained
a plating bath or in a flux, to be fixed. 3.4.75 as 04148
C02c-5/02 (19.3.79) MORITA KAGAKU KOGYO (2pp)
(J5 1116060)

OKAZ/ ★ D15 28985B/15 ★J7 9005

**Water-treatment appts. - includes electrolytic bath divided
three compartments by perforated walls, the outer compartm
contg. electrodes**

OKAZAKI T 20.06.74-JA-070407

J03 (20.03.79) A23l-01 B01k-01 C03b-01/82

The appts. comprises an electrolytic bath, a pair of s
ed, perforated partition walls dividing the bath into th
compartments, one of the outer compartments contg.
a cathode the other outer compartment contg. an anode
and an intermediate compartment incorporating a wate
supply tube. 20.6.74 as 070407 B01k-1/00; A23l-1/00
C03b-1/82 (20.3.79) OKAZAKI, T., KARASAWA, N.,
ARAI, M. et al. (2pp47) (J5 0161470)

TEIJ ★ D15 28986B/15 ★J7 900

**Osmosis using hollow membrane filaments in casing - by pa
one fluid through filaments and another through hollow
around filaments in casing**

TEIJIN KK 14.08.73-JA-091098

J01 (20.03.79) B01d-13 B01d-53/22

An osmosis device comprises a twisted or braided bu
of individual hollow membrane filaments disposed wit

a casing. One fluid is passed through the membrane filaments for mass transfer to or from another fluid passing through the hollow space surrounding the filaments within the casing. 14.8.73 as 091098 B01d-13/00; 53/22 (20.3.79)
TEIJIN KK (4pp47) (J5 0039682)

EBAI ★ D15 28987B/15 ★J7 9005-797

Waste water treatment by reverse osmosis - the water in the concn. chamber being externally circulated through a sodium ion-type cation exchanger

EBARA INFILCO KK 03.06.74-JA-062643

A91 J01 (A11) (20.03.79) B01d-13 B01j C02b-01/82 C02c

In waste water treatment by reverse osmosis, the water in the concn. compartment is externally circulated through a Na^+-type cation exchanger to remove the contaminating ions and prevent scale deposition on the reverse osmosis membrane.

In an example, industrial waste water (total hardness 25-35, Fe 0.1, SiO_2 50-60 ppm) was recycled after reverse osmosis using 0.86m^2 cellulose acetate tubular membrane under 21.1kg/cm^2 pressure in 80% yield. The initial flux rate 470 ml/min dropped to 282 ml/min. after deposition of scale contg. Fe 20.7, Al 25.2, SiO_2 14.5, Ca 9.8, and Mg 1.8%. When the water in the concn. compartment was circulated through a 120 l. "Diaion SKIB" (RTM) tower, the flux rate drop was from 430-425 ml/min. in 700 hr. and no scale deposit was observed. 3.6.74 as 062643 B01d-13/00; C02b-1/82 (20.3 79)
EBARA-INFILCO CO. LTD. (3pp) (J5 0153777)

LEEN= ★ D15 29042B/15 ★SU -608-538

Filter for removal of impurities from water and oils - has flexible filter material inside a chamber with flexible rubber walls plus electromagnet

LEGD ENG-COWS INST 03.10.75-SU-177668

A88 J01 (18.05.78) B01b-25/26

Device is used for purifying liquids, e.g. as a filter for removal of finely-dispersed organic and mineral impurities from water, and for cleaning liquid fuels and industrial and edible oils. Using additives capable of destroying urea and other similar impurities, the filter can be used in treatment of recycle water in self-contained life-support systems in submarines and space stations. It consists of a body with built-in chamber, flexible filter material, pref. 'Porolon', disposed in the chamber, with reception and clean-liquid chambers placed at opposite ends of the body, plus pipelines.

Filtration quality is increased and filter material regeneration is improved by making the chamber walls of an elastic material, e.g. a fluoroplast rubber, installed so that it can move backwards and forwards. Iron is removed and the water is disinfected by installing an electromagnet with electrodes in the receiving chamber.
Adoneva, V.A., Adamenko, P.G., Lavrov, I.S. et al.
Bul. 20/30.5.78. 3.10.75 as 177668 (3pp29)

USOL= ★ D15 29119B/15 ★SU -608-765

Mercuric sulphide obtd. from mercury-contg. aq. waste - by acidification and alkalisation of soln. in presence of barium sulphate

USOLE CHEM COMPLEX 28.07.75-SU-164436

E32 J03 (E36) (05.06.78) C01g-13 C02c-05/02

HgS is pptd. from Hg-contg. aq. waste, e.g. brine used in prodn. of caustic using Hg electrode, in the presence of $BaSO_4$ ($BaSO_4$:HgS = 3-100 mole/mole) with acidification of soln. to pH 1-6 and alkalisation to pH 8-10. Increased coagulation of colloidal HgS particles with highly dispersed $BaSO_4$ is obtd.
Sharnin, V.P., Uvarov, A.I., Abramov, I.E. Bul. 20/30.5.78. 28.7.75 as 164436 (2pp1347)

AUHE= ★ D15 29121B/15 ★SU -608-767

Sea-water desalinator - has settling chamber with discharge opening to which heat pipe heat exchanger is connected

AS UKR HEAT PHYS 29.11.76-SU-425748

Q24 (10.05.78) B63j-01 C02b-01/12

Sea water desalinator claimed in Parent Certificate No. 355068, consisted of a submerged heat-transmitting pipeline crystalliser, in which a crystal-hydrate suspension is formed, a separator to divide the crystal-hydrates and wash them free from brine, a crystal-melter, fresh-water heating exchanger, heat-exchanger to cool the hydrate-forming agent prior to feeding it to the crystalliser, compressor and degasifier to extract the agent from the fresh water, etc. Now power consumption is reduced by providing the melter in the crystal-hydrate device with a settling chamber, in the bottom of which is a discharge opening. The heat-exchanger is made as a heat-pipe connected at the bottom end to the discharge opening.
Smirnov, L.F., Klimenko, V.V. Bul. 20/30.5.78.
29.11.76 as 425748 Add. to 355068 (3pp29)

ENER= ★ D15 29122B/15 ★SU -608-768

Hydroxide residues from neutralising heavy metal contg. effluent - treated with acidic sulphate copper alloy pickling soln. prior to dewatering to improve metal recovery and filtration rate

ENERGOTSVETMET IND 04.01.74-SU-982980

M12 (M25) (12.05.78) C02c-03

The treatment is carried out to pH 8-8.5. The residues are then mechanically dehydrated e.g. by vacuum filtering.

The method reduces the filtration resistance of Cu-contg. residues and improves the metal, e.g. Cu recovery rate.
Selitskii, G.A., Pozdin, A.P., Gromov, A.V. et al.
Bul. 20/30.5.78. 4.1.74 as 982980 (2pp314)

NAUM/ ★ D15 29181B/15 ★SU -608-832

Microorganisms culture foam breaker - has comb-type insert rings forming a central channel connected to foam feeding tube

NAUMOV L F 09.11.76-SU-418577

(07.06.78) B01d-19/02 C12b-01/18

High sterility and simplification of foam breaker in microorganisms culture units are due to comb-type ring inserts with guides along the inner perimeter. The inserts form a central channel for foam flow distribution. The foam inlet tube is directly connected to the channel. The tube features a hollow cone with auger flights for swirling the foam.
Naumov, L.F., Yakimov, P.T., Chegodaev, F.N.
Bul. 20/30.5.78. 9.11.76 as 418577 (2pp89)

MITT- D15 74340Y/42 =US 4146-372

Water recovery from the atmosphere - esp. in tropical climates, by adsorption during the night and desorption during the day using silica gel as adsorbent

MITTEX AG 29.03.76-CH-003769

*A97 J01 Q42 (27.03.79) *DT2624-392 +B01d-53/04*

Recovery of water from air comprises (a) pressing night air at ≤20°C through a layer of non-absorbing heat sink material of high heat capacity to cool the material to <20°C; (b) passing the air through a layer of coarsely granulated, shaped, moisture adsorbent material to adsorb the moisture; (c) passing ambient day air at 25-70°C in reverse direction through the layer of adsorbing material to remove the moisture; (d) passing the moisture-contg. day air through the layer of cooled non-adsorbing material and condensing the water removed from adsorbing material on it and (e) recovering the condensed water.

The process is simple, efficient and economical, and the required energy is produced by the recovered water, which is also used for drinking and irrigation. 28.3.77 as 781890 (+2.12.76 - US - 746951) (16pp918).

SIEI D15 51691A/29 =US 4146-436

Electrochemical determination of heavy metals in flowing water - by depositing the metals on electrode, dissolving in an electrolyte and measuring charge used

SIEMENS AG 18.03.77-DT-711989

*J03 R16 (27.03.79) *BE-864-913 G01n-27/42*

In the electrochemical determn. of the concn. of heavy metals in water by pptn. of the metals at a solid electrode (I) under the influence of a constant negative D.C. voltage between (I) and a counter-electrode, the metals contg. water is contacted with (I) under constant flow conditions and the metals are subsequently dissolved by anodic oxidn. the pptn. and dissolution steps being repeated continuously.

Specifically, (1) the metals are pptd. at a Pt family electrode; (2) a Pt family electrode is used as the counter electrode; (3) the water is replaced with an electrolyte soln. after the metals are pptd.; (4) the pptd. metals are dissolved again by suddenly changing the negative D.C. voltage into a constant positive D.C. voltage; (5) the electric charge supplied for the dissolution is determined and from this charge the concn. is determined; (6) the functions of the working electrode and the counter-electrode are changed each time the charge is determined; and (7) the application time and the magnitude of the D.C. voltage are always maintained constant during the pptn. as well as during the dissolution of the metals.

Difficulties resulting from the use of Hg electrodes are avoided. 7.3.78 as 884111 (9pp990).

WYNE/ ★ D15 29397B/15 ★US 4146-471
Liq. clarification appts. with conical vessel - in which liq. flows helically to deposit solids as sludge blanket
WYNESS D K 10.12.76-US-749474 (29.11.73-US-420272)
(27.03.79) B01d-21/08

Water is purified in an appts. which comprises a conical shaped vessel with its upper end of max. dia. and a cylindrical chamber attached to its lower end. A conduit feeds a liq. contg. solids tangentially into the cylindrical chamber so that the liq. flows helically upwards into the conical portion where the solids separate out to form a revolving sludge blanket with the clarified liq. above the blanket. The clarified liq. is removed through a conduit while the sludge passes through a downcomer extending outside of the vessel.

The appts. is used to clarify water for potable or industrial use. 10.12.76 as 749474 (+ 21.7.75 - US - 597683) (10pp295).

ERPA- D15 60481A/34 =US 4146-472
Flotation sepn. of suspended impurities from waste water - using gas bubbles from co-current recycling of treatment liq.
ERPAC 08.03.77-FR-006748
*J01 +P41 (27.03.79) *BE-863-684 B03d-01*

Matter is sepd. by flotation by circulating the liquid without turbulence, introducing high pressure treatment water charged with a gas through a pipe below the inlet for the liquid, providing an outlet for the treatment water below the outlet for treated water such that the two fluid flows are superimposed, distinct and parallel flows to allow the bubbles to pass into the liquid to entrain and float particles. Pref. the liquid to be treated forms an upper flow and the water a lower flow.

Treated liquid remains undiluted. 27.1.78 as 872874 (5pp1376).

ACTI- ★ D15 29399B/15 ★US 4146-478
Closed spiral path waste water treatment apparatus - with aeration device and sludge return channel
ACTIVOX INC 20.10.76-US-734315
(27.03.79) C02c-01/10

A continuous waste water treatment system comprises a reservoir which provides a single, closed, continuous, horizontal spiral path. This has at least three concentric loops. The appts. also includes an aerator and circulator. Treated liquid is removed from an outlet which is connected to a clarifier. This removes some of the sludge which is returned to the reservoir via a sludge return channel.

The flow path between the end of the outer loop and the beginning of the inner loop may either be radial or a second spiral path situated beneath the first spiral path.

The appts. reduces ground space requirements for the treatment of water. 20.10.76 as 734315 (9pp295).

BROW/ ★ D15 29400B/15 ★US 4146-479
Magnetic water conditioner for reducing scale formation - with array of disc magnets in cylindrical plastic housing
BROWN M J 19.07.77-US-817022
(27.03.79) B01c-35/06

Calcareous waters are magnetically treated using an appts. which includes a hollow casing in which there is a longitudinal array of magnets coaxially arranged but spaced from the inner wall of the housing. This provides an annular water treatment zone which is divided into parallel flow channels.

Water to be treated is admitted at one end of the casing and flows backwards and forwards along the channels to exit through an outlet at the opposite end of the casing. Each magnet has diametrically oppositely facing pole faces of opposite polarities and a polar axis which is normal to the longitudinal axis. The casing is made of a material having a high permeability, and the channels of materials having a low permeability. Thus the casing provides a return path for flux generation by the array of magnets.

Appts. is used for the magnetic treatment of water to reduce scale formation. Arrangement allows optimum flux field arrangement for determining the max. capacity of the unit for any one type of calcareous water. 19.7.77 as 817022 (10pp295).

JAPN D15 23696A/13 =US 4146-481
Filter of stacked plate type - with filtering spaces between plates, has rotating sliding scrapers, keeping filter spaces clear of deposits
JAPAN NATIONAL RAILWAY (TESI-) 17.06.76-JA-U79173
*J01 (27.03.79) *FR2354-799 +B01d-29/42*

Filtering spaces provided by spacers in a vertical stack o filter plates have pivotally fastened scrapers, the peripheries of the plates forming a circular shape and the scrapers being slidably movable in a fixed range.

Pref. the upper and lower surfaces of the plates are flat and the spacers are completely within the bounds of the plates. The plates are pref. clamped by bolts and hav increased thickness around bores for the bolts.

The plates and spacers can be formed integrally. For sewage disposed in a railway vehicle. 6.6.77 as 803983 (8pp1376).

ANDZ D15 90877X/49 =US 4147-10
Dewatering press for fabrics or fibrous materials - includin clarification sludge from sewage treatment (OE150576)
MASCH ANDRITZ AG 14.05.75-OE-003694
*F07 J01 +P71 Q76 (03.04.79) *DT2616-517 B30b-05/04 B30 09/24*

Press for dehydrating fibrous material etc. comprises two endless sieve belts moving in the same direction between pairs of rollers to form a wedge shaped zone in which the material is pre-dehydrated. This zone is followed by a compression zone in the form of a frame-like structure contg. individual compression rollers mounted on bearing blocks of varying heights.

The bearing blocks can be moved or exchanged so that the path of the material has an ascending slope with line compression, or is wave-like or S-shaped with surface compression. Clearing muds from sewage plants are dehydrated efficiently. 3.5.76 as 682677 (7pp1364).

THIO ★ D15 29519B/15 ★US 4147-11
Sewage treatment appts. comprising vibrated conveyor - wi ratchet teeth for urging filter encased sludge towards incinerator
THIOKOL CHEMICAL CORP 04.11.77-US-848623
A88 J09 Q73 (03.04.79) B01d-33 F23g-05/02

A waste treatment system comprises a sewage delivery tube which discharges into a conveyor pipe having a perforated intermediate zone. A funnel is positioned directl beneath the perforations to collect liquid from the sewag A porous strip of consumable filter material is inserted into the conveyor pipe around the sewage delivery tube a is continuously formed into a closed tube.

A vibrator is attached to the conveyor pipe to oscillat it, and ratchet teeth inside the pipe urge the sludge-contg. filter toward its discharge end and an incinerator. Pref. the filter material is paper reinforced with thread in nylon.

Treatment of sewage, particularly for sepn. of the liquid content from sludge. The system does not use grinding or macerating devices or pumps. The filter is consumable and does not become clogged, neither does the conveyor pipe. The vibrator conveys the filter-encased sludge towards the incinerator and promotes rapid filtering out of the liquid content. 4.11.77 as 848623 (4pp1044).

THER- ★ D15 29604B/15 ★US 4147-6
Appts. for removing electrical energy from water - to reduce sco formation using earthed conductive rod immersed in water
THERMAL ENGINEERING 14.10.76-US-732532
A85 J03 (A18) (03.04.79) C23f-13

Electrolytic energy is removed from water using a conductive probe mounted in the wall of the containing vesse A non-conductive mounting is secured to the probe and insulates it from the vessel. The mounting is formed of a fluoro plastic and has a through aperture into which one end of the probe is screwed. The threads are of decreasing tapering dimension to ensure a fluid-tight seal. An earthed conductor is connected to the probe. The mounting is screw threaded into an aperture in the vessel again the threads being of decreasing taper in the direction of the probe. Pref. mounting is of polychlorotrifluoroethylene, polyvinylidene fluoride or fluorinated ethylene-propylene resin.

The appts. is used to reduce scale formation e.g. in pipes, cooling towers or high pressure steam boilers. The appts. besides preventing the formation of fresh scale also removes older formed scale. 14.10.76 as 732532 (-pp295).

UTAH ★ D15 29611B/15 ★US 4147-621

Field flow fractionation appts. - modified with cross flow superimposed on channel flow

UNIV OF UTAH 28.06.77-US-810835

J01 (03.04.79) B01d-03 B01d-13

Flow field-flow fractionation (FFF) apparatus employs lateral cross flow superimposed on the channel flow. The appts. comprises a pair of closely-spaced, parallel semipermeable plates forming an elongate channel between the two.

One of the plates is associated with a cross-flow fluid inlet and the other plate with an outlet. Non-porous sidewalls are provided to define the lateral boundary of the channel. The channel has an inlet and an outlet at the ends thereof for the channel flow.

The cross flow technique has greater application than prior FFF. Used for sepn., fractionation, solvent-solute exchange, filtration, dialysis, purification and experimental parameter determinations. 28.6.77 as 810835 (10pp1050).

SARS D15 82861Y/46 =US 4147-622

Cellulose triacetate osmotic membranes prepn. - by casting from solvent contg. swelling agent, precipitating in cold water and drying

SARTORIUS MEMBRANFI GMBH 14.05.76-DT-621519

*A88 J01 (A11 A32) (03.04.79) *ZA7606-497 B01d-13*

Process for the mfr. of asymmetrical selectively permeable cellulose triacetate membranes which have $\geqslant 1$ skin of low mol.wt. cellulose triacetate. A 2% soln. of the triacetate in 9/1 methylene chloride/methanol at 25°C has a viscosity of $\leqslant 10$ cp. and an acetyl content of $\geqslant 43\%$. The skin is cast as a membrane from a mixt. of $\geqslant 50\%$ acetone, solvent, 12-20% cellulose triacetate and, 5-15% swelling agent. The acetone:solvent ratio is 1.25/1. The cast membrane is exposed to evapn. for 2-90 secs. and pptd. in cold water. Pref. the membrane is tempered in water at 50-100 (60-100)°C.

The membranes are partic. useful in the desalination of sea water and brackish water. 18.3.77 as 779222 (10pp1383).

LITT D15 77876Y/44 =US 4147-624

Desorption of adsorbates from adsorbents - using an almost critical liq. solvent

LITTLE A D INC 15.04.76-US-677390

*A97 B05 C03 (03.04.79) *DT2716-798 B01d-15/06 B01j-29/38 +B01j-21/20*

Organic impurities are removed from waste water by (a) adsorbing the impurities from the water, (b) removing residual water and adsorbate from the adsorbent with a solvent which is liq. in the near critical state, at 0.95-0.995 times its critical temp. (°K) and a pressure equiv. to its vapour pressure, (c) sepg. the near critical liq. from adsorbent, (d) vaporising (part of) the liq. to form a solvent-rich vapour phase and a water/adsorbate-rich phase, (e) condensing the solvent-rich phase and (f) adjusting its temp. and pressure to convert it to a near critical liq. for recycle.

Solvent losses do not contribute additional pollution problems. The recovery is efficient and economical. 1. 4.76 as 677390 (14pp976).

DOMT ★ D15 29614B/15 ★US 4147-626

Mercury metal removal from chlor-alkali plant effluent - by addn. of polysulphide to ppte. mercury sulphide

DOMTAR LTD 07.01.77-US-757573

E36 J03 (03.04.79) C01d-01/08 C02c-05/04

Treatment of aq. effluents from chlor-alkali plants which contain elementary Hg and other undissolved solids so that all Hg metal is converted into a stable form that does not contaminate the environment is as follows: (a) an H_2O-soluble polysulphide (I) is added to the effluent at pH 7-13 to ppte. insol. Hg sulphide and (b) solids are sepd. from the effluent.

Use of (I) instead of a (hydro)sulphide significantly increases the amt. of Hg that may be removed by pptn. from a contaminated effluent.

Effluent is pref. at pH 9-12. (I) may be K, NH_4, Mg, Ca or pref. Na polysulphide, and may be prepd. in situ by addn. of excess S to e.g. a 40% Na (hydro)sulphide soln. The pptd. Hg sulphide is pref. removed immediately (before a significant portion is able to redissolve as a complex). If ionic Hg is present together with Hg metal, then pref. (I)is used in conjunction with a sulphide (pref. Na sulphide.). 7.1.77 as 757573 (4pp478).

AMCY D15 59073A/33 =US 4147-627

Poly:anionic and poly:cationic polymer mixt. - used to inhibit magnesium boiler scale formation in water desalination plant (NL 9.8.78)

AMERICAN CYANAMID CO 07.02.77-US-766330

*A91 (A14 A26) (03.04.79) *DT2804-434 C02b-05/06*

Process for the control of scale in evaporative desalination units comprises adding to the saline water polyanionic and polycationic polymers. The polyanionic polymer contains $\geqslant 50$ mole % acrylic acid, its alkali metal or ammonium salts. The polycationic polymer is (a) dimethylaminepolyamine-epichlorohydrin reaction prod. or (b) poly(dimethyldialkylammonium chloride) or (c) quaterised derivs. of poly (dimethylaminoethylmethacrylate) or (d) poly[oxyethylene(dimethylimino)ethylene(dimethylimino)ethylene dichloride]. The anionic polymer has a mol.wt. of 500-50000, and the cationic polymer a mol. wt. of 1500-500000. The ratio of cationic to anionic polymer is 2-25:1.

The polymers are partic. useful in controlling magnesium hydroxide scale. 7.2.77 as 766330 (6pp1383).

TDCO ★ D15 29616B/15 ★US 4147-631

Water filter control and distribution appts. - for coupling faucet and utilising standard filter cartridge

TELEDYNE INDUSTRIES 23.09.77-US-836155

J01 (03.04.79) B01d-27/02 B01d-35/02

Water filtering appts. comprises a housing having a base with a coupling for attachment to a faucet to receive a supply of water and a discharge outlet. A valve is provided for selectively permitting flow of water through the coupling to the outlet and flow through an input channel to a chamber defined by a cap portion.

The cap is inverted and removably secured to the base and houses a filter cartridge which encloses a filtration material. A spigot is located on the top of the cap for emitting water discharged from the filtration material The flow of water is controllable through the cartridge and the spigot.

Used in a drinking fountain of purified water. The appts. makes use of a readily available water filter cartridge. The user can select tap water without filtering filtered water discharged downwardly for collection in a container and filtered drinking water delivered upwardly as a fountain. The cap and base can be modified to receiv differently designed filter cartridges. There is a minimisation in the use of metallic parts. 23.9.77 as 836155 (12pp1044).

PETL ★ D15 29623B/15 ★US 4147-64

Removal of gypsum scale - by treatment with aq. alkali meta maleate salts at pH 7.5-12.0

PETROLITE CORP 15.10.73-US-406543

E12 H01 (03.04.79) C02b-05/06 C09k-07/02

Gypsum-contg. scale is dissolved by treatment with an aq. H_2O-soluble alkali metal maleate salt (I) at pH 7.5-

12.0. Opt. soln. may contain 1-10% pref. 1-3% by wt. of a suitable wetting agent, or may be used as an emulsion with an organic solvent (xylene, kerosene, etc.).

Process converts scale directly into a water-soluble cpd., thus elminating the need for either an acid wash or a sequestering agent. Treated scale is simply removed by an aq. wash. The process is suitable for use in oil wells, heat exchangers, cooling towers, etc.. Pref. (I) are dialkali metal maleates, esp. Di-Na maleate. 15.10.73 as 406543 (4pp478).

PQCO- ★ D15 29627B/15 ★US 4147-657

Sodium metallo silicate dispersions prepn. - without using high shear or appts. with moving parts, useful as coagulant aids

PQ CORP 03.08.77-US-821372 (07.12.76-US-748347)
E36 (03.04.79) B01j-13

The process comprises (a) providing a mixing block comprising (I) a cylindrical chamber in a solid block, the initial portion of the chamber being partitioned to form separate chambers through which fluids can flow, (II) an inlet so that fluid flows through both the separate chambers and the cylindrical chamber, (III) inlets intersecting the separate chambers, (VI) a mixing chamber formed in the chamber and (V) an outlet, (b) flowing water through the block, (c) injecting sodium silicate into one of the inlets in a separate chamber, (d) injecting metal salt soln. into the inlet in the other separate chamber, (e) mixing the two streams in the mixing area and (f) recovering the prod..

The mixing block has no moving parts and gives dispersions without the need for high shear mixing. The prods. are used as coagulant aids in H_2O-treatment. 3.8.77 as 821372 (6pp-).

AGEN D15 90533Y/51 =US 4147-665

Magnesia adsorbent for purifying waste water - esp. for treating effluents from chemical plants

AGENCY OF IND SCI TECH (HOSO) 01.09.76-JA-104578 (07.06.76-JA-066214)
*J01 (03.04.79) *DT2725-384 +B01j-21/04 B01j-23/02*

An absorbent for waste water treatment consists of a mixt. of magnesia and 5-40 wt.% of a metal oxide e.g. Al_2O_3, Fe_2O_3, CaO and kaolin. The absorbent is obtd. by calcining at 500-700°C a heat-decomposable magnesia-producing cpd. e.g. $Mg(OH)_2$, $MgCO_3$ or basic magnesium carbonate with a metal hydroxide or kaolin.

The absorbent has excellent absorption properties esp. for organic contaminants e.g. pulp mill waste and is easily regenerated. 31.5.77 as 802117 (4pp1393).

CALG D15 25068A/13 =US 4147-6

Self-inverting di:methyl di:allyl ammonium chloride polym emulsion - used as drainage aid, flocculant and clarification aid paper mfr.

CALGON CORP 24.02.76-US-660886 (01.10.73-US-402570)
*A91 F09 (03.04.79) *US4077-930 C08l-33/02 C08l-33/14 D2 03/38*

A stable, self-inverting water-in-oil emulsion of acrylamide polymer or copolymer with acrylic acid, 2-acrylamido-2-methyl propane sulphonic acid, 3-acrylamido-methyl butyl-trimethyl ammonium chloride or 2-methac loyloxyethyl trimethyl ammonium methosulphate, is prepd. by polymerising the monomer(s) at 0-100°C in water, inert hydrophobic liq., free radical catalyst and ⩾20 wt.% (of the oil phase) of an emulsifier of HLB ⩾

The prods. are used as drainage aids, retention aids save-all flotation aids and process water flocculants. The parent patent (25068A/13) described a similar process. 21.11.77 as 853740 (+ 16.7.74 - US - 487931) (11pp976).

SUMO D15 16791Y/10 =US 4147-

Acrylonitrile based semipermeable membranes prepn. - usin plasma discharge to crosslink the surface layer (NL010377)

SUMITOMO CHEMICAL KK 25.08.75-JA-103329
*A88 J01 (A14 D13) (03.04.79) *DT2638-065 B29h-07/20*

Prepn. of a semipermeable membrane comprises exposing porous shaped articles of polyacrylonitrile, or copolymers contg. >40 mole % acrylonitrile, to a plas The porous shaped articles are prepd. by (a) dissolving the polymeric material in a solvent; (b) casting the resu ant soln.; (c) dipping the cast soln. in a non-solvent to prepare a porous membrane opt. after partial evapn. o the solvent; and (d) drying the wet porous membrane obtd..

The membrane is useful for sepg. substances by reverse osmosis or ultrafiltration. 13.8.76 as 714238 (6pp918).

See Also

D13 CS 7704201 D16 US 4146381 D16 US 414647
D22 US 4146710

D16: FERMENTATION INDUSTRY

SNAM ★ D16 27860B/15 ★BE-871-048

Novel strain of Candida valida yeast - used to prepare protein by cultivation using ethanol as carbon source

SNAMPROGETTI SPA 05.10.77-IT-028277
C03 (D13) (05.04.79) C12d

The strain NRLL-Y 11119 is capable of multiplying in a culture medium using ethanol as carbon and energy source. The strain is used to produce a microbial biomass, particularly protein.

The biomass is used as protein additive in animal feeds or may be used to prepare proteins, amino acids nucleic acid and other products by extraction. The use of ethanol as carbon source, although more expensive than petroleum fractions for example, has advantages in non-toxicity problems with simpler processing. The strain has a high growth rate (1hr min. doubling time), a high growth temp. (up to 40° C) and a high yield based on ethanol (up to 80%). 5.10.78 as 871048 (8pp597)

AHSC ★ D16 27886B/15 ★BE-871-117

Determn. of isoenzyme(s) having different electric charges - by sepn. on weakly basic anion exchange resin, addn. of dry reagent and then substrate and spectrophotometric analysis

AMER HOSPITAL SUPPL CORP 11.10.77-US-841248
A89 B04 J04 R16 (A96) (09.04.79) G01n

Determn. comprises (a) sepg. and isolating the isoenzymes by submitting the sample to ion exchange chromato graphy on a weakly basic, a nion exchange resin, follow by elution and successive recovery of fractions contg. each of the isoenzymes to be determined, (b) separate examination of each of the fractions by (i) addn. to the fraction of a dry reagent for the isoenzyme to be deter ed without any substrate for the enzyme being present reconstitute the reagent, (ii) addn. of a substrate, for isoenzyme to be determined, to the reconstituted reage and (iii) analysis of the reconstituted reagent and the s strate by spectrophotometry.

Used in quantitative determn. of isoenzymes having different total electric charges e.g. the determination creatine-phosphokinase (CPK) isoenzyme MM and isoe zyme MB. 9.10.78 as 871117 (20pp395)

GRAI ★ D16 27923B/15 ★BE-872

Prepn. of roasted non-malted barley - by controlled heating, use replace part of the malt in beer brewing

GRAIN PROCESSING CORP 08.09.78-US-940719 (09.12.77 859124)
(30.03.79) A23n C12c

The barley, suitable to replace malt in brewing in a steeping used for prepg. a non-distilled fermented dri is prepd.by heating non-malted barley of ⩾12% protein content to a temp. sufficient to expand it such that a de mined volume of barley before heating have about 1.4-1.75 times the weight of the same volume after heating.

The process is esp. for beer mfr. The product can replace ⩽ 25% of the relatively costly malt, without adverse effect on the brewing process or the beer quality. 7.12.78 as 872607 (17pp597)

KUBA/ ★ D16 B/15 ★CS 7605-643
Stabilising colloidal and organoleptic properties of drinks
KUBANEK V 31.08.76-CS-005643
(28.02.79) C12h-01/02

MARI/ ★ D16 B/15 ★CS 7701-151
Plastic material pads prodn.
MARIASSY G 22.02.77-CS-001151
A96 (28.02.79) C12k-01/10

FRIM/ ★ D16 B/15 ★CS 7701-462
Cephalosporin C isolation from fermentation medium
FRIMM R 04.03.77-CS-001462
B04 (28.02.79) C12d-09/02

BLEC/ ★ D16 B/15 ★CS 7701-765
Multifunctional system for bacteriological analysis - in particular for establishing antibiotics resistance
BLECHA S 17.03.77-CS-001765
B04 J04 (28.02.79) C12k-01

NECA/ ★ D16 B/15 ★CS 7702-113
Controlled, automatic cultivation on liquid media
NECAS J 30.03.77-CS-002113
(28.02.79) C12b-01

RUTM/ ★ D16 B/15 ★CS 7702-263
Fodder yeast prodn. from synthetic ethanol
RUT M 06.04.77-CS-002263
C03 E17 (D13) (28.02.79) C12c-11/18

SKUR/ ★ D16 B/15 ★CS 7702-800
Alcohol-dehydrogenase isoenzyme isolation - from horse liver
SKURSKY L 28.04.77-CS-002800
B04 (28.02.79) C07g-07/02

GEME/ ★ D16 B/15 ★CS 7706-722
Proteins fixing on water-soluble polymers
GEMEINER P 17.10.77-CS-006722
A97 B04 (28.02.79) C07g-07

FILI/ ★ D16 B/15 ★CS 7708-285
Enzymatic synthetics of radioactive thymidine and deoxyadenosine - labelled with radioisotope of carbon or hydrogen
FILIP J 12.12.77-CS-008285
B03 K08 (B02) (28.02.79) C12d-13/06

KADL/ ★ D16 B/15 ★CS 7708-477
L-Lysine fermentation control
KADLEC K 16.12.77-CS-008477
B05 E16 (28.02.79) C12d-13/06

HOMO/ ★ D16 B/15 ★CS 7708-575
Cholinesterase activity determination
HOMOLKA J 20.12.77-CS-008575
B04 (28.02.79) C07g-07/02

HAAS/ ★ D16 B/15 ★CS 7800-064
Calcium citrate isolation - from metastable soln. of calcium citrate
HAAS Z 03.01.78-CS-000064
E12 (28.02.79) C07c-59/16 C12d-01/04

DEDE/ ★ D16 B/15 ★CS 7801-394
Inactive, lyophilised vaccine for aujez illness
DEDEK L 06.03.78-CS-001394
B04 (28.02.79) A61k-39/42 C12k-05

TAKE D16 50278R/28 =DS 2002-048
Microbiological production of citric acid - using a paraffin substrate
TAKEDA CHEMICAL IND KK 22.01.69-JA-004527
*E17 (05.04.79) *BE-744-416 C12d-01/04*

Citric acid is produced in good yields by culturing Candida lipolytica, Candida tropicalis, Candida sp. H 22 (IFO 1464), Candida sp. FRZ-3 (IFO 1465) or Candida sp. 164 K-1 (IFO 1504) in an aq. culture medium at pH 2-7 (3-6) using a 9-20C n-paraffin as the main C source.

Apart from the high yield, isocitric acid prodn. is strongly suppressed (citric: isocitric acid is ⩾9:1), culture time is rel. short and the harvesting pt. is easily fermentation does not occur as the micro-organisms do not utilise the citric acid produced. 17.1.70 as 002048 (6pp922)

ESSO D16 43213S/25 =DS 2059-277
Fermentation process for superior quality - rotein
EXXON RES & ENG CO 15.12.69-US-885285
*C03 (D13) (05.04.79) *BE-760-290 +A23j-01/14 C12d-13/06*

High-value protein is prepd. in a microbiological process using Pseudomonas spp. (ATCC 21439 and 21438) and Corynebacterium spp. (ATCC 21232 and 21236) in a suitable nutrient medium, using methanol as only C-source. Culturing under aerobic conditions and separating the cells from the culture. Protein is obtd. from the cells. The micro-organisms used are able to assimilate methanol and produce cells contg. > 70% protein.

In an example the signified micro-organisms are continuously aerobically fermented in a medium contg. 1-3 g H_3PO_4; 0.2-0.8 g $MgSO_4$; 0.2-1.0 g K_2SO_4; 0.01-0.03 g $FeSO_4 . 7H_2O$; and 0.01-0.03 g $MnSO_4 . H_2O$ per 1 l tapwater. Methanol is used as only C-source. Culturing at 32 °C and pH 7.0 yields 0.4 g cells/1 g methanol. contg. 70-80% protein. 2.12.70 as 059277 (4pp279)

ASAH D16 67771U/45 =DS 2318-831
Polymeric microfibril aggregates - adsorbents and/or filte materials prepd from two incompatible polymers
ASAHI KASEI KOGYO 26.01.73-JA-010263 (13.04.72-JA-036422)
*A32 B04 F01 (05.04.79) *DT2318-831 B01j-01/22*

Microfibre aggregates (I) obtd. by (a) mixing two syntheti polymers A and B with average mol. wt. of min. 10,000 and which are incompatible upon intimate mixing, in a mixing ratio of 20:80-80:20 (b) extrusion of the molten mixt. to fibres, skeins or films, whereby extrusion takes place with a pulling ratio of 1.0 to 10.0; (c) dissolving an replacement of polymer B by treatment with solvent, opt. with a deposited layerof a powered adsorbent; are used as adsorption agents.

(I) are very active adsorption agents with much improved adsorption capacity. They may be used for a very large number of different substances and combine their adsorptive properties with filtration properties. Depending on the components of (I) the adsorption capacity includes oils, fats, gases, dyes, pigments, phenols, molecula halogens, micro-organisms, yeasts, powdered adsorptio agents, metal ions etc.

(I) are free from the usual disadvantages of adsorption agents such as clogging of filters, passing fine particulat material through the filter etc. 13.4.73 as 318831 (+ 28.3.72;12.9.72-JA-085395;090974) (18pp279)

SICK/ D16 77973X/42 =DS 2457-04
Continuous growth of micro-organisms - with process parameter(automatically regulated by measured metabolic capacity of th culture in process
SICK P 03.12.74-DT-457044
*R12 R16 +R26 (05.04.79) *FR2293-488 C12b-01*

The system monitors and controls appts. for the continuous culture of micro-organisms, using as reference val ues to regulate the supply of substratum measurements o alterations in the culture area due to material change of the organisms.

To select and enrich mutants, the regulation characte -stics are used in conjunction with gradual alterations of culture conditions, with or without additonal regulation o the gradient rise by the values measured. 3.12.74 as 457044 (3pp160)

TOXN D16 68361W/41 =DS 2512-9
Semi permeable, cellulose microcapsules contg. powder adsorbent - in cellulose gel matrix, useful selective adsorbi agents
TOYO BREWING KK (ASAH) 20.02.75-JA-020381 (25.03.74-J 032686)
*A97 B04 J04 (05.04.79) *NL7503-577 B01j-13/02*

New microencapsulated adsorbent prepns. comprise a d persion of adsorbent in a microcapsule of external dia. 100-5000 μ, with an outer permeable polymer covering 0.5-5 μ thick having micropores of dia. 1-8 nm.

Prepn. of these microcapsules comprises dispersion of the adsorbent powder with solns. of cellulose or cell ulose esters; the dispersion is then added dropwise to a well stirred non-solvent to form the microcapsules, after which the cellulose ester covering is hydrolysed. 24. 3. 75 as 512920 (10pp047)

BIOR- D16 24417X/14 =DS 2541-960

Ethanol prodn from cellulose - by simultaneous anaerobic action of cellulase and an ethanol producing microorganism

BIO RES CENTER CO 20.09.74-JA-109335

*E17 (D17) (05.04.79) *BE-833-458 C12c-11/08*

Alcohol is produced from cellulose by an aerobically fermenting cellulose simultaneously with cellulose (obtd. from Trichoderma viride) and Saccharomyces cerevisiae. This increases the alcohol yield by 400% compared to the two stage fermentation using the above microorganisms. 19. 9. 75 as 541960 (3pp922)

MERE ★ D16 27983B/15 ★DT 2742-874

Oxygen-absorbing compsn. for anaerobic bacteria culture medium - contains metal powder, activator, adsorbent and opt. soda

MERCK PATENT GMBH 23.09.77-DT-742874

G04 (05.04.79) B01d-53/14 C12b-01

O_2-absorbing compsn. contains a metal powder and an activator in addn. to adsorbent. A pref. compsn. contains kieselguhr, Fe powder and citric acid. The addn. of soda helps to establish a pressure equilibrium for absorbed O_2 and provides CO_2 required by some bacteria for optimum growth.

The compsn. is used in creating an O_2-deficient or O_2-free atmos. in cultivating anaerobic bacteria, by contact with a reaction agent, pref. a solvent, e. g. water. The compsn. has optimum absorption capacity, is easy to handle and is ready for immediate use. 23. 9. 77 as 742874 (7pp200)

ISTS ★ D16 28081B/15 ★DT 2822-539

Adenylate kinase inhibitor, esp. for creatine kinase determn. - comprising adenosine mono:phosphate and a fluoride

IST SIEROTER VACC SCLAVO 30.09.77-IT-028139

B04 R16 (05.04.79) G01n-33/16

Reagent system for inhibiting adenylate kinase (AK) comprises adenosine-5'-monophosphate (AMP) and a fluoride. The fluoride is pref. an alkali metal fluoride. The system contains the two reagents in a ratio of 1 : 0. 15- 25.

The system is esp. useful for preventing interference from AK in the determn. of creatine kinase (CK) by the Oliver method, as used for diagnosis of myocardial infarct and progressive muscular dystonia. It has no significant effect on CK activity at the concns. used, and does not cause MgF_2 pptn. 23. 5. 78 as 822539 (15pp367)

MEIJ ★ D16 28137B/15 ★DT 2841-374

Broad-spectrum antibiotic BN-200 - obtd. by culturing Erwinia strain

MEIJI SEIKA CO LTD 04.10.77-JA-118538

B04 (05.04.79) C07g-11 C12d-09/22

Antibiotic BN-200, characterised by its physicochemical properties, is a new cpd., obtd. by culturing a suitable strain of the genus Erwinia (pref. FERM-P 3561) at 20-35 °C in a medium contg. assimilable C and N sources.

BN-200 is a white powder with the following characteristics : elementary analysis C 67. 46, H 7. 24, N 7. 55, O 17. 75%; mol. wt. 520 (titration); m. pt. 150-156°C (decomp); optical rotation $[\alpha]^{20}_{D}$ = 70. 7° (c = 1, MeOH). It is also characterised by its UV and IR spectra, solubilities, colour reactions and TLC R_f values.

BN-200 is active against Gram-positive and -negative bacteria, e. g. with a MIC of 1. 5 µg/ml against resistant Staph. aureus 52-34, 6. 5 µg/ml against E. coli NIHJ and $K_{12}R_1$ and 0. 3 µg/ml against Proteus vulgaris. It can be used in human and veterinary medicine at a dose of 20-300 mg/kg. 22. 9. 78 as 841374 (18pp367)

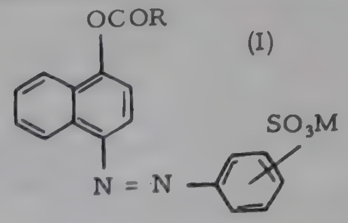
CHUS ★ D16 28138B/15 ★DT 2841-380

Fatty acid ester(s) of hydroxy:naphthyl:azo benzene-sulphonate cpds. - useful for determn. of lipase activity

CHUGAI SEIYAKU KK 22.09.77-JA-113206

B04 R16 (05.04.79) C07c-161/06 G01n-31/14

Fatty acid esters of formula (I) are new. In (I) R is 9-17C alkyl. and M is an alkali metal cation.



(I)

Typical cpds. (I) are e. g. Na-p-(4-lauroyloxy-1-naphthylazo)-benzenesulphonate, Na-p-(4-palmitoyloxy-1-naphthylazo)-benzenesulphonate, etc.

(I) are useful for the determn. of lipase activity and replace the olive oil and fatty acid esters of phenol and p-nitrophenol previously used for this purpose. (I) are an improvement over the previous materials since they can be obtd. in pure form and have good water solubility. 22. 9. 78 as 841380 (9pp513)

FABR D16 75678X/41 =GB 1543-962

Acellular vaccines prodn. - by mixing suitable RNA with bacterial membrane lipo) polysaccharides

FABRE P SA 02.04.75-FR-010252

*A96 B04 C03 (11.04.79) *BE-839-893 A61k-39/02*

Prepn. of acellular vaccine comprises mixing the ribonucleic acid (RNA) of ≥1 bacterium corresp. to the desired vaccine with a membrane material consisting of ≥1 membrane lipopolysaccharide and/or polysaccharide extracted from ≥1 bacterium chosen from the genera Klebsiella, Serratia, and Corynebacterium.

Pref. 100-200 pts. wt. membrane is used per 100 pts. wt. RNA. Pref. the membrane is e.g. Klebseilla pneumoniae, Serratia corallina or Corynebacterium avidum.

The vaccine is used in the treatment of infectious diseases. 1.4.76 as 013292 (8pp918)

CIBA D16 74329X/40 =GB 1543-98

Antifungal antibiotic papulacandin - by culture of Papulari sphaerosperma (BE130976)

CIBA GEIGY AG 03.10.75-CH-012857 (13.03.75-CH-003199)

*A97 B02 C02 (11.04.79) *DT2609-611 C12d-09/22*

A new antibiotic Papulacandin, comprising Papulacandin A-E is obtd. by cultivating Papularia sphaerosperma (Pers.) Hohnel NRRL 8086, or a mutant of it, aerobically in an aq. nutrient soln. that contains a carbon and nitrogen source and also inorganic salts, until the nutrient sol exhibits an antibiotic action. The antibiotic Papulacandin is then isolated and opt. sepd. into its components and/or converted into derivs.

Papulacandin has antibacterial activity against Hyphomycetes and against various species of yeast like fungi e Candida albicans. It has low toxicity and can also be used as a disinfectant. 10.3.76 as 009531 (19pp918)

KURE D16 15867A/09 =GB 1544-0

Culture of basidiomycetes of coriolus species - with homogenisatio of inoculating culture to prepare polysaccharide

KUREHA KAGAKU KOGYO 24.08.76-JA-100157

*B04 +P13 (B07 D13) (11.04.79) *BE-858-000 C12b-01/02 C12 01/08*

Basidomycetes fungus belonging to the genus Coriolus of the family of Polyporaceae, is cultivated by sumberged culture by homogenising a seed culture in a uniform slur in which lumps of mycelia are indiscernible. The slurry is then inoculated into the culture medium.

Pref. homogenisation is carried out by subjecting seed culture to mechanical shearing forces whereby the individual thread-form mycelium are uniformly disperse Homogenised slurry is inoculated as 0.01-0.2 g. per l. medium.

Prod. is used as base material for the prodn. of med cinal prepns. including anti-tumoric agents and for heal promoting foods and drinks. 23.8.77 as 035355 (4pp931)

SOED/ D16 83487X/45 #GB 1544-1

Isolation of a novel anticancer agent - from Streptomyc hachijoensis culture solns

SOEDA M 11.04.75-JA-044028 (09.04.76-GB-014563)

*B04 (11.04.79) *DT2615-099 A61k-35/74*

Anti-carcinoma substances are prepd. by (i) sepg. the liquids from the solids of a culture broth of Streptomyce hachijoensis, (ii) adding a pptg. agent comprising a wate miscible organic liq., ammonium sulphate at ≥2/3 of sa ration concn., or $ZnCl_2$ soln. to the liq. to cause pptn., (iii) collecting the ppte., (iv) extracting the ppte. with w er, aq. saline soln., aq. sec. Na phosphate soln. or aq. glucose soln. and (v) collecting and sterilising the extract contg. the anti-carcinoma substance.

Pref. the S.hachijoensis is the strain H-2609, ATCC 19769. Pref. the extract is filtered under sterile conditions and the filtrate collected. 9.4.76 as 014563 (5pp974)

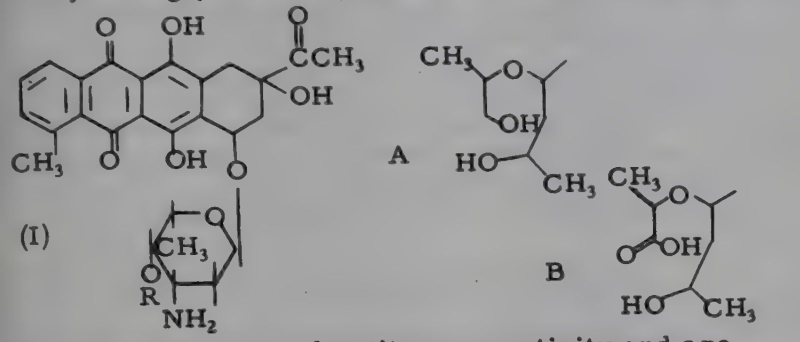
ZAID D16 84731Y/48 =GB 1544-195

Anthracycline-glycoside antibiotics prodn. - by fermenting Streptomyces strains, useful as antibacterials and antitumour agents

ZH BISEIBUTSU KAGAKU KEN 31.05.76-JA-063810

*B03 (11.04.79) *BE-855-098 A61k-31/35 C07h-15/24 +C07h-21*

Anthracycline glycosides (I) are new (where R is a gp. (A)



(I) have antibiotic and antitumour activity and are prepd. by submerged aerobic culture of a Baumycin producing Streptomyces organism esp. Streptomyces coeruleorubiclus in aq. medium contg. C and N sources and inorganic salts. 25.5.77 as 022138 (33pp945)

SUMI/ ★ D16 28571B/15 ★J5 4028-804

Streptokinase compsns. for oral administration - contain a trypsin inhibitor, obtained from e.g. soybeans, human urine etc., and/or mucin

SUMI Y 08.08.77-JA-094822

B04 (03.03.79) A61k-37/54

Streptokinase prepns. formulated for oral administration are characterised by contg. a trypsin inhibitor (e.g. trypsin inhibitor obtd. from soybeans, human urine, etc.) and/or mucin.

The use of a trypsin inhibitor and/or mucin assists the streptokinase to be absorbed from the intestinal tracts in a stable state without being deactivated by various proteinase in the stomach or intestinals and thereby enhances the activity of streptokinase.

In an example, 100,000 units of streptokinase, L-algine-Sepharose and 10,000 units of a trypsin inhibitor obtd. from human urine (specific activity: 380 units/mg protein) were dissolved in distilled water, lyophilised and formulated into enteric coating capsules. The capsules were orally administered to group (A) of healthy male dogs. The same prepns. were prepd. except for adding 2,000 mg of mucin and orally administered to another group (B) of dogs.

Shortening of the euglobulin dissolving time is observed in about 60 min. after the administration, indicating that the activity of streptokinase is increased. Further such activity is stronger and lasts longer in Group (B) than in Group (A). 8.8.77 as 094822 (2pp140)

TORA ★ D16 28608B/15 ★J5 4028-890

Incubating living cells - by adhering them to a cationic, semipermeable membrane, and passing incubation liquor on the opposite side

TORAY INDS INC 03.08.77-JA-092589

A88 (03.03.79) B01d-13 C12b-01/20 C12k-09

The process comprises adhering living cells on to the surface of cationic semi-permeable membrane, of moisture content 20-90% and flowing an incubation liquor onto the opposite side of the membrane.

Living cells may be incubated in an increased concn. Absorption of nutrient source and exretion of the sub-layer of living cells are performed through the semi-permeable membrane without interruption by the upper-layer of living cells. 3.8.77 as 092589 (5pp68)

SAOC ★ D16 28609B/15 ★J5 4028-892

16M-Macrolide-3-hydrolase - used e.g. for deacylating the 3-position of macrolide antibiotics by hydrolysis

SANRAKU OCEAN 09.08.77-JA-094690

(03.03.79) C07g-07/02 C12d-09/20 C12d-13/10

16M-Macrolide-3-hydrolase is used to hydrolyse the ester bond of 3-position on 16 member ring macrolide antibiotics including acyl gp. through O atom at 3-position to deacylate the acyl gp. Leucomycin and spiramycin are partic. effected. Optimum pH is 7.8-8.0. Optimum temp. is 37°C.

The enzyme activity is strongly inhibited by Cu^{++}, Zn^{++}, and Hg^{++} ions, deoxycolic acid and sodium dodecyl sulphate, and somewhat inhibited by Co^{++} ion and p-chloromercury benzoate, but not inhibited by Fe^{++}, Mg^{++}, Mn^{++}, Ca^{++}, 2-mercapto ethanol, dithiothreitol and EDTA 9.8.77 as 094690 (8pp68)

TOYM ★ D16 28610B/15 ★J5 4028-893

Sarcosine oxidase prepn. - by incubating microorganism of genus Arthrobacter in nutritional medium and isolating prod.

TOYOBO KK 05.08.77-JA-094432

(03.03.79) C07g-07/02 C12d-13/10

Method comprises by incubating microorganism belonging to genus of Arthrobacter and producible sarcosine oxidase in nutritional culture medium and isolating the sarcosine oxidase from the cultured broth.

Sarcosine oxidase is an enzyme, converting sarcosine to glycine, formaldehyde and hydrogen peroxide, and it is related to metabolism of creatinine and choline. When the sarcosine is reacted with creatinine together with creatinine amide hydrase and creatine amidino hydrase, formaldehyde and hydrogen peroxide are formed. By determn. of the formaldehyde and H_2O, creatinine and creatin content may be determined. For this fact, creatinine oxidase is useful for clinical examination.

Pref. arthrobacyer ureafaciens (IFO No. 12,140) is used, inoculated in culture medium including 1% wt. of choline, 0.2 wt.% of peptone, 0.1 wt.% og yeast extract, 0.1 wt.% of $MgSO_4 7H_2O$and 0.1 wt.% of K_2HPO_4, and incubated at 30°C for 40 hrs. with shaking. 5.8.77 as 094432 (4pp68)

TANA ★ D16 28611B/15 ★J5 4028-894

Di:hydroxy-acetone prepd. from glycerol - by treating with Acetobacter or Gluconobacter bacteria prod.

TANABE PHARMACEUTICAL KK 09.08.77-JA-095660

E17 (D21) (03.03.79) C12d-13

The method is characterised by culturing bacteria which belong to Acetobacter or Gluconobacter and can convert glycerol to dihydroxyacetone in a culture medium contg. sorbitol, mannitol, glucose or dextrin as the carbon source, reacting the bacterial body sepd. from the culture medium or its processed product aerobically with the aq. soln. which has salt concn. < 0.1% and essentially contains glycerol alone, and recovering formed dihydroxyacetone.

By culturing the bacteria in the culture medium contg. sorbitol, mannitol, glucose or dextrin as the carbon source the converting ability of the bacterial body can be increased. The culture is practiced at 25-30°C at pH 5-8 aerobically for 1-3 days and calcium carbonate is added to adjust the pH. 9.8.77 as 095660 (5pp5)

MITU ★ D16 28612B/15 ★J5 4028-896

Centrifugal sepn. of plasmid from Thermus bacteria - used for in vitro gene substitution

MITSUBISHI CHEM IND KK 08.08.77-JA-094767

(03.03.79) C12d-13/06 C12k-01/02

The method is characterised by sepg. and refining plasmid from bacteria belonging to Thermus by density gradient centrifuging method. Novel plasmic can be prepd. from highly thermophilic bacteria which can multiply only at > 45°C without spore-forming or parasitism and the plasmid can be used for in vitro gene-substitution at higher temp. with less danger of contamination c.f. prior art plasmid.

Thermus thermophilus HB-8 (ATCC 27634), T. flavus BS 1, T. flavus AT 61 and T. flavus AT 62 can be used. The density gradient centrifuging method is practiced utilising the density gradient in cesium chloride-ethidium bromide system and the density of cesium chloride is regulated previously to 1.59-1.60 g/ml. The plasmic which is closed circular DNA, is less bonded with the pigment (ethidium bromide) and can give heavier band in cesium chloride-ethidium bromide density gradient than open circular DNA. Plasmid having mol. wt. $6.1\text{-}6.6 \times 10^6$ or 17.0×10^6 can be obtd. 8.8.77 as 094767 (4pp5)

SNOW ★ D16 28613B/15 ★J5 4028-897
Highly viscous polysaccharide prepn. in high yield - by culturing pestalotia mould in medium contg. tomato juice or soybean whey
SNOW BRAND MILK PRODUCTS 09.08.77-JA-095376
(03.03.79) C12d-13/04

In the prepn. of highly viscous polysaccharide by liq. culturing a Pestalotia mould, the mould is cultured either in the culture medium contg. tomato juice or in the culture medium composed of soy bean whey and collecting formed polysaccharide from the culture medium. Highly viscous polysaccharide is prepd. in high yield.

The polysaccharide is a β-1, 3-homoglucan of average molecular wt. 300-500 and high viscous. The viscosity of its 0.1-0.4% soln. is 7-17 times as viscous as the locust bean gum soln. and its viscosity is hardly changed by pH-change and heating. Applicable strain is Pestalotia sp. No. 101 (FERM-P 4136) and the culture is carried out aerobically at ca. 30°C at pH ca. 5.0. 9.8.77 as 095376 (6pp5)

NISE- ★ D16 28723B/15 ★J5 4029-732
Cultivation or Cortinellus shiitake in porous wood - coated with aq. emulsion or paste of resin to prevent damage by Trichoderma or other harmful microorganisms
NIPPON SEIRO KK 29.07.77-JA-091878
A97 P13 (05.03.79) A01g-01/04

Strains of Cortinellus shiitake are incubated in small pores formed in wood culture medium, the incubated portion or whole surface of the wood is coated with aq. emulsion or paste of resin which is cured under normal temp., and then cultivation is conducted in conventional manner. Damage of Certinellus shiitake by Tricoderma or other harmful microorganisms can be inhibited and prevented. The coating may be brushed or sprayed, the latter being pref. The resin includes paraffin wax, polyvinyl acetate resin, acryl resin, latex, etc.

The strains e.g. are incubated in 1 cm pore on wood medium, and then the incubated portion is coated with 60 wt.% of paraffin wax emulsion having viscosity of 2000 cps. in thickness of 2.3 to 4 mm. 29.7.77 as 091878 (4pp22)

YAMA/ ★ D16 28724B/15 ★J5 4029-754
Soil conditioner prepn. from graminaceous weed Zizania latifolia - by drying, cutting steam heating, cooling, adding nutrients and Bacillus microorganism to ferment the medium, and drying the prod.
YAMADA T 05.08.77-JA-093345
C03 (05.03.79) A01n-07/02 C05f-11/08 C05g-03/04 C12k-01 C12k-03

Process comprises subjecting Zizania latifolia (gramineous weed) to drying, cutting and steam-heating; after cooling, adding nutrients to form a medium; inoculating microorganism belonging to the genus Bacillus to ferment the medium; and drying the fermented product and then formulating as powder or granule.

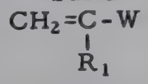
The microorganism propagates in the soil and makes the soil weakly alkaline when the product is applied to the soil. The product has high fertilising effect. Specifically, drying is conducted to water content about 10%. Cutting is to size 1-2 mm. Thus dried and cut weed is pulverised to the size 2 mm, and heated for 30-60 mins. by 120-150° C super-heated vapour. Thus swollen weed is treated with sodium hydroxide to decompose silicate contained in the weed, followed by neutralisation with sulphuric acid. Nutrients include, e.g., meat extract, bee honey, etc. Fermentation is conducted for about 1-3 months. 5.8.77 as 093345 (2pp108)

PFIZ D16 67308W/41 =SU -608-47
**Stabilized enzyme compsns - comprising bacterial cellular materi
covalently linked to particulate water insol polymeric material**
PFIZER INC 27.03.74-US-455143
*A96 B04 (26.04.78) *BE-827-033 C07g-07/02 + A61k-37/48*

Compsns. contg. immobilised bacterial cells wherein th
cells are covalently linked to particles of a water insol.
polymer matrix, have been prepd. They are used as sta
ilised insol. enzyme compsns. for use in enzymic react
ions. The amino group of the enzyme reacts with a free
group, e.g. epoxide, halocarbonyl or halomethylcarbony
of the polymer to form a covalent bond. Suitable enzyme
include glucose oxidase, penicillin-acylase, phenylalanin
ammonia-lyase and aspartate-ammonia lyase.

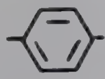
The enzyme may be reacted with the polymer direct o
by reaction with a monomer, e.g. an unsatd. ethylenic
monomer, followed by polymerisation. The enzyme may
be reacted with a cross-linking agent prior to covalent b
formation and polymerisation.

Suitable ethylenic monomers are of formula:-



$CH_2{=}\underset{R_1}{\underset{|}{C}}{-}W$

(where R_1 = H, Me or Cl; W = $-SO_2Cl$;



$-SO_2Cl$; $-COR_2$ or $-COX\text{-}(Y\text{-}X')_n\text{-}Z$; R_2 = halo,
azido, 2,3-epoxypropoxy, 2,3-epithiopropoxy, N-(2,3-
epoxypropyl) amino, chloride of p-diazoniumphenylaminc
acryloyloxy, lower alkoxycarbonyloxy or benzenesulphon
oxy; X = O or NR_3; R_3 = H or 1-6C alkyl; Y = 2 or 3C alk
ene; n = 1 or 2; Z = haloacetyl, 2-(4,6-dichloro)-s-tri-
azinyl, p-toluenesulphonyl p-(halomethyl) benzoyl or CN
and X' is the same as X with the restriction that when Z
p-toluenesulphonyl then X' = O).

Nelson. R.P. Bul. 19/25.5.78. 26.3.75 as 119868 (8pp)

KIFO= ★ D16 29155B/15 ★SU -608-8
**Immobilised enzyme for food, drug and chemical use - prepd.
coating solid carrier particle with mixt. contg. enzyme, substra
and adhesive and forming protective film**
KIEV FOOD IND TECHN 28.06.76-SU-378187
B04 (09.05.78) C07g-07/02

Enzymes are immobilised on hydrophilic carrier particl
e.g. silica gel, by bonding enzyme to carrier by means
adhesive, e.g. starch, and in the presence of enzyme su
strate, and then coating the prod. with semi-permeable
film-forming compsn.

Typical enzyme is β-galactosidase (I) with which lact
ose (II) substrate is used or invertase using sucrose as
substrate.

The fixed enzymes are used in food, pharmaceutical
chemical industries.

Elchits, S.V., Pichko, V.B., Chugui, V.A. Bul. 20/
30.5.78 28.6.76 as 378187 (pp938)

UYLA= ★ D16 29179B/15 ★SU -608-8
**High yield microbial biomass prodn. - using inorganic po
phosphoric acid as growth rate stimulating agent**
LATV UNIV 16.02.77-SU-454452
(07.06.78) C12b-01/08 C12b-03/14

Microorganisms are cultured at faster rates in aerated
media contg. 0.003-0.1 vol.% polyphosphoric acid as bi
stimulator. The agent is esp. effective in the cultivatio
of Pseudomonas fluorescens 310, Bac. subtilis, Flav.
suaveolens, Asp. niger, Actinomycites, etc. bacteria a
fungi.

Vitol, M.Ya., Lishmane, A.Ya., Vilks, S.R. Bul. 20/
30.5.78. 16.2.77 as 454452 (2pp314)

MELN/ ★ D16 29180B/15 ★SU -608-8
**Microorganisms culture unit - has air feeding tubes with conical s
nozzles below the diffusers**
MELNIKOV I A 04.01.77-SU-441013
(07.06.78) C12b-01/10

Additional aeration of culture fluid resulting in micro-
organisms growth intensification is provided by air feed
tubes. The latter are fitted below the diffusers, and ha
conical slot nozzles, while the nutrient feed tube is at th
central axis of the tank and has branches for the distrib
ing cups below the aerators.

Melnikov. I.A., Dorosinskii, L.B., Loginovskikh, L.A.
et al. Bul. 20/30.5.78. 4.1.77 as 441013 (3pp89)

ASBI= ★ D16 29182B/15 ★SU-608-833
Riboflavin microbiological prodn. - by culturing Candida boidinii yeast with methanol as carbon source
AS USSR BIOCHEM MIC 13.06.74-SU-034242
B02 (07.06.78) C12d-05/04

Riboflavin is obtd. by culturing a Candida boidinii yeast under aeration in a medium contg. methanol as C source. The method is quick and yields a good prod. yield. A prefd. strain is Candida boidinii 671.

The methanol is pref. added as a vapour, automatically dosed to provide a concn. ≯1%.
Erofeeva, Z.S., Kuvshinnikov, V.D., Blagodatskaya, V.M
et al. Bul. 20/30.5.78. 13.6.74 as 034242 (2pp314)

MOFO= ★ D16 29183B/15 ★SU-608-834
Rhizopus oryzae fungus strain - is used as producer of lipase to increase enzyme yield and its activity
MOSC FOOD IND TECHN 05.01.77-SU-441030
(07.06.78) C12d-13/10

Rhizopus oryzae strain 1414 colonies develop strong atmos-pheric vegetative mycelia and are velvety with a height of 1.0-1.5 cm.; they are colourless or with the development of spore carriers, become variegated with a dark g grey colour. The rhizoids are short and weakly branched and the stolons are weakly expressed.

The stilosporangiophores are straight and sinuous and have dia. 10-20 µ, with intermediate swellings at the branchings; they are brown coloured and 1-3 appear from each rhizoid neck.

The stilo-sporangia have dia. 50-150 µ and the sporangispores are spherical measuring (5-8) x (5-6) µ. The chlamydospores are spherical and have length up to 30-40 µ. The zygospores have dia. 120-140 u.
Gracheva, I.M., Milko, A.A., Mukhamedzhanova T.G.
et al. Bul. 20/30.5.78. 5.1.77 as 441030 (2pp314)

BUTT= ★ D16 29184B/15 ★SU-608-835
Penicillium roqueforti Thom fungal strain - used to produce lipase for use in cheese making
BUTTER CHEESE IND (ASMI=) 14.12.76-SU-430374
(D13) (07.06.78) A23c-19/02 C12k-01/02

On a Chapek agar the colonies are smooth in appearance, non-zonal, velvety and deep green in colour with white edges at 1-1.2 cm. and web-like edges at 0.8-1 mm.; a profuse colourless exudate is formed. The base of the colonies is colourless or pale cream. No atmos. mycelia are developed and conidia stems originate from the substrate; they are rough in texture and have length 150-200µ and dia. 4-6µ.

After 7 days the dia. of colonies on a wort agar are 3-3.5 cm.; the substrate is not coloured, and no exudate is formed; a webbed rim forms at 1.5-2 mm. The colonies are coloured deep green.
Lobyreva, L.B., Sviridenko, Yu. Ya., Marchenkova, A.I.
et al. Bul. 20/30.5.78. 14.12.76 as 430374 (2pp314)

BUTT= ★ D16 29185B/15 ★SU-608-836
Fungal strain Rhizopus nigricans Ehrenb F-2018 - used for produce lipase for use in cheese making
BUTTER CHEESE IND (ASMI=) 14.12.76-SU-431503
(12.05.78) A23c-19/02 C12k-01/02

The strain forms fast-growing colonies covering a Petri dish; it is strongly sporogenous, does not form atmos. vegetative mycelia, has a loose, velvety form and grows to a height of 1-1.5 cm.; the colonies are initially white but become olive-green. The rhizoids are branched and are dark brown; stolons are strongly expressed.

The sporangiospores are elliptical or spherical of dimension (4-12) x (4-10)µ and are clearly striated and strongly angular (esp. in mature cultures) and are grey or grey-brown. The zygospores are 100-200 µ in dia., and are dark brown or black, with low, wart-like protruberances formed above the substrate and at the surface. The stilo-sporangiophores are straight or occasionally arched and have dimensions (3000-4000) x (10-35) µ; they are brown and have no intermediate swellings etc.; 2-5 stilo-spor-

Lobyreva, L.B., Sviridenko, Yu. Ya., Marchenkova, A.I.
et al. Bul. 20/30.5.78. 14.12.76 as 431503 (2pp314)

RYZH/ ★ D16 29238B/15 ★SU-609-035
Spray-dryer protection from static electricity - by introducing manganese, iron and zinc sulphate mixt. as conducting impurities used in feed yeast concentrate drying
RYZHIKOV V I 19.09.75-SU-174508
Q76 (10.05.78) F26b-03/12

The method is carried out by neutralising the static electricity charge created.

To increase the neutralisation efficiency, the latter is carried out by supplying electricity conducting impurities into the material prior to its atomisation.
Rizhikov, V.I. Bul. 20/30.5.78. 19.9.75 as 174508
(2pp110)

LITT- ★ D16 29343B/15 ★US 4146-365
Apparatus for detecting one chemical - by reaction with another including wells and complementarily shaped coated inserts
LITTON BIONETICS IN 07.11.77-US-849154
B04 J04 R16 (27.03.79) G01n-33/16

One chemical is used to recognise a second chemical usin an appts. which includes a receptable tray having at least one well. The well is sized to receive an insert and a soln. of the first chemical. The insert is coated with the second chemical. The surface area of the insert and the well wall are complementarily shaped to define a first thin passageway between the insert and well along all the well wall.

Pref. the insert also has a longitudinal cavity and the well includes a central post which fits within the cavity again leaving a narrow passageway between the walls of the cavity and post.

The appts. is partic. used in affinity chromatography finding application in the immunoassay of immunochemicals such as antigens and antibodies. The narrow passageways reduce the diffusion time and hence process time is reduced. 7.11.77 as 849154 (5pp295).

WILL/ D16 10574A/06 =US 4146-38
Composting comminuted refuse opt. mixed with sludge - havin low bulk weight, controlled moisture content and determine graininess
WILLISCH H 30.07.76-DT-634209
*C04 (D15) (27.03.79) *DT2634-209 C05f-09 +C05f-11/08*

Particulate waste material capable of being composted is treated and purified by supplying and crushing the refuse a tube mill, piling successive layers of material to provi an elongated stack, forming >1 spaced tunnel in the stack by utilising >1 apertured, elongated cores, and withdraw ing the cores after stack has become self-supporting. Tu mill is fed with refuse material of preselected grain size of 15mm. and smaller in one dimension, and having spec ic gravity of <0.4-0.5. Pref. material has moisture con tent of 45-55 wt.%. Material with particle size >45-55m is discarded.

Thermal retting process employed does not require force ventilation or upturning of the material. 29.7.77 a 820153 (5pp931).

WILL/ D16 25210Y/15 =US 4146-3
Compost heap for household refuse and industrial waste automatically aerated to obviate turning operation
WILLISCH H 12.03.76-DT-610521 (21.10.75-DT-547134)
*(27.03.79) *BE-846-713 +C05f-11/08*

Particulate waste material, which can be composted, is treated and purified by piling successive layers of the m erial, e.g. refuse and sewage sludge, such that transve se tunnels are left in the stacks to expose the stack inte ior to air; controlling the depth of material above the tu el to allow aerobic fermentation without rotting; and allo ing the stack to ferment and undergo thermal retting whi undisturbed until it has matured as compost. The tunnel are formed by cores which are withdrawn to reveal the tunnels. Pref. vertical vents and transverse passages a formed in the stack.

Greater efficiency of space utilisation is obtd. 21.10 as 734426 (8pp1376).

SUMO D16 89451Y/50 =US 4146-432

Immobilised Streptomyces proteases - adsorbed on anion-exchange resin or polysaccharide

SUMITOMO CHEMICAL KK 24.06.76-JA-075118 (31.05.76-JA-063890)

*A96 B04 (27.03.79) *NL7705-966 C07g-07/02*

A water-insoluble, enzymatically active immobilised protease compsn. comprises proteases produced by Streptomyces germs bacteria immobilised by adsorption on a water-insoluble macroporous, macroreticulated anion-exchange resin having a specific surface area of ≮1m²/g. and a total anion-exchange capacity of ≮0.5meq./g. Pref. the proteases have esterase and amidase activities and are produced from Streptomyces-griseus, -fradiae, -erythreus, -rimosus or -flavovirens.

Purificn. of the crude proteases may be achieved simultaneously with the immobilisation, and the enzymes can be adsorbed in an amt. of ⩽400mg. per g. of the anion-exchanger. 27.5.77 as 801246 (5pp990).

MASU/ ★ D16 29372B/15 ★US 4146-433

Assessing antibacterial activity of antibiotics on agar plate - by successive dilution then incubating to determine minimal inhibiting concn.

MASUDA G 30.11.76-JA-142928

B04 (27.03.79) C12k-01/04

Method comprises prepg. a number of agar plates each with a different concn. of the antibiotic and with the concns. obtd. by twofold dilutions of the antibiotic. The agar plates are incubated overnight and examined to determine the minimal antibiotic concn. (MIC) at which growth on the plate is inhibited.

After this initial examination the plates are uniformly sprayed with an antibiotic inactivating enzyme and incubated for a second time. Examination of the plates determines the minimal antibiotic concn. (MBC) at which no visible bacterial growth occurs during the second incubation.

The antibiotic is pref. β-lactamase unstable penicillin or cephalosporin and the bacteria are Staphyloccus aureus, enterococcus, Escherichia coli or Klebsiella pneumoniae. Application of the inactivating enzyme to the plates is advantageously achieved by a spray. 29.11.77 as 855612 (5pp295).

HABE- D16 03968Y/03 =US 4146-454

Electromolecular propulsion of cpds. in semiconducting media - for the prepn., selective extn. or analysis of organic or inorganic cpds.

HABER INSTRUMENTS (HABE/) 22.07.76-US-707532 (28.12.70-US-102120)

*B04 E24 J03 R46 +P41 R16 (J04) (27.03.79) *BE-845-787 G01n-27/26*

Mobility is imparted to a chemical species by providing a semiconductive transport medium (I) and impressing a voltage of 0.05-25,000V/cm across the medium sufficiently high to produce a current density of 0.001-400(0.002-100)uA/cm² and ⩾the threshold current value for the species in the medium, below which value the species remains stationary, to induce a high mobility rate for the species.

The method permits the sepn. characterisation or study of molecular types by virtue of the differential threshold levels. Pref. mobility is imparted to a biochemical species (esp. human or bovine albumin, haemoglobin, cytochrome C, myoglubin or pancreatin) in a non-aq. medium by providing (I) comprising a non-aq. solvent with proton acceptor properties and applying a voltage of 0.05-25,000 V/cm across the medium sufficiently high to produce a current density of ⩾2μA/cm² and ⩾the threshold current value for the species in the medium. 22.7.76 as 707532 C.i.p. 3989298 (26pp990).

ESSO ★ D16 29396B/15 ★US 4146-470

Dispersal of oil slicks - with combination of chemical dispersant and microorganism

EXXON RES & ENG CO 22.07.77-US-818191 (01.04.74-US-457098)

H03 (D15) (27.03.79) C12b-01/10

Method for dispersing a layer of hydrocarbon oil in sea water comprises contacting the oil layer with (a) a chemical dispersant and (b) a microorganism at ca. 25°C using an oil:(a):(b) wt. ratio of 100:1:1.

Specifically the oil is Kuwait crude, No.4 heating oil, Prudhoe Bay crude or Lakosa crude. Component (a) is a mixt. of 9 wt.% sorbitan monooleate (SM), 15 wt.% polyoxyethylene-sorbitan monooleate (PSM), 15 wt.% aq. Na dioctyl sulphosuccinate (DSS) and 61 wt.% isoparaffin solvent, and has an HLB of 10.6. Component (b) is Micrococcus cerificans.

Combinations of (a) and (b) act synergistically. 22.7.77 as 818191 (5pp367).

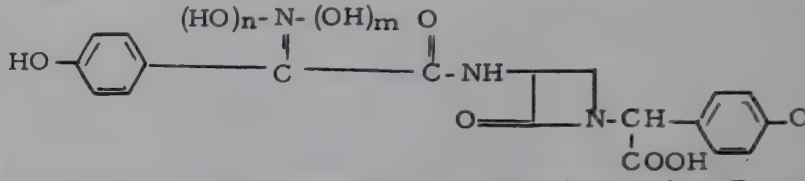
FUJI D16 34513Y/20 =US 4146-536

Antibiotics nocardicine E and F - prepd. by cultivation of Nocardi a uniformis tsuyamanensis ATCC 21806 or its mutants

FUJISAWA PHARM IND KK 14.11.75-JA-137391

*B03 (27.03.79) *BE-848-366 A61k-31/39 C07d-205/08 C12d-09/22 +A01n-09/22*

Novel Nocardicins of formula (I) are free of other Nocardicins and have a white crystalline form. In the formula, Nocardicin E has m = 1 and n = 0 and Nocardicin F has m = 0 and n = 1.



(I)

Prods. are antibacterials, esp. active against Pseudomonas aeruginosa. They are e.g. prepd. by fermentation of Noardia strains in a nutrient medium. 2.11.76 as 738144 (5pp974).

BEEC D16 67720W/41 =US 4146-610

Antibiotic MM 13902 from Streptomyces olivaceus - having synergic antibacterial activity with ampicillin

BEECHAM GROUP LTD 28.03.74-GB-013856

*B04 (27.03.79) *DT2513-854 A61k-35*

Pharmaceutical compsns. for treating bacterial infections in human and animals comprise an antibacterially effective amt. of a pharmaceutically acceptable dibasic salt of MM 13902. MM 13902 is a solid carboxylic acid of molecular formula $C_{13}H_{16}O_8N_2S_2$.

The UV, IR and NMR spectra of MM 13902 are given. It has antibacterial activity against e.g. Staph. aureus, B. subtilis. E. coli, and synergises the activity of ampicillin against e.g. E. coli, Klebsiella aerogenes, Proteus mirabilis or Proteus morganii. 22.9.76 as 725383 (+ 19.3.75; 23.8.76 - US - 559803; 716772) (15pp974).

DEUT/ ★ D16 29551B/15 ★US 4147-480

Gas circulation system with hollow gas flow element - having tapered holes for flow of gas through element; used in fermentation and gas purificn. processes

DEUTSCH D H 19.08.77-US-825947

J04 Q56 (03.04.79) F04b-39

Gas circulation system comprises a hollow gas impermeable element which is sealed gas tight across a chamber. The element has a wall thickness of between 0.001 μ and 3 mm. and contains a no. of tapered holes for the flow of gas through the wall of the element. The holes are tapered in the same direction so that all the smaller openings are either on the inside or the outside surface of the element.

The distance across the smaller openings is less than the mean free path of the gas molecules which are to be employed in the system. The no. and size of the holes are such that the mean absolute effusional resistance coeff. of the wall is between 10^{-4} and 2.0 under the operating conditions in the chamber. Used in bacteriological fermentation reactions for introducing air or other gases into a chamber at a controlled rate and in the depollution of industrial smoke stack gases. System avoids the use of pumps and compressors which can give rise to impurities caused by the presence of lubricants. 19.8.77 as 825947 (12pp67).

DEUT/ ★ D16 29552B/15 ★US 4147-481

Gas circulation system with gas flow sheet - having tapered holes for flow gas through sheet

DEUTSCH D H 19.08.77-US-826270
J04 Q56 (03.04.79) F04b-39

Gas circulation system comprises a sheet of gas impermeable material which is sealed gas tight across a conduit. The sheet has a thickness of between 0.001 μ and 3 mm thick and contains a no. of tapered holes for the flow of gas through the sheet. The holes are tapered in the same direction so that all the smaller openings are either on one side or the other side of the sheet.

The distance across the smaller openings is less than the mean free path of the gas molecules which are to be employed in the system under the operating conditions of temp. and pressure. The no. and size of the holes are such that the mean absolute effusional resistance coeff. of the wall is between 10^{-4} and 2.0 under the operating conditions.

Used in (I) in bacteriological fermentation reactions for introducing air or other gases into a chamber at a controlled rate; and (2) In the depollution of industrial smoke stack gases (treatment). Arrangement avoids the use of pumps and compressors which can give rise to impurities caused by the presence of lubricants. 19.8.77 as 826270 (11pp67).

SUMO D16 67330A/38 =US 4147-592

Antithrombotic and antitumour-potentiator urokinase purificn. - by adsorption of impurities on ionic pullulan gel

SUMITOMO CHEMICAL KK 10.03.77-JA-026726
*B04 (03.04.79) *DT2809-330 C07g-07/02*

The purificn. of urokinase comprises contacting a crude aq. soln. of urokinase with an ionic pullulan gel at pH 6.0-9.0 and recovering pure urokinase soln..

Pref. the contacting is effected using an ionic pullulan gel of water regain of 1.0-20 g per g of dry gel and an ion exchange capacity of 1-4 meq./g. Pref. the gel has diethyl amino ethyl gps. in ion exchangers.

Harmful impurities such as pyrogens and colouring matter can be removed. 6.3.78 as 883746 (4pp964).

AJIN D16 14881B/08 =US 4147-692

7-Glycyl:propylamino-4-methyl:coumarin - useful as fluorescent material (intermediate) for measuring enzyme activity

AJINOMOTO KK 16.06.77-JA-071469 (26.02.77-JA-020663)
*B04 E13 R16 (B02) (03.04.79) *J54005-976 +C07c-103/52*

7-Glycyl-prolylamino-4-methylcoumarin and acid salts, partic. with proline residue in L-form, are useful fluorogenic substrates for determn. of enzymatic activity.

Enzymatic activity of X-prolyl dipeptidyl-amino peptidase is determined by measuring amt. of 7-amino-4-methylcoumarin formed by enzymatic hydrolysis of 7-glycyl-L-prolylamino-4-methylcoumarin. Rate of hydrolysis is proportional to amt. of enzyme present. Fluoroescence intensity of 7-amino-4-methyl-coumarin is 30 times greater than that of 7-glycyl-L-prolylamino-4-methylcoumarin.

Partic. useful in diagnosis of hepatic and malignant disease. Novel N-endo protected derivs. of 7-glycyl-prolylamino-4-methylcoumarin are useful intermediates in synthesis of the substrates. 17.2.78 as 878826 (3pp).

FINN- D16 51646A/29 =US 4147-752

Immunological determn. and enzymatic reactions - using ring-shaped coated body, to fit test-tube etc. coated with e.g. antibody, antigen, protein, hapten or enzyme

FINNPIPETTE OSMO A 14.01.77-SF-000116
*B04 J04 +P31 R15 R16 (03.04.79) *BE-862-908 G01n-33/16*

A form piece which in use is mounted in a test tube and coated with a material, e.g. antibody, enzyme, protein, antigen, or haptene, has a body in the form of a ring with an aperture, and at least one projection extending from the outer surface of the body to provide spacing from the test tube.

Pref. the body is a hollow cylinder and the projection extends from the lateral surface. The body pref. has a magnetic core and the body is of porous material. A handle is pref. provided on the body. 11.1.78 as 868491 (8pp1376).

MERI ★ D16 29672B/15 ★US 4147-772

Stabiliser for lyophilised and liq. viral vaccine - comprises partially hydrolysed gelatin, poly:hydric alcohol, Medium 199 and an acidic buffer

MERCK & CO INC 23.02.78-US-880667 (03.02.76-US-654837)
B04 (03.04.79) A61k-39/12

A vaccine comprises an inactivated or attenuated virus, and a stabiliser consisting of 2-5 pts. of partially hydrolysed gelatin having a mol. wt. of about 3,000, 2-55 pts. of sorbitol, mannitol or dulcitol, 0.5-1.7 pts. of Medium 199 as equivalent cell culture medium, an acidic buffer to adjust to pH 6 - 6.5.

The stabiliser stabilises lyophilised and liquid viral vaccines e.g. measles, mumps, rubella, polio or hepatitis and the vaccines have prolonged storage stability with diminished redn. in titre. 23.2.78 as 880667 (4pp).

MORG D16 09345A/05 #US 4147-773

Bifidus powder contg. lactulose - used in prevention or treatment of intestinal disorders

MORINAGA MILK KK 10.06.76-JA-067067 (12.12.77-US-859713)
*B04 (03.04.79) *J52151-787 +A61k-37*

Powder compsn. comprises 28-57 wt.% lactulose, < 2.5 wt.% moisture and $\geqslant 8 \times 10^{10}$ freeze dried viable cells of genus Bifidobacterium per g compsn. Suitably Bifidobacterium adolescentis - longum, or bifidum is used. The compsn. esp. comprises a mixt. of (a) 40-70 wt.% of the cells and a suspending agent therefore with cell concn. $\geqslant 2 \times 10^{11}$ per g and (b) 60-30 wt.% powder contg. ⩽ 55 wt.% lactulose and balance lactose and galactose.

The compsn. can be stored with high cell survival rate and administered orally to establish favourable Bifidobacteria in cases of abnormal intestinal flora. 22.12.77 as 859713 (8pp945).

KITA D16 18361A/10 =US 4147-774

Antibiotic PO-357 - prepd. by cultivation of Streptosporangium pseudovulgalae PO-357 in nutrient medium under aerobic conditions

KITASATO INST 10.07.76-JA-081470
*B04 (03.04.79) *J53007-601 A61k-35*

Novel antibiotic sporamycin is prepd. by culturing the microorganism Streptosporangium pseudovulgare PO-357 FERM-P No. 3571, ATCC No. 31308.

The cpd. shows antibacterial and antifungal activity and also antitumour activity. LD_{50} (mice is 15 mg/kg (i.p) and 13 mg/kg (i.v.). 11.7.77 as 814665 (7pp945).

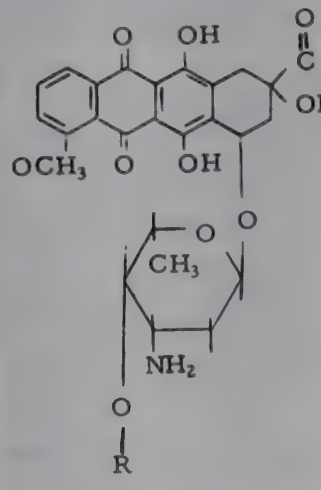
ZAID D16 84731Y/48 =US 4147-778

Anthracycline-glycoside antibiotics prodn. - by fermenting Streptomyces strains, useful as antibacterials and antitumour agents

ZH BISEIBUTSU KAGAKU KEN 31.05.76-JA-063810
*B03 (03.04.79) *BE-855-098 A61k-31/71 C07h-15/24*

Anthracycline glycosides of formula (I) are new.

In (I) R is of formula A or B.



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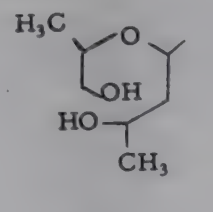
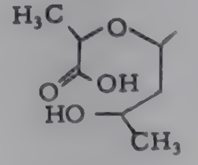


A



B

(I) are useful as antibacterial and antitumour agents. 16.5.77 as 797201 (26pp918).

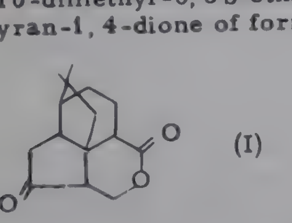
GRAC D16 87867A/49 =US 4147-798

Tetra:cyclic antitumour agent quadrone - obtd. by culturing Aspergillus terreus strain

GRACE W R CO 24.04.78-US-899616 (02.08.77-US-821087)
*B02 (03.04.79) *BE-869-439 A61k-31/36 C07d-311/94 C12d-13*

D 16: FERMENTATION INDUSTRY -p. 32

Complex quadracyclic lactone, designated quadrone, is produced by cultivating the microorganism Aspergillus terreus NRRL 11156 under submerged aerobic conditions in an aq. carbohydrate soln. contg. a nitrogenous nutrient. Pref. organism is cultured at 22-30 (25)°C for 4-15 days. Fermentation is pref. effected until prod. concn. is ≥ 0.001 mg/ml. Also new is the produced cpd., octahydro-10,10-dimethyl-6,8b-ethano-8bH-cyclopenta[de][2]benzopyran-1,4-dione of formula (I).


(I)

Cpd. inhibits the growth of tumorous human nasopharynx cells in mice.

24.4.78 as 899616 (7pp963).

MICR- D16 20240B/11 =US 4147-807

Bacteria concentrate for fermenting sausages and other meat prods. - contg. Micrococcus varians and lactic acid bacteria, pref. Pediococcus cerevisiae

MICROLIFE TECHNICS 06.09.77-US-830917

*(D13) (03.04.79) *DT2809-759 A23b-04/12*

Dry and semi-dry sausage and other fermented unsat. prods. are prepd. by mixing meat with spices, nitrites or nitrates and fermenting with a compsn. comprising Micrococcus varians NRRL-B-11,060 and ≥1 lactic acid-producing bacterium to lower the pH to 5.4-4.8 without added acid-producing chemicals which lower the pH more rapidly than the lactic acid-producing bacteria.

A superior flavour is obtd. The bacterial compsn. is pref. provided in the form of a frozen cell concentrate for storage and is thawed for use. 6.9.77 as 830917 (5pp).

NATR ★ D16 29725B/15 ★WP 7900-16

Increasing the immunogenicity of an antigen - by combination of a antigenic material with the antigen

NATIONAL RES DEV CORP 28.09.77-GB-040339

B04 C03 (05.04.79) A61k-39

D/S: N(CH, DT, SW, US) + E(CH, DT, FR, GB, SW).

An immunologically active prepn. for human or veterinar use comprises an antigenic material in combination with an MHC antigen.

An antigenic material in combination with an MHC antigen, e.g. an HLA antigen or an analogous MHC antige of another animal species is new.

The MHC antigen may be in the form of an MHC-B2M complex and is bound to the antigenic material through th B2M-portion of the complex. Pref. the antigenic materia is a bacterial or viral antigen; a hormone peptide; a bacterial toxin or toxoid such as diphtheria toxoid; or HCG.

MHC antigen enhances the immunogenicity of the antigen material with which it is combined. Thus, immunisation procedures may be simplified, the amts. of antigenic material required may be reduced and the response to a given quantity of antigenic material is amplified.

27.9.78 as GB0016 (22pp954).
ISR: DT1945251; 1 Journal Reference.

See Also

D12 J5 4028855
D13 SU 608513
D23 J5 4028305
D12 J5 4028856
D14 FR 2396516
D13 BR 7705805
D17 US 4146706

D17: SUGAR; STARCH

BIGN/ ★ D17 B/15 ★BR 7704-123

Rotary sieve for cleaning sugar cane

BIGNELLI M 24.06.77-BR-004123

P43 (16.01.79) B07b-01/08 C13c-01

SEDA/ ★ D17 B/15 ★CS 7606-011

Sugar mixture separation

SEDA L 16.09.76-CS-006011

(28.02.79) B01d-21/02

HAYB D17 54027R/30 =DS 2003-350

Heat resistant slightly viscous starch syrup - of high sugar content and difficully

HAYASHIBARA CO 24.01.69-JA-005124

*(D13) (05.04.79) *BE-744-835 +C12d-13/02 C13k-01/06*

Starch syrups are obtd. by (a) using α-and/or β-amylase and α-1,6-glucosidase to saccharify a liquidised starch slurry and (b) hydrogenating this syrup, in which the oligosaccharides and dextrins formed are linear, to sugar alcohols.

The syrup is more stable, heat-resistant, has increased sweetness, reduced tendency to crystallise and improved taste. The α-1,6-glucosidase is pref. isoamylase and/or pullulanase and the hydrogenation is pref. effected in the presence of Raney Ni. 26.1.70 as 003350 (6pp922)

SUSO D17 45737U/33 =DS 2302-841

Monosacchardie sepn from higher saccharides - using a polystyrene sulphonate cation exchange resin cross-linked with divi

SUOMEN SOKERI OY (SUS -) 26.01.72-US-220886

*A91 (05.04.79) *DT2302-841 C13k-01*

Mono-, di, tri- and oligo-saccharides are sepd. from an aq. saccharide soln. (I) having a solids content of 20-60 (25-55) wt.% obtd. from a starch conversion process and also contg. ≥ 15 wt.% fructose by passing (I) alternatively with water into a 2.5-5 m. high column filled with 0.15-0.84 mm beads of a polystyrene sulphonate cation exchange resin in salt (Na, Ca) form and crosslinked with 2-8 wt. % divinyl benzene at a rate of 0.2-2.0 (1.5) $m^3/hr/m^2$ colu dia. and sepg. the fractions appearing at the foot of the column.

Monosaccharides are thus easily sepd. in high yields and purity. 20.1.73 as 302841 (5pp922)

KNAU/ ★ D17 28033B/15 ★DT 2744-0

Continuous hydrolysis of vegetable matter - in reactor with heatin hydrolysis, extraction, scrubbing and dilution zones

KNAUTH H 30.09.77-DT-744067

(05.04.79) C13k-01/02

In the continuous hydrolysis of vegetable matter with dil acid at high temps., e.g. to produce xylose and sugars, the deaerated matter descends in a vertical reactor in co -terflow to the acid. Hydrolysis and extraction is follow by scrubbing in counterflow with hot water and by contin uous discharge from the reactor.

The system combines the max. sugar yield with the m acid consumption. It is suitable for prehydrolysis (hemi cellulose) as well as for hydrolysis proper. Only simple proven process techniques are applied. 30.9.77 as 7440 (7pp39)

PHIP D17 10003A/05 =US 4146-

Acidising or fracture-acidising subterranean formations - usi gelled acidic compsns.

PHILLIPS PETROLEUM CO 24.12.75-US-643986 (27.10.77-U 846063)

*A97 H01 Q49 (A11) (27.03.79) *US4068-714 E21b-43/27*

A gelled acidic compsn. for matrix or fracture acidisin of a subterranean formation, comprises water; a water-dispersible biopolysaccharide obtd. by reacting Xanthon nas bacteria on a carbohydrate as thickener; a water sol uble cpd. of a polyvalent metal e.g. $KMnO_4$, $NaMnO_4$, $(NH_4)_2CrO_4$, $(NH_4)_2Cr_2O_7$, alkali metal (di)chromates an CrO_3; a water soluble reducing agent to reduce valency metal and cause gelation; and an organic acid which reacts with acid soluble components in the formation.

The components are sufficiently compatible with each other in an aq. dispersion to cause gelation. Compsn. is stable to degeneration by the heat of the formation, allowing good penetration of the compsn. In parent patent, the process is described. 27.10.77 as 846063 Div. ex 4068714 (9pp982).

USDA ★ D17 29486B/15 ★US 4146-705

Treatment of extracellular Arthrobacter stabilis polysaccharide(s) - to increase soln. viscosity, by acidification, drying, and heating

US SEC OF AGRICULTURE 17.06.77-US-807620

(D16) (27.03.79) C07h-01/08

Method of treating the extracellular heteropolysaccharide (I) produced by Arthrobacter stabilis NRRL B-3225 is described: (a) (I) in its acidified form is dried to <25% H_2O (dry wt. basis); (b) dried (I) is heated for 5-130 mins. at 80-100°.

Method increases the viscosity of aq. solns. of (I) by more than 350% over known solns. (US 3632570). (I) is potentially useful as a thickening and suspending agent in aq. solns., and the method does not affect the compatability and viscostability in the presence of salts, acids, etc. 17.6.77 as 807620 (4pp478).

MAYO/ ★ D17 29580B/15 ★US 4147-557

Sugar cane mill with rake feed conveyor - where sweeping incline with gated aperture provide selective by/pass of station

MAYO A R 03.02.78-US-874933

(03.04.79) C13d-01/02

In a sugar mill a mixture of cane stalks, bagasse, juice and water is advanced up an inclined surface by a rake conveyor which separates the product into a series of longitudinally spaced packages. An aperture through the inclined surface may be closed by a sliding gate driven by a control. Typically the control activates the gate to allow alternate product packages to fall through the aperture.

Those packages which fall through the aperture are received by a belt conveyor which advances them to one stage of the sugar mill. Those packages which pass over the aperture are discharged into a chute at the upper end of the inclined surface and pass to a downstream stage of the sugar mill.

The gated aperture allows one stage of a sugar mill to be bypassed selectively e.g. to halve the product load supplied to it. This prevents overload and permits total bypass of a defective milling stage. 3.2.78 as 874933 (15pp295).

See Also

D16 DS 2541960

D18: SKINS; HIDES; LEATHER; TOBACCO

UNIL ★ D18 27865B/15 ★BE -871-072

Nourishing tanned leather - using fatty material emulsion comprising a hydroxylated phosphatide

UNILEVER NV 06.10.77-GB-041668

E11 (06.04.79) C14c

The process comprises using an aq. emulsion of a fatty material comprising a hydroxylated phosphatide (produced by hydroxylation of ethylenic double bonds c.f. US2445948 and US 2629662 using oxidants esp. H_2O_2).

Unlike normal phosphatides, the above penetrate the leather completely and are almost completely absorbed so that the bath is practically exhausted. The process is applicable to all types of leather. 6.10.78 as 871072 (8pp597)

ADAM/ ★ D18 B/15 ★CS 7500-731

Synthetic tanning agents prepn.

ADAMEK M 05.02.75-CS-000731

(28.02.79) C14c-03/20

LISS/ ★ D18 B/15 ★CS 7601-744

Fine leather prodn. for gloves or clothes

LISS Z 18.03.76-CS-001744

A82 F08 (28.02.79) D06n-03

MORA/ ★ D18 B/15 ★CS 7706-956

Leather feeding system

MORAVEC R 26.10.77-CS-006956

(28.02.79) C14b-17/06

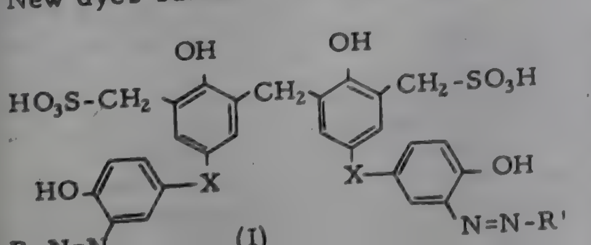
UGIN D18 45733U/33 =DS 2302-716

Soluble disazo dyes - from substd diphenyl methane coupling components, for fast pastel shades on leather

PECHINEY UGINE KUHL 26.01.72-FR-002511

*E21 (05.04.79) *DT2302-716 C09b-33/04 C09b-45/04 D06p-03/32 +D06p-01/06*

New dyes suitable for leather are of formula (I):-



(I)

In (I), X is sulphonyl or isopropylidene and R and R' are gps. usually found in diazotisable prim. aromatic amines and may be o- to the amino gps.

used in forming metal complexes. The Cu-, Ni-, Cr-, Co- and Fe-complexes of (I) are also new.

(I) give fast pastel shades, previously impossible without expensive processing and/or damaging the leather. 19.1.73 as 302716 (6pp922)

BADI D18 73034A/41 =DS 2714-81

Calcium oxide and sulphide free liming - by using combination sodium hydroxide soln. with sodium sulphate and/or sodiu di:carboxylate

BASF AG 02.04.77-DT-714813

*(05.04.79) *DT2714-813 C14c-01/06*

Lining bath contains ≥ 2 wt. % NaOH (based on hide salt wt.) and 50-200 g Na_2SO_4 and/or Na salts of 3-6C dicarboxylic acids as swelling aids. The lining process is thu free of lime and sulphides (leading to less polluting effluents) and may be carried out continuously. 2.4.77 as 714813 (5pp922)

FARB D18 00256A/01 =GB 1543-8

Chromium tanning opt. pickled hides - in presence of hydrolysabl water-soluble, partly-esterified dicarboxylic acids

BAYER AG 12.06.76-DT-626429

*E19 (11.04.79) *DT2626-429 C07c-69/52 C14c-03/06 +C0 69/34*

Skins are chrome-tanned or leather re-tanned by treatin with ≥1 Cr (III) salt and ≥1 acid binding agent in the pre ence of ≥1 water-sol. partially esterified polycarboxylic acid of 4-11C which is capable of being hydrolysed into a free acid or salt. Pref. the acid is a dicarboxylic acid, a is present in an amt. of 0.5-2 (1.3-1.8) moles per mol Cr_2O_3.

Process makes it possible to obtain completeltanning and to use the chrome liquors completely. 8.6.77 as 02 (7pp974)

CHCC D18 55363A/31 =GB 1543-

Synthetic fibre tobacco filters - of composite polypropylene-E fibres, heat treated to above the EVA m.pt. to stabilise the filter

CHISSO CORP 19.01.77-JA-004757

*A97 F04 P15 (A18) (11.04.79) *DT2801-211 A24b-15/02 D0 08/10 +D01f-08/06*

Tobacco-smoke filters are produced by forming a bundl of fibres contg. 20-100 wt.% of composite fibres and 80-zero wt.% of other fibres. Composite fibres have a propylene polymer as first component; and, as second component, an EVA copolymer having a vinyl acetate content of 0.5-18 mol.%, a saponification prod. of EVA copolymer, or mixt. of copolymer with saponification prod. where total amt. of vinyl acetate and vinyl alcohol monomer is 0.5 mol.%. Second component occupies 60-100% circumference of the fibres. Bundle is subjected to heat < m.pt. of first component > m.pt. second component, and cooling to stabilise it by interadhesion.

Hot-melt adhesive fibres are produced giving superior smoking taste. 19.1.78 as 002256 (12pp931)

OLIN D18 33748A/19 =GB 1544-014
Aromatised filter cigarette - with volatile aroma substance impregnated porous sleeve and partly perforated paper lining around filter core
OLIN CORP 28.10.76-US-736421
*E15 P15 (11.04.79) *DT2747-775 A24d-01/02*

A flavoured ventilated filter tip cigarette comprises a tobacco column and an abutting filter. Filter is enclosed by an air permeable wrapper impregnated with a volatile smoke flavouring agent, a tipping envelope enclosing enclosed filter and having a ventilated area in communication with wrapper.

Envelope and wrapper are adhered together over regions of their contiguous surfaces, but not over the ventilated area of tipping envelope. Ventilated area is adhesive-free and air permeable, permitting ambient air to flow through and carried into the filter imparting flavour to the smoke from the cigarette.

Esp. used in mentholated cigarettes to ensure taste effect of menthol enters mainstream of smoke. 11.7.77 as 029042 (3pp931)

BURR- D18 25317Y/15 =GB 1544-116
Continuously producing cigarette filter tips - with filling of filter chamber under reduced press.
BURRUS F J & CIE (BAIM-) 26.11.76-CH-014907 (08.12.75-CH-015905)
*P15 (11.04.79) *BE-849-111 A24c-05/56*

Cigarette filter units are produced by arranging fibrous filter portions at spaced intervals on a sheathing strip having a width 75-93% of the filter portion circumference, wrapping the strip to leave chambers between the portions, and exhausting air from the openings in the chambers.

The chambers at reduced pressure are fed to a filling station where particulate filter material is sucked in, whereupon the opening in each chamber is sealed with a strip. The method permits operation utilising particulate material at very high speeds, e.g. up to 60 m./min. 7.12.76 as 050944 (9pp1379)

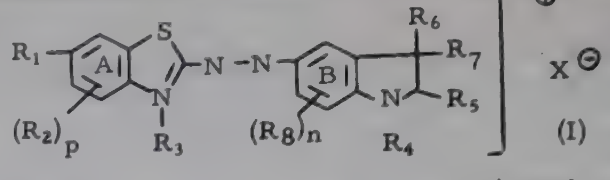
MERA- ★ D18 28262B/15 ★GB 2004-729
Olefin polymer fibre cigarette filter - contains fibres coated with wax
MERAK SPA 29.09.77-IT-028092
A94 F01 P15 (A17) (11.04.79) A24c-05/50

A cigarette filter comprises olefinic polymer fibres impregnated with an animal, vegetable, mineral and/or synthetic wax. The wax is esp. carnauba, sugar cane, candelilla, palm, Japan, montan wax, paraffin wax, Fischer-Tropsch process waxes, beeswax or shellac.

The filters are superior to those produced by impregnating polyolefin fibres with other materials, e.g. EVA, triacetin, etc. 28.9.78 as 038473 (5pp955)

FARB D18 38274V/21 =J7 9005-409
Basic azo dyes from benzothiazoles and indolines - giving blue shades to leather cotton and synthetic polymers
BAYER AG 10.11.72-DT-255058
*A60 E21 F06 (16.03.79) *BE-807-058 C09b-29/36 C09b-43*

Novel azo dyes have formula (I): (where R_1 is H, (cyclo)



(I)

alkyl, aralkyl, (ar)alkoxy, aryloxy or acylamino; R_2 is nc -ionic substit; R_3 and R_4 are (cyclo)alkyl, aralkyl or alkenyl; R_5 is H, (cyclo)alkyl or aryl; R_6 and R_7 are H or alkyl; each of the pairs R_5/R_6 and R_6/R_7 may form cycloalkyl; R_8 is a nonionic substit. or COOH; p is 0-3; n is 0-3; X^- is anion; A and B may carry condensed rings and the (a)cyclic radicals may opt. be substd. by non-ionic or COOH gps.).

(I) are useful for dyeing/printing leather, cotton and synthetic fibres, esp. (co)polyacrylonitrile and acid modified polyesters. 8.11.73 as 125034 (clg. 10.11.72-DT-255058) C09b-43/00; 29/36 (16.3.79) BAYER AG (22pp) (J5 0000016)

COHN/ ★ D18 29315B/15 ★US 4146-040
Flame retardant cigarettes - coated with alkali silicate and cpd. t
lower pH
COHN C C 17.03.77-US-778665
P15 (27.03.79) A24d-01/02

Cigarettes are constructed using wrappers coated separat
ly with a layer of alkali metal silicate, and with a materia
to lower the pH of the silicate.

The cigarettes are flame retardant according to the Flammable Fabrics Act Test No. DOC FF-4-72, i.e. a smouldering cigarette will not ignite a mattress with cotton ticking and batting within one minute. The smoke does not have the unpleasant taste which results when alkali silicate is used alone. The cigarettes yield more puffs per unit length, do not drop ash so easily, and do no
stick in processing machinery. 17.3.77 as 778665 (7pp955

PHIM D18 80461A/45 =US 4146-04
Cigarette wrapping material esp. paper - coloured brown wi
insoluble humate and washed to remove all soluble humate
PHILIP MORRIS INC 28.04.77-US-791896
*F09 P15 (27.03.79) *DT2817-775 +A24d-15/03*

Prepn. of brown cigarette papers comprises (a) staining the paper with a sol. humate salt; (b) fixing the humate or the paper by ion exchange to render it insol. and (c) washing the fixed paper to remove sol. salts formed during th
ion exchange step. Pref. an alkali metal humate is used and it is rendered insol. on the paper by ion exchange wit
an alkaline earth metal.

The paper has a reduced content of sodium ions and th
amt. of gas phase constituents such as carbon monoxide i
reduced. 28.4.77 as 791896 (6pp918).

ICIL D18 09601X/06 =US 4147-17
Smoking mixt. compsn. - contains a dispersed smectite to produce
firmer ash and to retard burning rate
IMPERIAL CHEM INDS LTD 16.07.74-GB-031426
*A97 P15 (03.04.79) *DT2531-127 +A24d-01/18*

Mfr. of a smoking material comprises dispersing a smectite in water by agitation to produce a slurry having a viscosity not less than that of a slurry obtd. from the same smetcite and water by agitation at 15°C with an energy input of 0.04 J/g/sec until a max. visoosity is reached, mixing the slurry with a combustible film forming binder and inorganic filler and making the slurry into a form from which a tobacco-simulating material can be obtd..

Fine dispersion gives improved ash coherence and greater combustion retardance by the smectite. The materials have low air porosity. 14.6.77 as 806377 (+ 8.7.75 - US - 594086) (6pp982).

DUPO ★ D18 29561B/15 ★US 4147-51
Solvent-drying wet animal hides - with a mixt. of methanol ar
chlorinated hydrocarbon carrier
DU PONT DE NEMOURS CO 30.01.78-US-873660
E16 Q76 (E17) (03.04.79) C14c-01 F26b-03

The hides are dried by treating with a single-phase drying medium contg. a chlorine-contg. carrier liq. (I) and methanol, until the required amt. of water has been removed. (I) is $\geqslant 1$ of $CCl_2F.CClF_2$ (Ia), $FCCl_3$, C_2Cl_4, nd $CH_3.CCl_3$.

Pref. the medium contains 4-40 wt.% methanol and rying can be carried out in stages. During treatment layers form, pref. within 3 min., one being mainly aq. nethanol with < 20 wt.% (I), the other being ⩾ 90, esp. ⩾ 97 wt.% (I).

Sepn. of the medium into aq. and carrier layers is apid so the process is suitable for automation. Hides can e dried to nearly any predetermined moisture level and ofter hides of more uniform quality are obtd. compared vith oven drying. 30.1.78 as 873660 (5pp1251).

See Also

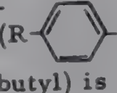
D15 J5 4030251

D2: DISINFECTANTS; DETERGENTS

D21 : DENTAL ; TOILET PREPARATIONS

STUC/ ★ D21 B/15 ★CS 7605-625
Powder mixture for suspensions prepn.
STUCHLIK M 30.08.76-CS-005625
(28.02.79) A61k-09/14 A61k-47 C07c-31/18

HAAR D21 54226W/33 =DS 2405-004
Para-isopropyl(tert,-butyl)-alpha-methyl hydrocinnamic alcohol - for use as germicidal, antiperspiratory and deodorising agent
HAARMANN & REIMER GMBH 02.02.74-DT-405004
*E14 P34 (05.04.79) *DT2405-004 A61k-07/32*

p-Isopropyl- and/or p-t. butyl-a-methyl-hydrocinnamic alcohol (I) :- (R--CH_2-$CH(CH_3)$-CH_2OH, where R is isopropyl or t. butyl) is used as a bacteriostatic deodorant.

(I), which pref. applied in amts. of >0.1 mg/cm^2 skin surface (in any suitable carrier), does not damage skin flora while having an intrinsic weakly floral, cyclamen-like, odour and acting as its own fixative. 2.2.74 as 405004 (4pp922)

LEIT D21 59928X/32 =DS 2501-683
Composite prosthetic matl. - comprises methacrylate-based polymer matrix contg dispersed bioactive material
LEITZ WETZLAR E 17.01.75-DT-501683
*A96 L02 P32 (05.04.79) *DT2501-683 A61c-08 A61f-01 C08f-120/14 C08l-33/08*

Bonding compsn. for dental repairs comprises a mixt. of methyl methacrylate polymer matrix and a durable bioactive, bone-compatible filler, (20-70 vol.%), of particle size $\leqslant$200 u.

A pref. filler comprises SiO_2, (20-60 wt.%); P_2O_5, (5-40 wt.%); Na_2O, (2.7-20 wt.%); K_2O (0.4-20 wt.%); MgO, (2.9-30 wt.%); CaO, (5-40 wt.%); and F, (0.005-3 wt.%). Materials are prepd. by in vivo or in vitro polymerisation of a mixt. of Me methacrylate, hardener and filler; or the filler can be introduced when the polymerisation mixt. reaches a certain viscosity. 17.1.75 as 501683 (4pp047)

ASAO D21 88592Y/50 =DS 2725-665
Tooth and bone prostheses prodn. - from powdered hydroxy-apatite and metal, ceramic or glass fibres
ASAHI KOGAKU KOGYO 07.06.76-JA-066217
*P32 (05.04.79) *DT2725-665 A61c-08 A61f-01*

Dental and osseous prostheses are produced by adding (a) a fine powder of $\geqslant$ 50 wt.% $Ca_{10}(PO_4)_6(OH)_2$ and $\geqslant$ 50 wt.% $Ca_3(PO_4)_2$, $AlPO_4$, Al_2O_3, SiO_2, $Mg_3(PO_4)_2$ and/or fluorides, chlorides or oxides of Li, Na, K, Mg and/or Ca to (b) fibres of metal, ceramic or glass in a mould, compressing and sintering (e.g. for $\frac{1}{4}$-40 hrs. at 800-1500°C.)

The prosthesis have high mechanical strength and affinity for living tissue (compared, e.g. to Al_2O_3 alone). 6.6.77 as 725665 (4pp922)

FRES- ★ D21 27948B/15 ★DS 2811-522
Dental disinfectant compsns. - contg. silver and/or zinc sulphadiazine as antibacterial agent
FRESENIUS E CHEM 16.03.78-DT-811522
B05 E12 (05.04.79) A61k-07/16 A61k-31/18

Dental core compsns. with disinfectant action in liq., paste-like or solid form contain 0.5-10 (pref. 1-3) wt.% of Ag and/or Zn sulphadiazine (I). The compsns. can be formulated as toothpastes, tooth-powders or mouthwashes. They pref. contain (I) in the form of particles with a size of <5 (esp. 0.5-3) u, opt. together with other ingredients, e.g. fluorides, abrasives, humectants, thickeners, foaming agents, flavours, sweeteners and preservatives.

Component (I) is active against the bacteria causing parodontosis and the acid-producing plaque bacteria causing caries. 16.3.78 as 811522 (4pp367)

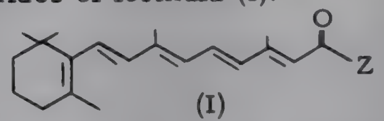
MINN ★ D21 28158B/15 ★DT 2842-0
Infiltrated, homogeneous metal object - where metal skeleton impregnated with copper, silver, and/or gold, used in mfr. moulds, dies and dental prostheses
MINNESOTA MINING CO 26.09.77-US-836782
M22 P53 (05.04.79) B22f-05

The object consists of a continuous phase (a) of spherica particles made of metal not resisting high temps., a lig microscope showing that the largest particles (a) are joi ed together by necks to form a skeleton (a) in a continuo metal phase (b) which has a m. pt. $\geqslant$25°K lower than tha of the particles (a) with the lowest m. pt. in the skeleton

Particles (a) pref. have dia. 1-200 μ, esp. $<$ 45 μ, a consist of Co, Fe, and/or Ni, whereas phase (b) is Cu, Ag, and/or Au. The object is pref. made by heating pa icles (a) with a volatile organic binder and hot moulding a flexible die, followed by sintering, and then infiltratin with metal(s)(b). 25.9.78 as 842026 (51pp1144)

JOHJ D21 32746Y/19 =GB 1543-
Totally trans retinoic acid esters and amides - UV absorbers used sun-screening agents for human skin and as plastics additives
JOHNSON & JOHNSON 03.11.75-US-628177
*A60 E15 (11.04.79) *BE-847-942 C07c-175*

Novel derivs. of all trans-retinoic acid are esters or amides of formula (I):



(I)

Z is OX, t-butylamino, propylamino, 1, 1, 3, 3-te methylbutylamino, 4-hydroxyphenylamino, 1-be triazolyl etc. X is 2-cyc hexylethyl, 10-carbomethoxydecyl, 4-bromobenzyl, -CH_2.CO.Y etc. Y is cholesteryloxy, phenyl, 4-bromophenyl, 2-naphthyl, etc.

Cpds. are used as UV absorbents for plastics or ski They do not have the skin irritant properties of retinoic acid. 3.11.76 as 045746 (8pp974)

AMCY D21 93644X/50 =GB 1543
Clear cream rinse compsns. for conditioning shampooed ha contain an alkyl trimethyl ammonium chloride or bromide
AMERICAN CYANAMID CO 02.10.75-US-618972 (19.05.75 578438)
*E16 (11.04.79) *NL7604-794 A61k-07/06*

An aq. water white creme rinse compsn. is prepd. for proving the condition of the hair subsequent to a shamp operation. Conditioning agent contains an alkyl trimeth ammonium chloride or bromide contg. 10-18C alkyl gp and a dialkyl dimethyl quat. ammonium chloride or br ide.

Pref. the alkyl trimethyl ammonium chloride or br ide is lauryl trimethyl ammonium chloride or bromide The pH of the compsn. is 2.5-7, esp. 4.5. Lauryl trimethyl ammonium halide is present to 0.25-5 wt.% an dialkyl dimethyl quat. ammonium halide to 0.25-3 wt.

Prod. is clear oil-free prod. which is water solubl yielding a clear aq. compsn. on dilution with water. 4.5.76 as 018276 (5pp931)

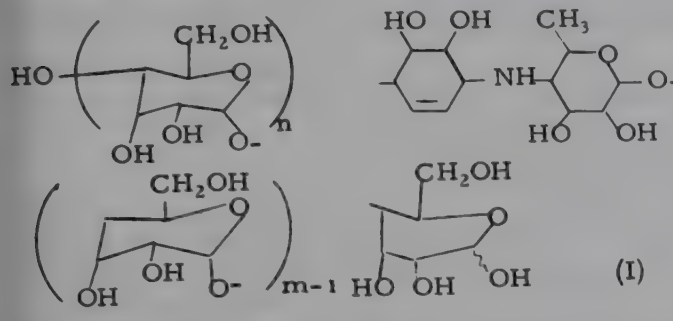
DRAG- D21 06187B/04 =GB 154
Glycerine:tri-3,5,5-tri:methyl-hexanoate - useful for protecting skin, e.g. in sunscreening compsns.
DRAGOCO GERBERDING 27.06.77-DT-728922
*E17 (11.04.79) *DT2728-922 A61k-07 C07c-69/30*

Glyceryl-tri-3, 5, 5-trimethylhexanoate (I) is new. It n be prepd. by converting glycerol with 3, 5, 5-trimethyl anoic acid in the presence of a basic catalyst.

(I) is used in skin protective oils, creams, emulsio and ointments pref. at concns. of 2-15 wt.%. It is eas spread, is not decomposed by bacterial flora of the sk nor charged into substances harmful to the skin; and is resistant to atmospheric oxidn. Cosmetic compsn. contg. (I) are storage stable. 6.10.77 as 041643 (3pp945)

FARB D21 70740Y/40 #GB 1544-068
Amino sugars which inhibit glycoside hydrolases - prepd. by fermenting Actinomycetales strains and useful e.g. in diabetes treatment
BAYER AG 02.04.76-DT-614393 (30.03.77-GB-013394)
*B03 C02 (11.04.79) *BE-853-155 A61k-31/35 C07d-309/10 +C07d-407/14*

Amino sugar derivs. (I) are new, where n is 1-8; m is 0-8

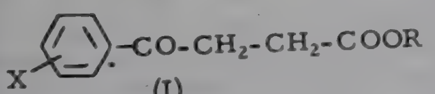

(I)

such that m+n = 3-8. The cpd. is free of structural isomers (as defined) when m+n = 3 or 3 and is free of homologous cpds. when m+n = 5.

The cpds. control carbohydrate metabolism by inhibiting glucoside hydrolase and are used in treating diabetes, adiposity and hyperlipaemia. 30.3.77 as 013394 (45pp945)

BADI D21 05578Y/04 =GB 1544-091
Synergistic insect repellent compsns. - of diethyl toluamide and alkyl halobenzoyl propionates
BASF AG 05.07.75-DT-530070
*B05 (11.04.79) *BE-843-684 A01n-09/02 A01n-09/20 A01n-09/24*

A repellent for use against injurious or troublesome articulata comprises N, N-diethyl-m-toluamide and a halobenzoylpropionic ester of formula (I), (where X is a halogen and R is opt. branched, 1-4C alkyl, opt. substd. by chloro or methoxy).

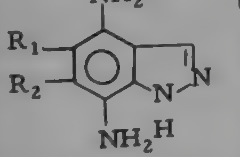

(I)

Pref. the halo-benzoyl propionic ester is ethyl beta-(p-bromobenzoyl)-propionate in wt. ratio to N, N-diethyl-m-toluamide of 10:1-1:10. Repellent contains 2-40 wt.% specified components, plus a pharmaceutically acceptable solid or liq. carrier.

Prod. can be prepd. in the form of an aerosol pack, further contg. a solubiliser and propellant. 2.7.76 as 027619 (3pp931)

HENK D21 02236Y/02 =GB 1544-124
Oxidn. hair dyeing compsns. contg. 4,7-diamino indazole derivs. - as developers or as both developers and couplers BE211276)
HENKEL KG AUF AKTIEN 21.06.75-DT-527791
*E23 (11.04.79) *DT2527-791 A61k-07/13*

A hair dye comprises ≥1 coupler component and, as the developer component, ≥1 4, 7-diaminoindazole deriv. of formula (I), (where R_1 and/or R_2 are 1-4 C alkyl, the other radical being H if only one is alkyl), or the (in)organic salt of (I).

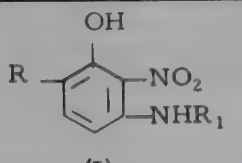


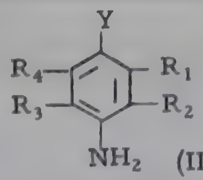
Pref. a mixt. of (I) is used as the developer component, pref. also as the coupler component. Equimolar quantities of developer and coupler are used. Pref. developer substances and direct dyes are used in compsn. Developer/coupler combination is present to 1-3 wt.%.

Cpds. produced show reduced sensitisation and allergic effects to persons, and removal is made easier. 18.6.76 as 025268 (8pp931)

OREA D21 03916Y/03 =GB 1544-127
Nitro couplers for keratinous fibre dyeing prepns. - by direct, oxidn. or direct and oxidn. techniques
L'OREAL SA 07.11.75-FR-034208 (26.06.75-FR-020155)
*E24 (11.04.79) *BE-843-417 D06p-03/04 D06p-03/08 +C09b-51*

is prepd. in an aq. vehicle suitable for dyeing


(I)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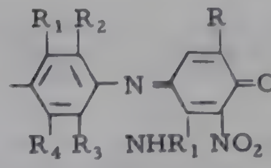

(III)

where R is H, alkyl or halogen, R_1 is H, alkyl, carbamylalkyl, mesylaminoalkyl, aminoalkyl, acylaminoalkyl, mono- or diaminoalkyl, piperidinoalkyl, morpholinoalkyl, carbamyl, acyl or carbalkoxy. Alkyl gps. contain 1-4C.

Compsn. may otherwise contain ≥1 cpd. of formula (I); and ≥1 oxidation base of formula (II), where R_1, R_2, R_3 and R_4 each are H, alkyl, halogen or alkoxy, and Y is hydroxyl or $-NR_5R_6$, where R_5 and R_6 are each H, alkyl, hydroxy-, carbamyl-, mesylamino-, amino-, acylamino, sulpho-, morpholino-, or piperidino-alkyl; or a heterocyclic oxidation base.Compsn. may otherwise contain ≥1 cpd of formula (III).

Coupling agents used permit good rates of coupling, with good stability properties. 25.6.76 as 026586 (49pp931

JOHS D21 21905A/12 =GB 1544-157
Fluorocarbon-free aerosol propellants - contg. chlorinated alkane, alkane and carbon di:oxide, esp. for use with antiperspirant compsns.
JOHNSON S C & SONS INC 15.09.76-US-723346
*E16 (E17) (11.04.79) *DT2741-882 A61k-07/32 C09k-03/30*

A non-flammable, non-fluorocarbon propellant system contains 65-85 wt.% (mixt.) of either 1, 1, 1-trichloroethane or dichloromethane, 14-32 wt.% hydrocarbon propellant contg. n-butane, isobutane, propane or a mixt., and 0.5-3.3 wt.% carbon dioxide w.r.t. propellant.

Pref. system contains 74-76.5 wt.% first cpd., 21-24 wt.% hydrocarbon cpd., and 1.5-2.5 wt.% carbon dioxide. Opt. an antiperspirant intermediate is added contg. 20-60 wt.% astringent salt, 20-79 wt.% emollient, 0-10 wt.% talc, starch (or its derivs.), sodium bicarbonates or their mixts. and 1-10 wt.% bulking agent to yield wt. ratio of propellant to antiperspirant intermediates of 33-2:1.

Compsn. uses conventional antiperspirant intermediates, without using fluorocarbons. 7.9.77 as 037366 (8pp931)

ERDO/ ★ D21 B/15 ★HU T016-183
Prepn. of insect-repellent creams - comprising high concn. of active ingredients in silicone grease and/or vaseline base stiffened to ge with aerosil
ERDOS G 02.06.76-HU-EO0335
A96 B05 (28.03.79) A61k-07/40 A61k-09/10

KURS ★ D21 28440B/15 ★J5 4028-33
Adhesive for hard tissues, e.g. bones, in humans - comprises radic polymerising monomers, peroxide s), amine(s) (salts) and sulphin acid salts
KURARAY KK 04.08.77-JA-094284
A81 E19 G03 (A14 A96) (02.03.79) C09j-03

Adhesive for the hard tissue of the human body comprise (1) radical polymerising monomers, and hardeners comprising (2) peroxides, (3) amines or salts of amines and (salts of sulphinic acid. The components are packed in a way such that components (1) and (4) are not packed toget er, and mixed at the time of using.

Pref. component (1) is e.g. methyl (meth)acrylate, hydroxyethyl (meth)acrylate, bisphenol-A-di(meth)acryla neopentyl glycol di(meth)acrylate. Component (2) is e.g. dibenzoyl peroxide, dilauroyl peroxide, di-p-chlorobenzoyl peroxide, di-p-chlorobenzoyl peroxide. Component (3) is e.g. N, N-dimethylaniline, N, N-dimethyl-p-toluidine N-methylaniline, N-methyl-p-toluidine. Component (4) is e.g. sodium benzenesulphinate, calcium benzenesu phinate, ammonium benzenesulphinate. The ternary har eners quickly polymerise carboxyl gp.-contg. monomer sulphonic acid gp.-contg. monomers, and phosphoric aci gp.-contg. monomers. Theamts. of the hardeners use are 1-20% of Component (1).

The adhesive has strong, long-lasting and stable adhe ive power to bones, dentines and the enamel of teeth, an cures quickly and provides a colourless cured prod. 4.8.77 as 094284 (9pp136)

SHIS ★ D21 28586B/15 ★J5 4028-832

Cosmetic with soft touch and excellent extensibility - contains cyclic silicone tetramer or pentamer and powdery inorganic pigment

SHISEIDO KK 09.08.77-JA-095275

A96 E11 (A26) (03.03.79) A61k-07

Cosmetic contains 10-90 w/w% of tetramer or pentamer of cyclic silicone and 5-20 w/w% of powdery inorganic pigment. Pref. cosmetic having dilatant fluidity contains 20-80 w/w% of tetramer or pentamer of cyclic silicone and 20-70 w/w% of powdery inorganic pigment. The tetramer of octamethylcyclotetrasiloxane and pentamer of decamethyl-cyclopentasiloxane can be used. They are volatile and safe and shows little surface tension.

Conventional oily cosmetic has excellent extending property but is sticky and gives undesirable greasy brilliancy. The cosmetic described is free of the above defects and has dilatant fluidity which has not been observed in conventional cosmetics. 9.8.77 as 095275 (10pp5)

KASH- ★ D21 28587B/15 ★J5 4028-833

Oxidising agent for use in hair dye - comprises hydrogen peroxide, oil of specific iodine value, water, surfactant, stabiliser and acid

KASHIWA KAGAKU KOGY 03.08.77-JA-090957

E19 (E37) (03.03.79) A61k-07/13

The oxidising agent is an emulsified creamy substance of pH 1.5-2.5 and is composed of H_2O_2, oil of iodine value $<$ 15, water, surfactant, stabiliser and acid.

The stability of hydrogen peroxide in creamy compsn. can be improved by combining water, oil of iodine $<$ 15 (e.g. vegetable oil, animal oil, mineral oil, etc.), surfactant (e.g. sorbitan fatty acid ester, polyethyleneglycol fatty acid ester, polyoxyethylene alkylether, etc.), acid and stabiliser (e.g. sodium pyrophosphate, EDTA, oxyquinoline, acetamide, etc.). 3.8.77 as 090957 (5pp5)

KASH- ★ D21 28588B/15 ★J5 4028-834

Creamy hair-dye component contg. hydrogen peroxide - packaged in container with plastics gas permeable inner layer e.g. of polyethylene and with e.g. aluminium outer layer

KASHIWA KAG 00.00.77-JA-110541 (03.08.77-JA-090957)

E24 (03.03.79) A61k-07/13

Creamy drug prod. contg. hydrogen peroxide is prepd. by packaging the emulsified creamy drug composed of hydrogen peroxide, water, oil, surfactant, stabiliser and acid, in vessel with inner layer of the plastic sheet which is permeable to gas and impermeable to liq., and the outer layer of substance which can maintain the strength of the vessel and can not transmit light.

The space between the inner layer and the outer layer is connected to atmosphere. An example of the vessel is a double layer tube, of which outer layer is Al tube and the inner layer is polyethylene tube.

Decompsn. of hydrogen peroxide can be suppressed in the creamy drug. The creamy drug is also strongly acidic and the vessel is required to have sufficient strength, to be anticorrosive, and to scatter formed oxygen gas. 3.8.77 as 110541/77 Div. ex. 90957/77 (9pp5)

SHRK ★ D21 28589B/15 ★J5 4028-835

Dentifrice base comprising calcium carbonate granules - having surface layer of calcium phosphate obtd. by contacting the granules with gaseous phosphoric acid

SHIRAISHI KOGYO KK (SHIR-) 04.08.77-JA-092992

B06 E33 (03.03.79) A61k-07/16

The dentifrice base is obtd. by (1) prepg. aq. suspension contg. calcium hydroxide and fine cubic calcium carbonate which has average dia. < 0.1 µm, (2) spraying the dispersion in gaseous stream including carbon dioxide and (3) contacting thus obtd. cubic calcium carbonate granules of average granular size 0.15-0.55 µm with gaseous phosphoric acid to convert the surface of the cubic calcium carbonate granules to calcium phosphate.

The dentifrice base is white very fine powdery substance having pH 7.5-8.5 and low apparent density. By converting the surface of calcium carbonate granules to calcium phosphate its polishing property can be improved, that is, the same polishing effect can be attained with less abrasion of teeth. 4.8.77 as 092992 (5pp5)

UNIL ★ D21 29443B/15 ★US 4146-605

Oral anti-calculus compsns. with lower astringency - comprise ionic aluminium cpds. in carrier at acidic pH

LEVER BROTHERS CO 07.10.77-US-840357

B05 E12 (E33) (27.03.79) A61k-07/16

Oral compsn. for controlling calculus is at pH <4.5 and comprises an Al cpd. (I), which is in the ionic form and has a F/Al ratio when titrated by NaF of >1.2, together with a carrier.

The compsns. are less astringent and safer than many prior anticalculus compsns. The compsns. may be in the form of toothpastes, tooth powders, mouthwashes, lozenges, chewing gum, etc. 7.10.77 as 840357 (7pp1248).

YAMA/ D21 88144A/49 =US 4146-606

Dental sealing composition - contg. a strontium cpd., a zinc cpd. and tannin

YAMAGA R 27.05.77-JA-062391

*E33 (E32) (27.03.79) *DT2822-671 A61k-07/16*

A pharmaceutical compsn. for dental use comprises a strontium cpd., a zinc cpd. and tannin in a wt. ratio of 1-3:2-4:1-3. Pref. system comprises a further fluorine cpd. to yield a wt. ratio of strontium:zinc:tannin:fluorine of 1-3:2-4:1-3:0-4. Compsn. is in a solid prepn. form. Used for preventing dental caries by application of compsn. to a tooth, or preventing the progress of caries by application to tooth in decayed state.

Compsn. is esp. used as a protective agent for dentine or an obturating agent for dentinal tubules. Also used for the protection of dental pulp and the alleviation of hyperesthesia. 26.5.78 as 909871 (3pp931).

UNIL ★ D21 29444B/15 ★US 4146-607

Synergistic anti-plaque compsns. - contg. tetradecyl:amine with a aluminium or zinc cpd.

LEVER BROTHERS CO 07.11.77-US-849046

B05 E16 (27.03.79) A61k-07/22

Compsn. contains a synergistic mixt. of Al and/or Zn contg. cpd(s). (I) with tetradecylamine (II). Compsns. have synergistic antiplaque effect, and greatly retard the rate of formation of plaque.

Compsn. may be a mouthwash, toothpaste, dentifrice, tooth powder or chewing gum, etc. Amt. of (II) is generally 0.005-0.05 molar; and amt. of (I) is generally 0.001-0.05 molar. Thus a mouthwash suitably contains 0.02 molar (II), and ca. 0.02 molar (I) (esp. 0.018 molar for Al; 0.02 molar for Zn) in a medium contg. 75-95% H_2O and 5-25% EtOH at pH 4.1 (for Al) or 4.3 (for Zn). (I) is typically any non-toxic salt of the appropriate metal. 7.11.77 as 849046 (6pp478).

UNIL ★ D21 29445B/15 ★US 4146-608

Synergistic anti-plaque compsns. - contg. tetradecyl:amine with a copper, nickel, iron, or cobalt cpd.

LEVER BROTHERS CO 07.11.77-US-849051

B05 E16 (27.03.79) A61k-07/22

The compsn. contains a synergistic mixt. of metal-contg. cpd(s). (I) with tetradecylamine (II). Metal is Cu, Ni, Fe or Co. Compsns. have synergistic antiplaque effect, and greatly retard the rate of formation of plaque.

Compsn. may be mouthwash, toothpaste, dentifrice, tooth powder or chewing gum, etc. Amt. of (II) is generally 0.005-0.05 molar; and amt. of (I) is generally 0.0005-0.015 molar. (I) is typically any non-toxic salt of the appropriate metal. 7.11.77 as 849051 (6pp478).

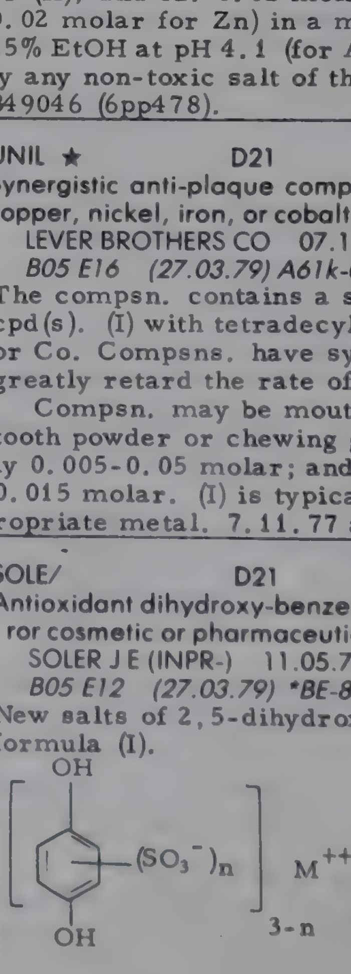
SOLE/ D21 82881Y/47 =US 4146-63

Antioxidant dihydroxy-benzene sulphonic acid transition metal salt - ror cosmetic or pharmaceutical treatment of the scalp

SOLER J E (INPR-) 11.05.76-FR-014113

*B05 E12 (27.03.79) *BE-854-519 A61k-31/28*

New salts of 2,5-dihydroxybenzene sulphonic acids are of formula (I).



(I)

In (I) M^{++} is the divalent cation of a transition metal; n = or 2, but with the proviso tha when n is 2, the two radicals $-SO_3^-$ are situated in the para position relative to one anothe

(I) are useful for treating

isorders of the scalp. A specific cpd. is cadmium 2,5-ihydroxy benzene-1,4-disulphonate. 26.4.77 as 790882 5pp).

AYF ★ D21 29454B/15 ★US 4146-649

kin moisturising compsn. - contg. polyethoxylated alcohol, olyethoxylated glycoside, soluble salt, and urea or aminoacid

FABERGE INC 14.10.76-US-732461

A96 E19 (A25) (27.03.79) A61k-07/48

A skin moisturising compsn. contains 30-60 wt. % of a olyethoxylated 12-20C fatty alcohol (I) contg. 6-30 ethoxy ps. per molecule, 15-35 wt. % polyethoxylated glycoside II) having 6-15 ethoxy gps. per molecule, 0.01-5 wt. % of n alkali or alkaline earth metal chloride, phosphate, cit-rate, formate, acetate or lactate (III), and 0.01-5 wt. % of urea or a 2-6C amino acid (IV).

The compsns. soften and smooth the skin, without leav-ing a greasy film. 14.10.76 as 732461 (3pp955).

DIAS ★ D21 29602B/15 ★US 4147-605

Prodn. of silica and other sols - by electrodialysis of alkali metal salts of oxide s) of the element

DIAMOND SHAMROCK CORP 14.04.77-US-787314 (22.03.76-US-669188)

E37 J03 L02 (03.04.79) B01d-13/02

A process is claimed for producing a sol. of Si, Al, Sb, Cr, Mn, Mo, Sn or W in an electrodialytic cell with a cation exchange membrane separating the anode and cathode compartments. A catholyte contg. $\gtrapprox$ 5% NaOH is supplied to the cell. A 0.1-5.0% (as metal oxide) aq. soln. of a water soluble alkali metal salt of the oxide of the element from which the sol. is to be made, is introduced into a reservoir from where it is circulated as anolyte through the anode compartment of the cell. The pH of the anolyte is controlled continuously to 7.5-8.5 for Si, 9.5-10.5 for Sb, 2.5-3.5 for Mo and 10.3-10.8 for Sn.

Glass beads are provided in the anolyte compartment which are fluidised to impinge of the anode to reduce the deposition of the element on it. A current of $>1/8$ amp /inch^2 is passed between the electrodes to cause migration of the alkali metal cations from the alkali metal salt from the anode compartment to the cathode compartment whilst preventing migration of metal oxide into the cathode compartment. The sol. produced is removed from the anode compartment when it is reached a particle size of $>$ 13 millimicrons and a concn. of >8 wt %.

Process allows electrodialytic prodn. of sols. useful e.g. as binders for making stools for cooling hot ingots in the steel industry, as binders for precision casting moulds, as anti-slip agents in floor polishes, and as abrasives in toothpaste. 14.4.77 as 787314 (6pp513)

BRIM ★ D21 29661B/15 ★US 4147-750

Wax based stick applicator prodn. - with remelting step to eliminate shrinkage cavities, esp. for antiperspirants

BRISTOL MYERS CO 24.07.78-US-927438

(03.04.79) B29c-05 B29f-05

Wax-based stick applicator contg. distributed ingredients (A) is made by first pouring a melt of (A) and the wax into an open dispenser container. The melt is cooled until semi-solid, then a hollow tubular probe inserted near the centre of the surface of the mass, to such a depth that it touches any voids. The probe is then withdrawn thus forming a central cavity. The mass is heated to melt it so that it flows and fills up this cavity. Pref. the probe is inserted to a depth of 0.75-2 inches.

Used esp. for antiperspirant sticks but also for deodorants, hair colours, furniture waxes etc.. The formation of holes inside the stick is prevented. 24.7.78 as 927438 (5pp1251).

WACK D21 69080Y/39 =US 4147-760

Disperse silica having increased thickening activity - prepd. by treating pyrogenic silica with silicon tetrachloride, hydrolysing and deacidifying

WACKER CHEMIE GMBH 08.03.76-DT-609487

*A60 E36 G01 (03.04.79) *DT2609-487 C01b-33/12 C09c-01/28*

Highly dispersed SiO_2 with improved thickening action is produced by treatment of pyrogenically produced silicic acid. Process comprises (a) preparing silicic acid by flame hydrolysis from silicon halides; (b) sepg. the silicic acid from generated gases; (c) reacting the acid with 2 - 10 wt.% of $SiCl_4$ calculated on silicic acid, while optionally/mechanically stirring; and (d) hydrolysing the product by means of an air/water vapour mixture, and finally deacifying to obtain the SiO_2 improved thickening action.

The thickening agent is useful for a variety of purposes, e.g. as additive for preparations of dental hygiene. 22.2.77 as 770338 (5pp).

ARMO D21 00386A/01 =US 4147-766

Safe decodorant aerosol particles - formed by spray drying soln. forced through a spinning sintered metal ring filter

ARMOUR PHAR CO 09.06.76-US-694419

*A31 J04 +P33 Q76 (03.04.79) *DT2725-754 A61k-07/38 +A61j-03/07*

Hollow, thick-walled macrospherical particles consist of anti-perspirant material, $\geqslant$85% of the particles having diameters $>15\mu$ and few of the particles having diameters $>74\ \mu$, and having a true density >1. The walls are thick enough to withstand slipping, handling and dispensing without fragmentation into smaller particles which may be respired and retained in the lungs.

An appts. for producing the particles comprises a centrifugal atomiser having a porous sintered metal filter ring rotated inside a spray drying chamber. 9.6.76 as 694419 (10pp976).

RORE ★ D21 29676B/15 ★US 4147-782

Aq. pharmaceutical detergent compsn. - for cleaning oily skin, contains N-acyl sarcosinate, polyvinyl:pyrrolidone and protein hydrolysate

RORER W H INC 24.06.76-US-699819

A96 (03.04.79) A61k-31/60 C11d-07/60

The compsn. comprises (by wt.) 8-31% N-acyl sarcosinate salt (I); 0.1-5% polyvinylpyrrolidone of ave. mol. wt. 4,000-90,000; 0.1-6% water soluble protein hydrolysate and the balance water. In (I), the anionis Na, K, NH_4 or triethanolamine and 'acyl' is lauroyl, myristoyl or stearoyl. The compsn. is pref. adjusted to pH 4.6-8.3 and may additionally contain 0.1-6 wt.% salicylic or lactic acid as keratolytic agent.

Used for cleaning oily skin, e.g. of persons with acne. The compsn. has superior cleaning properties without the irritating and excessive drying actions of soaps and conventional detergents. Oils and 'super-fatting' additives are not required, and the compsns. are compatible with salicylic acid. 24.6.76 as 699819 (4pp1251).

See Also

D13 US 4146499 D16 J5 4028894 D22 DS 2536617

D22: BANDAGES; DRESSINGS

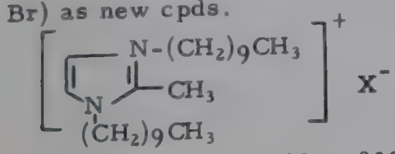
GOLD ★ D22 27893B/15 ★BE -872-502

1,3-Di-n-decyl-2-methyl-imidazolium chloride and bromide - have microbicidal activity against bacteria, fungi, yeasts, spores and algae

GOLDSCHMIDT TH AG 03.07.78-DT-829137

B03 C02 P34 (30.03.79) A61l C07d

The parent patent claims quaternary imidazolium salts as new cpds. This patent specifically claims 1,3-di-n-decyl-2-methylimidazolium chloride and bromide (III) (X=Cl or Br) as new cpds.



(III)

(III) may be formulated to give effective compsns. using modern methods and techniques. 4.12.78 as 872502 Add to 839038 (11pp395)

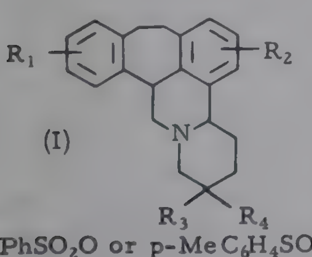
AMHP ★ D22 27940B/15 ★CA 1050-550

Octa:hydro-benzo-cyclo-hepta-pyrido-iso-quinoline derivs prepn. - useful as antifungals, disinfectants and therapeutic agents

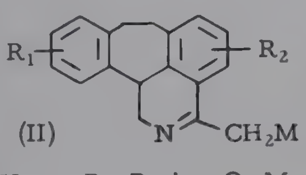
AYERST MCKENNA & HA 16.06.75-CA-229360

B02 C02 (13.03.79) C07d-471/04

Prepn. of octahydrobenzo[6,7]cyclohepta[1,2,3-de]pyrido-[2,1-a]isoquinoline derivs. of formula (I): compsn. treating a cpd. of formula (II) with $XCH_2CR_3R_4CH_2Y$ and redn. of the prod.



(I)



(II)

In the formulae (R_1 and R_2 are H; R_3 is H or 1-6C alkyl; R_4 is H or OH; or R_3+R_4 is =O; M is Li, Na or K; X and Y are Cl, Br, I, $MeSO_2O$, $PhSO_2O$ or p-$MeC_6H_4SO_2O$; in (II), R_4 may also be protected OH and R_3+R_4 may be protected oxo).

Reduction is with (a) $NaBH_4$ or Raney Ni/H_2, Raney Ni or noble metal catalyst/H_2; and then protecting gps. may be removed; or (b) with metal and acid then protecting gps. are removed. When R_3 is H and R_4 is OH, oxidn. gives R_3+R_4 as oxo, which on treatment with alkylmagnesium halide or Li alkyl gives a cpd. with R_3=alkyl and R_4=OH.

Improved route to (I), with fewer steps, greater economy and efficiency than prior processes is provided. Some cpds. (I) are described in US 3657250. (I) are also antifungals useful for disinfecting purposes and as therapeutic agents. Dose 0.5-500 mg/kg daily. 16.6.75 as 229360 (49pp1248)

OREA D22 16021W/10 =DS 2444-183

Cistern additive treats water closet flush water - with constant concentration every time flushed until additive exhausted

L'OREAL SA 21.09.73-FR-033967

*P28 +Q42 (05.04.79) *BE-818-895 E03d-09/02*

The immersion vessel accomodates an additive to be continuously dissolved in a liquid, e.g. in a toilet flushing tank. The additive is contained in the bottom part, and above its initial height is an inlet and outlet port for the flushing liquid, while at the top is an air vent. The port height lies between the minimum and maximum levels of liquid in the tank, the liquid being guided against the free surface of the additive.

Inside the vessel is a deflector plate guiding the liquid, forming a shaft with the vessel wall, and at the middle part of the latter opposite the port. 16.9.74 as 444183 (5pp160)

HENK D22 12715Y/08 =DS 2536-617

Permonocarboxylic aq. concentrate stable to storage - contg. percarboxylic and/or carboxylic acid, hydrogen peroxide and water

HENKEL KG AUF AKTIEN 16.08.75-DT-536617

*C03 E17 F06 +P34 (D21) (05.04.79) *BE-845-228 A61l-13 C07c-179/10 D06l-03*

Aliphatic monopercarboxylic acid concentrates comprise a mixt. of peracetic and acetic acids or perpropionic and propionic acids, (0.5-20 wt. %) H_2O_2, (25-40 wt. %); and water, (to make 100%). Pref. compsns. comprise HOOA and HOAc, (1 mole HOOAc, 5-10 wt. %); and excess H_2O_2 (2 or more moles, esp. 3-50 moles).

These concentrates are stable on storage and are use for oxidn. reactions; treatment of hair, straw or textile materials; or as a microbiocide and antivirus agent. 16.8.75 as 536617 (3pp047)

COLG ★ D22 28247B/15 ★GB 1543-91

Absorbent article for perineum region use - having two hinge separable, absorbent pads

COLGATE PALMOLIVE CO 10.02.76-GB-005195

P32 (11.04.79) A61f-13 A61k-13/16

The article comprises a pair of separate slightly spaced elongate absorbent pads each having a front surface for facing the perineal region, and an inner side surface, which face each other to form a fluid receiving channel in the mid portion of the assembly. The pads are hinged by an elongate fluid impervious sheet which extends between the pads and over their outer side surfaces onto th front surface, to prevent fluid leaking from the pads during use.

Absorbent pad for wear in the region of the perineum, as a sanitary towel, and maternity pad etc.

Central channel receives and traps body exudates to b rapidly absorbed by the large surface area of the inner side surfaces of the pads, giving drier body contacting s faces than prior single pads. The sepn. of the pad in use provides improved fit minimising risk of leakage and pro viding greater comfort. 10.2.76 as 005195 (4pp50)

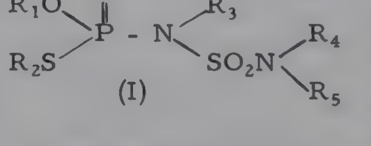
NITN D22 23602A/13 =GB 1544-0

(N)-Sulphamoyl phosphoric acid ester amide derivs. - havi insecticide, acaricide, nematocide and fungicide activity and us in plant protection, hygiene and preservatives (BE 20.3.78)

NIHON TOKUSHU NOYAK 20.09.76-JA-111745

*B05 C01 (11.04.79) *DT2741-085 A01n-09/36 C07f-09/24*

Thiophosphoric acid amide esters of formula (I) are new In (I) R_1 is 1-6C alkyl, R_2 is 1-6C alkyl or alkenyl, R_3 i



1-6C alkyl or aryl, R_4 is 1-6C alkyl, R_5 is 1-6C alkyl or aryl and X is O or S.

Prepn. is from a (di)thiophosphoryl halide reacted with sulphamide salt, or from a phophoramido-thioate salt reacted with an alkylating or alkenylating agent. Each reaction is conducted at -20°C. to b.pt. of the reaction mixt. in the presence of an inert s vent or diluent.

Prods.are used as insecticides, acaricides, nematocides and fungicides. 14.9.77 as 038347 (15pp931)

DAIL ★ D22 28584B/15 ★J5 4028-8

Deodorant partic. for combating odour of basic cpds. - such ammonia and amine, comprises adduct of glyoxal with sodiu bi:sulphite as active component

DAICEL KK 05.08.77-JA-094350

E12 P34 (03.03.79) A61l-09/ B01d-53/16*

Deodorant contains as active component an adduct of glyoxal with Na bisulphite. Adduct is partic. effective agai basic odours such as NH_3 and amines. It has more prolonged activity than glyoxal. 5.8.77 as 094350 (3pp108)

OKUB/ ★ D22 28903B/15 ★J5 4030-2

Fragrance-retaining synthetic resin foam prepn. - by impregnati inorganic porous granules with fragrance, deodorant etc. a incorporating or interposing the granules in resin foam

OKUBO K 10.08.77-JA-096457

A97 (06.03.79) C08j-09/04

The inorganic granules are pref. activated alumina gel, activated silica gel, etc. The foam is soft and hard pol urethane, polystyrene, polyethylene, etc. For emitting fragrance, open-cell foam such as of polyurethane is b To keep volatile ingredients the granules impregnated w the ingredients are interposed between prefabricated sheets of open-cell soft foam with vent holes.

The retention of fragrance etc. is increased cf. that of the liq. form. Selection of resins, granules and fragrance/deodorant gives wide applications: e.g. as deodorant/filter in pumping systems, as fragrance/deodorant in houses, stores, vehicles, factories, etc., as deodorants for cloths, shoes, hats, etc., as deodorant for sanitary goods, etc. 10.8.77 as 096457 (3pp119)

ROHM ★ D22 29313B/15 ★US 4146-027
Non-adherent wound dressing - consists of easily tearable foam adhered to fibrous absorbent
ROHM & HAAS CO 09.05.77-US-794770 (24.04.73-US-354062)
A96 P34 (27.03.79) A61l-15

A wound dressing consists of a layer of foam permeable to liquids stuck to a layer of liquid absorbent material. The foam is crushed or uncrushed, has a wet foam density of 0.05-0.5g/cc., a dry foam density of 0.2-3.0g/cc., thickness 1-70 mils., and cohesive tear strength 0.5-10 p.l.i.

The dressing does not adhere to tissues because no fibres are exposed. The low tear strength of the foam allows the dressing to be peeled off even if parts of the foam are embedded in scabs. 9.5.77 as 794770 Div. ex 3901240; C.i.p. 3887408, 4069366 (+5.9.73, 24.9.76 - US - 394601, 726716) (5pp955).

SURG- ★ D22 29325B/15 ★US 4146-133
Sterile easily openable plastics bag - has a conventionally heat sealable filling opening and an opening protected by a pull flap
SURGICOT INC 22.10.76-US-735058
A92 Q32 (27.03.79) B65d-27/32 B65d-31/12

A plastics bag for packaging articles and maintaining them in a sterile atmos. comprises a lower sheet gussetted at both ends. At one end the upper flap of the gusset extends over one end of the upper sheet and is secured to it partway along its length by a seal line. At the other end, the upper flap of the gusset underlies the other end of the upper sheet to define a mouth.

In use, an article is inserted into the package through the mouth and the mouth is sealed closed along a line. The package can then be opened merely by gripping the end of the upper flap of the gusset and pulling the flap away from the upper sheet to tear the seal line. Opening of the bag is effected without contamination of the contents. 22.10.76 as 765058 (6pp525).

GAIS/ ★ D22 29431B/15 ★US 4146-566
Volatile component dispensing package for room deodorant - with upper chamber holding adsorbent granules and lower chamber acting as bellows
GAISER C J 05.07.77-US-812581 (17.11.76-US-742560)
*P34 (27.03.79) A61l-09/**

The package comprises a container divided by an internal apertured wall into first and second chambers. The external wall of the second chamber is formed by a collapsible external wall which has a single check valve in it. This permits air intake to the second chamber.

The first chamber encloses a bed of solid, insert, adsorbent particles onto which a volatile ingredient is adsorbed. The first chamber has vapour outlet port in its wall. In use air is admitted through the check valve into the second chamber. It passes through the apertured wall and flows through the solid adsorbent to desorb the volatile ingredient which is discharged through the outlet port.

The appts. is used to dispense a volatile ingredient such as a perfume as a room deodorant. The vapour released from the package is of a preselected desired compsn. 5.7.77 as 812581 (8pp295).

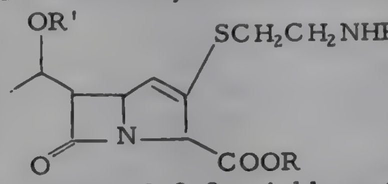
LABO- D22 69198Y/39 =US 4146-570
Automatically venting steam steriliser - with heat expansible valve element closing working chamber when all air is vented
LABOR MUSZERIPARI 20.03.76-HU-LA0886
*P34 (27.03.79) *DT2708-944 A61l-03*

Automatic steriliser has a water vaporising heater in the bottom of a chamber. A one-way valve controls the exit of gases from the chamber; a lateral outflow pipe from above the heater to the bottom of the valve, the valve has a heat-expandable body of smaller O.D. than the I.D. of a hous- ber attached to the body.

the body expands due to steam passage, and a device for adjusting the position of the body and seat to regulate outflow are provided. A safety valve is connected to the chamber, and a discharge pipe is connected to the downstream side of the seat; a pipe including a steam relief valve connects the discharge pipe and the safety valve. A thermostat is in the chamber, and a time switch is provided. 11.3.77 as 779021 (4pp1376).

MERI ★ D22 29452B/15 ★US 4146-633
Antibiotic delta-three thienamycin and its protected derivs. - prepd. by double bond isomerisation of protected thienamycin and de:blocking
MERCK & CO INC 31.10.77-US-847292 (19.11.76-US-743364)
B02 C02 (D13) (27.03.79) A61k-31/40 C07d-487/04

Δ^3-Thienomycin and derivs. of formula (I) are new.



(I)

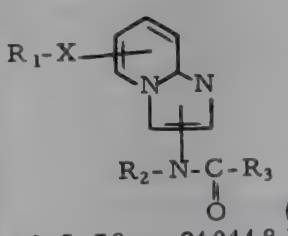
where R' is H, bromo-t.-butoxycarbonyl o- or p-nitrobenzyloxycarbonyl, t.-butoxycarbonyl or 2,2,2-trichloroethoxycarbonyl and R is H, o- or p-nitrobenzyl, t.-butyl, 2,2,2-trichloroethyl or phthalyl.

Δ^3-Thienomycin (I; R = R' = H) and its salts are antibiotics which are active against Gram-positive -negative bacteria. They may be used as antibacterial drugs, additives to animal feedstuffs, food preservatives and disinfectants. Daily oral dosages are generally 15-600mg/kg.

Compsns. contg. the antibiotic and its salts are conventional. (I) are also useful in the total synthesis of thienomycin. 31.10.77 as 847292 (7pp476).

MERI D22 74685A/42 =US 4146-642
Imidazo-(1,2-a)-pyridyl-carbamate derivs. - with anthelmintic, fungicidal, antibacterial and nematocidal activity (NL 2.10.78)
MERCK & CO INC 28.03.77-US-781902 (30.05.78-US-910418)
*A60 B02 C02 (27.03.79) *DT2812-914 A01n-09/22 A61k-31/44 +C07d-487/04*

Heterocyclic substd. imidazo[1,2-a]-pyridines of formula (I) are new.



(I)

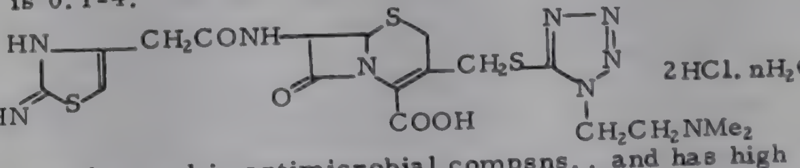
In (I) X is O, thio, sulphinyl or sulphonyl; R_1 is pyridyl, opt. substd with loweralkyl, amino or phenyl; R_2 is H or loweralkyl; R_3 is loweralkoxy.

The imidazopyridines are useful as anthelmintics.

30.5.78 as 910418 Div. ex 4105767 (9pp910).

TAKE D22 18141A/10 =US 4146-710
Di:hydrohalide hydrate(s) of cephalosporin derivs. - stable, solid antibiotics prepd. by reacting a cephalosporin deriv. with exces hydrogen halide and opt. water (BE 28.2.78)
TAKEDA CHEMICAL IND KK 31.08.76-JA-104583
*B02 E13 (D15) (27.03.79) *DT2738-711 C07d-501/36*

Crystalline cephalosporin deriv. is of formula (I), where n is 0.1-4.



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It may be used in antimicrobial compsns., and has high storage stability. 29.8.77 as 828842 (9pp997).

PROC D22 33107Y/19 =US 4147-58
Laminated disposable diaper - comprises upper fibrous layer absorptive layer and lower impermeable layer, joined by hot me adhesive
PROCTER & GAMBLE CO 30.10.75-US-627406 (02.05.77-US-792523)
*F07 P21 +P32 P73 (03.04.79) *DT2649-039 +B32b-07/14 B32b 31/10*

Disposable diapers are made continuously by passing a porous fibrous topsheet over a hot melt adhesive source to form randomly disposed adhesive globules on individual fibres and fibre junctions, passing the topsheet and a fluid-impermeable non-fibrous backing between nip rolls, and introducing absorbent core elements between the webs.

The nip gap is sized to deform the globules and bond the topsheet to the backing directly while minimising press-through of adhesive through the topsheet, the bonded webs then being severed to form the diapers. The adhesive is pref. pumped through a slot nozzle. 2.5.77 as 792523 Div.ex. 4069822 (8pp1358).

FMCC ★ D22 29650B/15 ★US 4147-720
Aliphatic di:peroxy-di:carboxylic acid prodn. - by oxidising di:carboxylic acid with hydrogen peroxide in phosphoric acid
FMC CORP 30.12.77-US-866091
E17 (03.04.79) C07g-179/10

Satd. 6-16C aliphatic diperoxydicarboxylic acids (I) are prepd. by reacting the corresp. dicarboxylic acid (II) with 2-5 (3-4) moles H_2O_2 in H_3PO_4 as reaction medium. Enough H_3PO_4 is used to give a stirrable mixt. and to dissolve (II) at 60-100°C. The resulting reaction slurry is then stirred at 20-70°C and (I) recovered.

Pref. the H_2O_2 concn. is $\geqslant 65\%$ and the H_3PO_4 concn. 85-95%, with (II):H_3PO_4 mole ratio esp. 1:8-12. Where (II) has $\geqslant 12C$ the medium pref. contains $\not> 5$ wt.% of a stronger acid e.g. H_2SO_4, CH_3SO_3H, CF_3SO_3H or toluenesulphonic acid.

(I) are useful as catalysts and as oxidising, bleaching and disinfecting agents. Safer reaction carries less risk of explosion c.f. use of H_2SO_4 as reaction medium. Traces of H_3PO_4 can be tolerated in the prod. without affecting its stability. 30.12.77 as 866091 (6pp1251).

NELR ★ D22 29669B/15 ★US 4147-769
Shelf-stable aerosol microbiocidal compsn. - contg. an ene-diol cpd. and a catalytic metal cpd.
NELSON RES & DEV 09.01.78-US-867805 (18.07.74-US-489708)
E17 P34 (E12 E35) (03.04.79) A61k-07 A61l-09/04

An aerosol container, contg. no water and a stable antimicrobial compsn., comprises dihydroxymaleic acid (0.5%), NH_4Cl (0.05%), isopropyl myristate (3%), cupric oleate (0.03%), mineral spirits (0.02%) and propellant (96.4%).

The compsn. is useful as a disinfectant for first aid kits, hospital emergency or operating rooms, as deodorant and antiperspirant on human body, for combatting athlete's foot, etc. The oxidn. of ene-diol cpd. is catalysed by the metal cpd. thus producing a microbiocidal effect. 9.1.78 as 867805 (+28.6.76 - US - 700311). (4pp)

SCOL ★ D22 29670B/15 ★US 4147-770
Topical compsns. contg. vanillin, ethanol salicylic acid etc. - useful for treating dermatitis including tinea pedis or athlete's foot
SCHOLL INC 27.12.76-US-754694
B05 C03 P34 (03.04.79) A01n-09/02 A61k-31/61 A61l-09/04

An antimicrobial compsn. having antibacterial and antifungal activities for treating dermatitis including tinea pedis, comprises a liquid including water, ethanol, silicylic acid, benzocaine, and $\geqslant 2.5$ % of vanillin.

The compsn. is useful for treating dermatitis of the nature of tinea pedis or athlete's foot, and has activity against e.g. Candida, Trichophyten and other Gram-positive and Gram-negative bacteria. It may be applied to the foot as a cream, gel, powder, liquid, aerosol etc..

Pref. concn. of vanillin in the compsn. is 2.5-20%, it is solid and sublimes and when used on the foot it condenses in the footwear to affect the disease and lend deodorisation and sanitisation of the footwear. Dermatitis of athlete's foot can also be treated with the compsn. by using a controlled release dispenser. 27.12.76 as 754694 (4pp957).

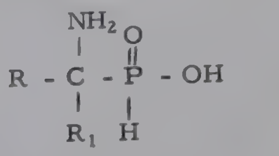
SCHW/ ★ D22 29673B/15 ★US 4147-775
Non-irritating topical antiseptic compsn. - contains Magnesium Usta and iodine in a pharmaceutical or cosmetic vehicle
SCHWARTZ S H 17.03.78-US-887547 (06.10.76-US-730008)
E36 (E33) (03.04.79) A61k-33/18

Non-irritating antiseptic for topical application to human skin comprises a pharmacological or cosmetic vehicle plus a mixt. made from 85-97 pts. magnesium usta (A) and 3.5-8.5 pts. iodine, esp. 95 pts. (A) and 5 pts. iodine. This mixt. is pref. incorporated into the vehicle at 2-10 wt.%. Specified vehicles are lanolin, ethanol and talc.

Used as germicide for treating cuts, burns, acne etc. The compsn. does not stain, irritate or burn the skin. and can be formulated e.g. as dusting powder, ointment, lotion, after-shave, cosmetics (it is skin coloured) or aerosol. It is stable against sublimation of iodine when stored in sealed containers. 17.3.78 as 887547 (3pp1251).

CIBA D22 82995Y/47 =US 4147-780
Substd. (1)-amino-methane-phosphonous acid derivs. - useful as antimicrobials for in vivo and in vitro applications
CIBA GEIGY CORP 21.05.76-GB-021000
*B05 C03 E11 (03.04.79) *BE-854-843 A61k-31/66 C07f-09/48*

New cpds. are of formula (I) (where R and R_1 are each H, deuterium or (substd.) lower alkyl; R_2 is H, lower alk(en)yl, lower alkynyl, cycloalkyl, (substd.) 6-10 Caryl or substd. lower alkyl; and R_1 and R_2 are not both H), or the corresp. zwitterion form.

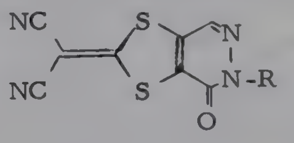


$$R-\underset{R_1}{\overset{NH_2}{C}}-\underset{H}{\overset{\overset{O}{\|}}{P}}-OH \qquad (I)$$

(I), and their acceptable salts with acids or bases, and their optical isomers, and valuable chemotherapeutics in the treatment of pathogenic bacteria, Gram-negative bacteria and yeast. 23.5.77 as 799428 (12pp976).

DOWC ★ D22 29677B/15 ★US 4147-784
4-oxo-1,3-di:thiolo-pyridazine-2-ylidene-propane di:nitrile(s) - useful as antimicrobials esp. antibacterials and antifungals
DOW CHEMICAL CO 24.03.78-US-889807
A60 B02 C02 (03.04.79) A61k-31/50 C07d-495/04

4,5-Dihydro-4-oxo-1,3-dithiolo[4,5-d]pyridazine-2-ylidenepropanedinitriles of formula (I) are new:



(I)

(R is H, 1-7C alkyl or Ph opt. substd. by 1 or 2 Cl or Br).

(I) are antimicrobials esp. antibacterials and antifungals effective against a broad spectrum. Useful in latex and alkyd paint films, wood and wooden prods. to prevent fungal attack. 24.3.78 as 889807 (4pp1248).

KALE/ ★ D22 29692B/15 ★US 4147-826
Mounting shed snake skins - by applying to wet substrate, rolling and drying, requiring no adhesive
KALETA D J 30.03.78-US-891753 (31.01.77-US-763859)
P73 (03.04.79) B32b-09/02 C14b-17 C14c-15

The skins are mounted by first laying the water-satd. skin, inside downwards, on a substrate, there being at least a film of liq. between the skin and substrate. Excess liq. is removed by a roller, then the skin dried so that it adheres to the substrate. The substrate and liq. used are both free of adhesives. The film of liq. may be introduced before or after laying the skin on the surface. A plastic surface is esp. used and the liquid is water.

The skins are used for decorative or scientific purposes. The fragile skins are mounted without tearing and without use of adhesives. 30.3.78 as 891753 (5pp1251).

JOHJ ★ D22 29695B/15 ★US 4147-83
Pressure sensitive adhesive compsn. - comprising mixt. of natura rubber and polyisobutylene with liq. plasticiser and solid tackifier
JOHNSON & JOHNSON 31.08.77-US-829376
A81 G03 P34 (A11 A17) (03.04.79) A61l-15/06 C09j-03/12

Adhesive compsn. comprises 30-50 wt.% of a mixt. of elastomers, 5-20 wt.% of a liq. plasticiser and 30-50 wt.% of a solid tackifier having a softening point of 100-120°C. The elastomers are natural rubber and polyisobutylene of m.wt. 64000-99000 in ratio 1:1-3:1. The compsn. has a Williams plasticity of 1.5-2.4 mm.

Used for surgical adhesive prods. having a flexible backing such as tapes, bandages and dressings. The compsn. has excellent adhesion to the skin with good resistance to water. 31.8.77 as 829376 (5pp1302).

AI D22 22415B/12 =US 4147-921
eatable article for application to the body - having a layer of wax
elted by a heating element incorporated in the article
CLAIROL INC (BRIM) 09.09.77-US-831839
*P24 P32 R59 (03.04.79) *EP---1-151 +H05b-01*

heat treatment article for the human body surface includes a wax layer, a heating element, and an insulation ayer enclosed between two flexible covers. A barrier ecured to the element is pref. disposed between the element and insulation layer. The wax is pref. enclosed between two sheets sealed together to form pockets of wax. A barrier is pref. disposed between the wax and element.

In use the wax is melted and the article is applied to the body. 9.9.77 as 831839 (7pp1376).

See Also

D15 J5 4028447

D23: OILS; FATS; WAXES

ABO ★ D23 27888B/15 ★BE -872-476
ydrogenation catalyst for oils, esp. cooking oils - comprises nickel
vith specified amt. of absorbed basic nitrogen cpd.
LABOFINA SA 02.12.77-LU-078622
(D13) (30.03.79) B01t C11d

The catalyst for the selective hydrogenation of natural oils consists of a Ni catalyst having an absorbed basic nitrogen cpds. the percentage of N atoms being 5-40 based on the Ni atoms. Basic N cpds. specified are ammonia, urea, hexamethylenetetramine, and 4-22C aliphatic amines

The process comprises using the above catalyst for hydrogenation of natural oils under conditions to selectively hydrogenate the polyunsatd. cpds. and limit the formation of satd. products, transisomers and conjugated diene cpds.

The vegetable oils such as soya, cam etc. are used for example as cooking oils and to prepare fatty acids for paints and varnishes. The modified catalyst avoids the formation of solid products in the hydrogenation. It gives a high reaction rate and high yields. 1.12.78 as 872476 (12pp597)

LABO ★ D23 27889B/15 ★BE -872-477
Hydrogenating oils, esp. cooking oils, using nickel catalyst - in
presence of a specified amt. of a basic nitrogen cpd. to avoid
formation of solid products
LABOFINA SA 02.12.77-LU-078621
(D13) (30.03.79) C11c

The process for partial and selective hydrogenation of natural oils, comprises effecting the hydrogenation in the presence of a basic nitrogen cpd. the percentage of N atoms being 5-40 based on the Ni atoms. Specified nitrogen cpds. are urea, hexamethylenetetramine, 8-22C aliphatic amines and mixtures of these.

Vegetable oils such as soya, corn etc are used for exampled as cooking oils and to prepare fatty acids for paints and varnishes. The presence of the nitrogen cpd. avoids the formation of solid products in the hydrogenation The process gives high yields with a high reaction rate. 1.12.78 as 872477 (9pp597)

KALI/ ★ D23 B/15 ★CS 7705-799
Beta-ionone continuous prodn. appts.
KALINA K 06.09.77-CS-005799
E15 (28.02.79) C07c-45 C07c-49/61

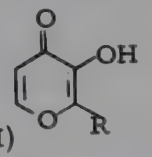
TOKU ★ D23 28171B/15 ★DT 2842-265
Direct aliphatic carboxylic acid esterification with ethylene - in liq.
phase, catalysed by tungsten hetero:poly:acid, or its salt, and water
TOKUYAMA SODA KK 28.09.77-JA-115540
E17 F06 G02 (05.04.79) C07c-67/04 C07c-69/14

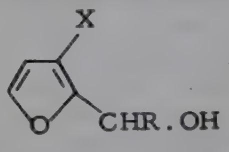
Ethyl esters of aliphatic carboxylic acids are prepd. by reacting C_2H_4 with an aliphatic carboxylic acid (I) in the liq. phase and in the presence of (i) an acid catalyst consisting of a W heteropolyacid or an acid metal salt thereof and of (ii) < 7.5 (pref. 0.01-5 esp. 0.1-3.5) wt.% water (w.r.t. (I)).

The esters may be used as solvents for dyes, paints and inks; as organic raw materials, perfumes and textile modifiers. The ethyl esters are prepd. in 1 step, with high conversions and 98-99% selectivities. By-prod. formation is inhibited. 28.9.78 as 842265 (29pp200)

PFIZ D23 34952A/20 =GB 1543-897
Gamma pyrone(s) esp. maltol and ethyl maltol prepn. - from furan
cpds., used in perfumes and flavouring and as flavour enhancers in
food
PFIZER INC 12.11.76-US-741348
*E13 (D13) (11.04.79) *BE-860-699 C07d-307/26 C07d-307/34*
C07d-309/16

Gamma-pyrones of formula (I) are prepd. by contacting a 3-substd. furfuryl alcohol of formula (II) in aq. soln.with ≥ 1 equiv. of a halogen oxidant, a peracid or a peroxide and heating the 4-substd. 6-hydroxy-2H-pyran-3(6H)-one formed under acidic conditions until hydrolysis is complete.


(I)

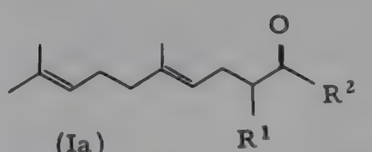

(II)

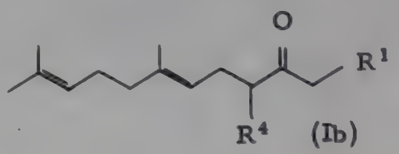
In the formulae R is H, 1-4C alkyl, phenyl, or benzyl. X is Cl, Br, I or 1-4C alkoxyl. Pref. the oxidant is a halogen. Pref. reaction is at 70-160°C.

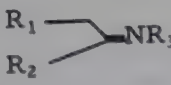
(I) are e.g. flavour and aroma enhancers for e.g. foods, beverages and perfumes. 9.11.77 as 046568 (10pp974)

TANA/ ★ D23 28813B/15 ★J5 4030-111
Terpenyl-ketone(s) prepn. - useful as perfume(intermediates) and
medicine intermediates
TANAKA J 08.08.77-JA-094845
B05 E19 (06.03.79) A61k-07/46 B01j-23/04 B01j-31/12 C07c-45
C07c-49/24

Terpenylketones (Ia)(Ib) are prepd. by reacting an imine (II) with myrcene over alkali metal catalyst and hydrolysing the resulting alkylated imine (IIIa)(IIIb) (where R^1 = H


(Ia)


(Ib)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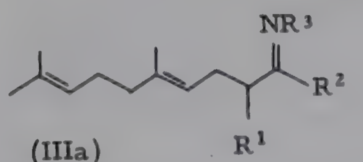
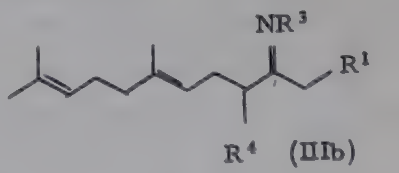

(IIIa)

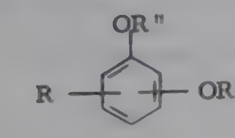

(IIIb)

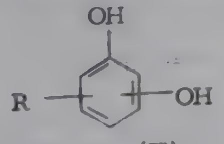
or alkyl; R^2 = $-CH_2R^4$ (R^4 = H or alkyl) or aryl; R^3 = alkyl or cycloalkyl).

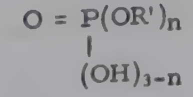
(Ia) and (Ib) are useful as perfumes or synthetic intermediates for perfumes or medicinals and can be obtd. in high yield easily. 8.8.77 as 094845 (4pp104)

UBEI ★ D23 28817B/15 ★J5 4030-123
Bivalent phenol alkyl ether prodn. - by reacting bivalent phenol
with alkyl phosphate and heating resultant prod. with water
UBE INDUSTRIES KK 11.08.77-JA-095558
B05 E14 (06.03.79) C07c-41 C07c-43/22

Bivalent phenol alkyl ethers (I) are prepd. by reacting bivalent phenol (II) with 0.4-1.5 mol. equiv. (calcd. to II) of alkyl phosphate (III) and heating the resulting prod. (IV) with 1-10 pts. wt. (calcd. to 1 pt. wt. of IV) of water.


(I)


(II)


$$O = \underset{\substack{| \\ (OH)_{3-n}}}{P}(OR')_n$$
(III)

In the formulae R=H, 1-4C alkyl or hal; R is 1-4C alkyl; R" is H or as R' ≥1 of R" is as R'; n=1-3.

(II) is e.g. catechol, resorcin, hydroquinone, 3-(m)-ethylcatechol, etc. (II) is e.g. tri(m)ethyl phosphate, tripropyl phosphate, etc. First step is pref. carried out at 150-220°C for 3-8 hrs. Second step is pref. carried out at 70-100°C for 1-4 hrs.

(I) is a useful raw material for medicines, spices, antioxidants or stabilisers for synthetic resins and is obtd. in high yield (> 80%). 11.8.77 as 095558 (3pp104)

DAII ★ D23 28824B/15 ★J5 4030-136

Macrocyclic ketone prodn., for use as perfume - by reacting di:halide, di:tosylate or di:mesylate with alkyl- or aryl-sulphinyl acetone and cyclising

DAIICHI KOGYO SEIYAKU 08.08.77-JA-095351

E15 (06.03.79) B01j-31/12 C07c-45 C07c-49/27 C07c-147/14

Macrocyclic ketone (I) is prepd. by reacting a dihalide, ditosylate or dimesylate (II) having ≥ 7C alkylene or alkenylene gp. with alkyl- or arylsulphinylacetone (III) in the presence of a base and subjecting the prod. (IV) to intramolecular cyclisation with a base.

(I) is a perfume of natural muscone and is obtd. at low cost in high yield from easily available raw materials. Bases include alkali hydride, alkali alkoxide, alkyllithium, sodium amide and dimethyllithium amide. Reaction is at -30°C to room temp. in a solvent such as DMF, HMPA, ether, THF, dioxane and diglyme. Typical prod. is 2-cyclopentadecenone. 8.8.77 as 095351 (3pp104)

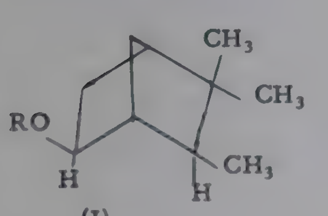
TAKS ★ D23 28829B/15 ★J5 4030-144

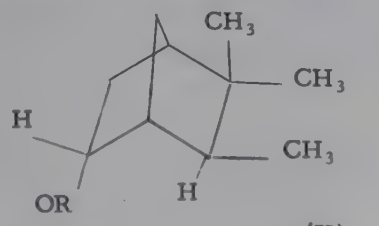
Iso:camphor cpds. prepn. for use as aromatic perfumes - by reacting camphene with glacial acetic acid and conc. sulphuric acid opt. deacylating, oxidising reducing and acylating

TAKASAGO PERFUMERY KK 05.08.77-JA-094036

E15 (06.03.79) C07c-35/28 C07c-69/14

Isocamphor cpds. of formula (I) and (II) (where R = H or acetyl) are prepd. by reacting camphene with glacial acetic acid and conc. sulphuric acid to afford 6-exo-acetoxy-exo-isocamphor (Ia), deacetylating (Ia) to afford 6-exo-hydroxy-exo-isocamphor (Ib), oxidising (Ib) to afford 6-oxo-exo-isocamphor (III), reducing (III) to afford 6-endo-hydroxy-exo-isocamphor (IIa) and opt. acetylating (IIa) to afford 6-endo-acetoxy-exo-isocamphor (IIb).


(I)


(II)

(I) and (II) are useful as aromatic perfumes and prepd. industrially in higher yield than known methods. In an example, to a mixt. of camphene (136 g) and glacial acetone acid (480 g) was added amt. sulphuric acid (49 g) and the mixt. was stirred at 50-55°C for 6 hrs. Reaction mixt. was combined with water and hexane. Organic layer was neutralised with aq. Na_2CO_3, washed with water, dried over dry $NaSO_4$ and evaporated. Product was distilled in vacuum. The distillate (15 g) b.p. 89°C/4 mm Hg was 6-exo-acetoxy-exo-isocamphor. 5.8.77 as 094036 (6pp104)

SHIS D23 10187V/06 =J7 9005-401

Synthetic oils - (poly)glycerol-based

SHISEIDO KK 00.00.72-JA-061994 (08.05.71-JA-030584)

*(16.03.79) *J48085-567 +B01f-17 C11c-03/02*

A condensate of glycerol or polyglycerol with sorbitan was esterified with 2-ethylhexylic acid (I). In an example 45kg condensate alc. prepd. from sorbitan, diglycerol, and NaOH by heating 3hrs. at 260° in an N_2 atmos. was heated with 100 kg I at 220°C for 4 hrs. to give 109 kg 2-ethyl-hexylic acid diglycerolsorbitan pentaester. 8.5.71 as 061994 C11c-3/02; B01f-17/00 (16.3.79) SHISEISO CO. LTD. (3pp) (J4 8085567)

ZAPO= ★ D23 29138B/15 ★SU -608-7

Mixture for the mfr. of lightweight concrete filler - contains clay a waste obtd. from reprocessing of animal fat and vegetable oil

ZAPOROZHE IND INST 28.01.77-SU-447726

L02 (05.05.78) C04b-31/20

Use of the waste from reprocessing animal fat and veget able oil (bleaching earth) as the swelling agent reduces t vol. wt. of the lightweight concrete filler obtd. from a mixture contg. (in wt. %): crude clay 92-98 and (I) 2-8. (contains (in wt. %): SiO_2 50-65, TiO_2 1, Al_2O_3 18-21, Fe_2 7, FeO 0.5, MnO 0.2, MgO 4, CaO 2.5, B_2O_3 4, S + SO 0.2, P_2O_5 0.2 and CO_2 2.0. The material is prepd. by mixing the components, drying at 100-105°C, heating sl -ly to 400°C. and then rapidly to 1150°C.

Burkhanova, K. M., Kovenkina, V. L., Litvinenko, L. I. et al. Bul. 20/30.5.78. 28.1.77 as 447726 (2pp124)

TUCH= ★ D23 29178B/15 ★SU -608-8

Cotton wax recovery from spent caustic digestion liquor - includ de-emulsifying with acid and solvent extracting from resulti solids

TULA CHEM IND RES 20.01.75-SU-098803

F09 (29.06.78) C11b-01/04

Cottonseed wax is obtd. from spent caustic digestion liq by de-emulsifying it with mineral acids to pH 1-2, recov ering the resulting wax-contg. solids and extracting with boiling solvent.

The method is simpler than prior art methods. Colo phony resin present in the liquor may also be recovered the same time.

Iosilevich, A. I., Postupalskii, V. V., Novakovskii, E. M et al. Bul. 20/30.5.78. 20.1.75 as 098803 (2pp314)

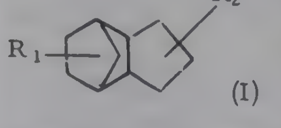
RUHR D23 88397Y/50 =US 4146-5

Perfume compsns. contg. isomeric tricyclodecanes - es hydroxymethyl-formyl-tricyclodecanes (NL 29.11.77)

RUHRCHEMIE AG (GRAU-) 25.05.76-DT-623285

*E15 (27.03.79) *DT2623-285 +C11b-09*

Perfume compsn. comprises a mixt. of isomeric hydro methyl formyl tricyclo$[5,2,1,0^{2,6}]$-decanes having forr ula (I):


(I)

(where R_1 and R_2 are hydroymethyl o formyl; and R_1 is hydroxymethyl whe R_2 is formyl, and vice versa). Comp also contains perfume adjuvants or d uents. Compsn. contains ≥1 other co ponent, pref. an alcohol with weak odour such as ethano propanol, glycols, glycol ethers, polyglycols, adipates and phthalates.

Perfume compsns. have a musk-like odour, esp. Tonkin musk. Prod. is mfd. readily and inexpensively. 20.5.77 as 799114 (4pp931).

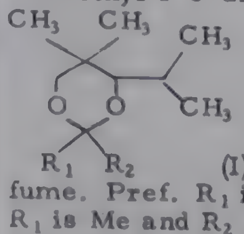
HENK D23 32352A/18 =US 4146-

Perfume compsn. contg. 4-isopropyl-5,5-di:methyl 1,3-dioxan cp - prepd. by acetalising or ketalising tri:methyl pentane-di:ol 25.4.78)

HENKEL KG AUF AKTIEN 23.10.76-DT-648109

*E13 (27.03.79) *DT2648-109 A61k-07/46 C11b-09*

Perfumery compsn. contains 1-50 wt. % of 4-isopropyl -dimethyl 1-3-dioxane of formula (I):


(I)

(where R_1 and R_2 are each H, 1-3C a or cyclopropyl) and the remainder c omary constituents of perfumery compsns.

Pref. customary constituents of p fumery compsns. include ≥1 other p fume. Pref. R_1 is Me and R_2 is H; R_1 is Et and R_2 is H; R_1 is Me and R_2 is Me; R_1 is Et and R_2 is Et; or R_1 is c lopropyl and R_2 is Me.

Perfumery compsn. are imparted characteristic fra rances ranging from fruity, herbal to woody. 21.10.77 844281 (4pp931).

OLA D23 23317A/13 = US 4146-507

ri:methyl and di:methyl cyclo:hexene nitrile perfumery cpds. - repd. from acrylonitrile or crotononitrile and 2 methyl 1,3-entadiene

POLAK'S FRUTAL WORKS INC 26.10.76-US-735571 (06.12.77-US-858039)

*E15 (27.03.79) *BE-858-818 +C11b-09*

Perfume compsn. contains an olfactory amt. of 2,4-dimethyl cyclohexene-3-nitrile, 3,5-dimethyl cyclohexene-3-nitrile, 2,4,6-trimethyl cyclohexene-3-nitrile and 3,5,6-trimethyl cyclohexene-3-nitrile, plus a suitable carrier.

Pref. cpd. is present to 0.01-6 wt.% of total perfume. Prepn. is by Diels-Alder reaction using 2-methyl-1,3-pentadiene and either acrylonitrile or crotonitrile. Use of crotonitrile in place of acrylonitrile produces the trimethyl- derivs. Pref. cpd. is present to 0.1-4 wt.% of total perfume.

Cpds. used in such perfumes have woody, cinnamic notes. Cpds. are stable to acid or basic conditions. 6.12.77 as 858039 (2pp931).

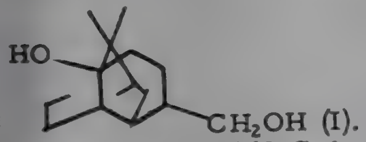
ROUR D23 14345X/08 = US 4146-740

Norpatchoulenol mfr. by oxidative decarboxylation of corresp. acid - obtd. by e.g. oxidn. of patchoulol

ROURE BERTRAND DUPO 09.04.75-CH-004602 (02.08.74-CH-010676)

*E15 (27.03.79) *NL7508-836 C07c-35/22*

Cpd. of formula (I) is new and is an intermediate for the perfume material norpatchoulenol.



(I).

10.2.77 as 767462 C.i.p. 4055594 (+ 9.7.75 - US - 594335) (4pp997).

NAAR D23 44066X/24 #US 4147-671

Perfumes with castoreum-like aroma - contg. o-hydroxybenzyl ethyl ether and 8-allyl-8 hydroxy-tricyclo (5,2,1,0) decane

NAARDEN INT 27.11.74-NL-015485 (25.11.75-US-635213)

*E15 (03.04.79) *BE-835-988 C11b-09*

Perfume compsn. additionally contains a cpd. reminiscent of castoreum comprising (A) 8-allyl-8-hydroxytricyclo $5,2,1,0^{2,6}$ decane and opt. (B) o-hydroxybenzylethyl ether. Pref. ratio (B):(A) is 300:1-1:5 esp. 30:1-1:1. (A) is suitably present at ≥100 ppm of the compsn. (alone).

Both (A) and (B) give the desired odour. (B) accentuates the phenolic character while (A) has a more sweet animal smell. 4.4.78 as 893449 Div.ex. 4057516, 4124771 (+ 22.8.77 - US - 826768) (3pp945).

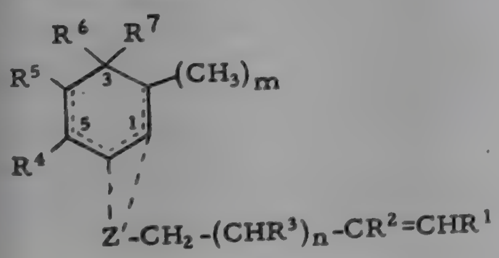
FIRM D23 52777W/32 #US 4147-672

Organoleptic oxygenated alicyclic derivs - giving galbanum or juniper oil-like odours to perfume compsns. soaps etc.

FIRMENICH SA 29.01.74-CH-001147 (17.01.75-US-541988)

*B03 C02 E15 (03.04.79) *DT2502-767 C07c-49/43 C11b-09*

Cyclic ketones (I) are new.



(I)

The ring is satd. or contains an isolated double bond at position 1, 4 or 6 or two double bonds in position 1 and 4, 1 and 5 or 4 and 6. Z is bound at position 1 or 6 and is CO; m is 0 or 1; n is 0, 1 or 2; R^{1-5} are H or one is CH_3 and the rest are H; and R^6 and R^7 are 1-3C alkyl or one is 1-3C alkyl and one is H. A specific cpd. is 1-(3,3-dimethyl-cyclohexyl)-pent-4-en-1-one.

The cpds. are perfumes and flavour and taste modifying agents. They are added to foods, feeds, drinks, pharmaceuticals etc.. 23.7.76 as 708075 (22pp945).

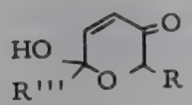
PFIZ D23 00033A/01 = US 4147-705

Gamma-pyrones prepn. esp. from furfuryl alcohol cpds. - giving prods. useful in perfume and flavouring field

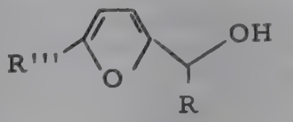
PFIZER INC 09.09.76-US-721885 (02.08.76-US-710901)

*E13 (D13) (03.04.79) *BE-855-965 C07d-309/22*

A 6-hydroxy-2H-pyran-3(6H) one of formula (I) may be prepd. by contacting a furfuryl alcohol of formula (II)



(I)



(II)

with one equiv. of halogen oxidant e.g. Cl_2, Br_2, BrCl, HOCl, HOBr or mixts. at temp. -50 to 50°C.

In the formulae R is H, 1-4C alkyl, Ph or benzyl; R''' is H, 1-4Calkyl. A co-solvent may be used e.g. 1-4C alkanols or diols, 2-10C ethers, low mol.wt. ketones, nitriles, amides and esters.

Cpds. are intermediates in prepn. of gamma-pyrones. 16.1.78 as 869493 Div.ex. 4082717 (+ 9.9.76 - US - 721885)(8pp1393).

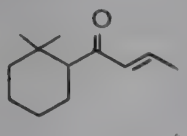
INFL D23 52578Y/30 = US 4147-727

Higher carbonyl cpds. having organoleptic properties - prepd. by reacting a substd. halide or substd. aldehyde with a carbonyl cpd. (NL 19.7.77)

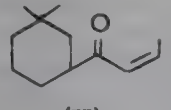
INT FLAVORS & FRAGR INC 11.11.76-US-740948 (11.08.76-US-713357)

*E15 P15 (D13) (03.04.79) *DT2700-688 C07c-49/61*

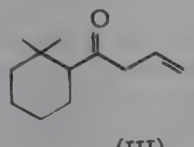
Mixt. of 1-butenoyl-3,3-dimethylcyclohexanes of formulae (I), (II) and (III) is claimed.



(I)



(II)



(III)

Mixt. has a sweet rootbeer-like, cedarwood flavour and is useful as a flavourant in foodstuffs. 15.11.77 as 851726 Div.ex. 4081481 C.i.p. 4062894 (-pp936).

See Also

D13 GB 1544200

D24: SOAP; SOAP DETERGENTS

UNIL ★ D24 28147B/15 ★DT 2841-652

Striped soap cake extrusion - with extrusion cone sub-divided by biconcave central insert

UNILEVER NV 26.09.77-GB-039975

(05.04.79) C11d-13/18

A soap mixt. which is extruded through a perforated disc into an extrusion cone is injected with a liquid (to give it a [illegible] downstream of the perforated disc. The extrusion cone is subdivided by a biconcave centre into two streams, and the liquid is injected in both.

The result is a very uniform quality of the striped texture in both of the produced soap strands. 25.9.78 as 841652 (11pp39)

D25 : OTHER DETERGENTS

PROC ★ D25 B/15 ★BR 7804-045
detergent compsn.
PROCTER & GAMBLE CO 27.06.77-CA-281391
(16.01.79) C11d-01/02 C11d-03/06

KOSI/ ★ D25 B/15 ★CS 7605-086
Non-ionic biodegradable surfactants prodn.
KOSIKOVA B 04.08.76-CS-005086
(28.02.79) C11d-01/80

KOHO/ ★ D25 B/15 ★CS 7700-892
Mixed detergent
KOHOUT J 11.02.77-CS-000892
(28.02.79) C11d-01/12

SMRZ/ ★ D25 B/15 ★CS 7700-893
Condensates of formaldehyde with ethylamine and ethanolamine
SMRZ R 11.02.77-CS-000893
E16 (28.02.79) C07c-95/02 C11d-03/48

KOSI/ ★ D25 B/15 ★CS 7701-019
Non-ionic, biodegradable surfactants - including lignin hydrophobic and saccharide hydrophilic components
KOSIKOVA B 16.02.77-CS-001019
(28.02.79) C11d-01/80

NOVA/ ★ D25 B/15 ★CS 7705-748
Detergent non-irritating to skin
NOVAK J 05.09.77-CS-005748
(28.02.79) C11d-01/94

PETE/ ★ D25 B/15 ★CS 7706-546
Cationic surfactant prepn.
PETERKA V 10.10.77-CS-006546
(28.02.79) C11d-01/52

PAUL/ ★ D25 B/15 ★CS 7707-204
Rapidly-wetted, non-foaming agent
PAULOVIC M 04.11.77-CS-007204
(28.02.79) C11d-01/74

RHON D25 60856A/34 =DS 2806-161
Dust-free stabilisation of anhydrous sodium metasilicate - by heating it with a cpd. releasing its water of crystallisation at temps. below the m. pt. of the silicate penta:hydrate (BE 16.8.78)
RHONE-POULENC INDUSTRIES 16.02.77-FR-004380
*E34 (05.04.79) *DT2806-161 C01b-33/32 C11d-03/08*

Anhydrous Na metasilicate (I) is stabilised by treating it with a cpd. which is capable of releasing water (II) at below the m.pt. of (I) pentahydrate and of converting 1-20 wt. % (2-10) of (I) to the pentahydrate.

(I) which is thus rendered less dusting, is used in a cleaning compsn. (e.g. for crockery)comprising 20-60% (I), 0.1-5 % (II) (e.g. borax), 10-30% Na_2CO_3 and 0.1-5% (II) (e.g. borax), 30-70% Na tripolyphosphate, 0.1-3% nonionic surfactant, 10-30% Na_2CO_3 and 0.1-3% Cl-releasing cpd. 14.2.78 as 806161 (4pp922)

CIBA ★ D25 28144B/15 ★DT 2841-445
Aq. or powdery detergent compsns. - contain sodium poly:phosphate and potassium poly:phosphate or pyrophosphate and opt. anionic surfactant or dispersant (NL 30.3.79)
CIBA GEIGY AG 28.09.77-CH-011850
E34 (05.04.79) C11d-07/16

Washing- and detergent compsn. contains (1) $\geqslant$ 20 wt. % mixt. of (a) Na polyphosphate and (b) K poly- or -pyrophosphate, provided Na polyphosphate proportion is $\geqslant$15 wt. %, w.r.t. total washing- or detergent compsn., and (2) 0-15 wt. % anionic surfactant or dispersant. Aq. or powdery compsns. may be used. Ratio Na- : K phosphates in compsns. is 3 : 1 to 1 : 3. The washing of textile fibre materials with the compsns. opt takes place in combination with non-enzyme active protein-contg. materials.

The compsns. are pref. used for washing out cellulose-contg. textile fibre materials dyed or printed with reactive dyes or treated with optical brighteners, and for washing household laundry. The compsns. remove water hardeners and do not increase electrolyte content of washing liq. Highly conc. liq. detergents can be obtd. which remain stable, without salting out and phase-sepn. on ad ing surfactants or dispersants. Combination of Na- and K phosphate increases solubility of $Na_5P_3O_{10}$. 23.9.78 as 841445 (32pp200)

EART- ★ D25 28629B/15 ★J5 4029-3
Liq. cleaning compsn. for ovens - contains surfactant(s), adhesi increaser and at least one of nitrate and carbonate of sodium an potassium and sodium bi:carbonate
EARTH SEIYAKU KK 06.08.77-JA-094554
A97 E34 (05.03.79) C11d-03/04 C23g-01/14

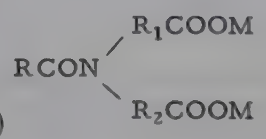
Compsn. is composed of 0.5-20 wt.% of $\geqslant$ 1 of potassiu nitrate, sodium nitrate, potassium carbonate, sodium ca bonate and sodium bicarbonate, 0.2-5 wt.% of $\geqslant$ 1 surfa ants and adhesion increaser.

Pref. surfactants include sulphonate ester of higher alcohols, dialkylsulphosuccinic acid ester, polyoxyethylene alkyl ether, polyoxyethylene-alkylphenyl ether, quat.-ammonium salts or alkylglycine type, betaine type and imidazole type cpds. Adhesion increasers include xanthene gum used in amt. < 1 wt. %.

Compsn. is not stimulating to the skin, eyes and nose It has a pH of 7-10 and is not corrosive to metals (e.g. Cu, Al) of the oven. 6.8.77 as 094554 (4pp170)

KAWA- ★ D25 28868B/15 ★J5 4030-2
Solid detergent having reduced irritation and improved lathering comprises long chain N-acyl:imino di:basic carboxylic acid
KAWAKEN FINE CHEM K 12.08.77-JA-096708
E19 (06.03.79) C11d-01/10

A solid detergent contains a salt of a long-chain N-acylimino dibasic carboxylic acid having formula (I).



$$RCON\begin{cases}R_1COOM\\R_2COOM\end{cases}$$

(I)

In the formula, RCO is a 8-22C satd. or unsatd. fatty acid residue, R_1 and R_2 are the same or different 1-3C straight or branched chain alkylene, M is alkali metal, ammonium, cationic residue of an alkanolamine, o a cationic residue of a basic amino acid, M' is H, alkali metal, ammonium, cationic residue of alkanolamine, or cationic residue of a basic aminoacid). (I) is long-chai N-acylimino diacetate or dipropionate, or long-chain N-acyl-3:3'- iminodibutyrate.

The solid detergent prepd. from long chain N-acylglutaminate, as a base material has inferior properties. T new detergent has lower irritation effect and superior su ability for processing. Lathering and shape retaining pr perties are improved.

Pref. long-chain N-acyliminodicarboxylate is alkali metal salt, alkanol-amine salt (monoethanolamine, triethanolamine salt etc.), or basic aminoacid salt (lysine, ornithine, arginine salt, etc.) of longchain N-acylimino diacetate, -dipropionate, -dibutyrate, etc. The N-long-chain acyl is caprylic, aluric, myristic, palmitic, oleic acid gp. etc. 12.8.77 as 096708 (8pp126)

MONS D25 18418B/10 =US 4146-4
Polymeric acetal carboxylate detergent builders - stable in alkali solns. but depolymerisable in acid media to biodegradab components
MONSANTO CO 22.08.77-US-826[illegible]26
*A25 (A97) (27.03.79) *EP---1-004 C11d-03/38*

Detergent compsn. comprises $\geqslant$5 wt. % of an anionic, no ionic, zwitterionic, ampholytic or amphoteric surfactan and $\geqslant$1 wt. % of a stabilised water soluble polymer comprising polyacetal carboxylate segments of formula $-[CH(-COOM)-O]-_n$. In the formula, M is alkali metal, ammonium, tetralkyl ammonium or alkanol amine gp. h ing 1-4C in the alkyl chain; n averages $\geqslant$4. The total number of polyacetal carboxylate segments comprise $\geqslant$5 wt. % of the total polymer.

Pref. compsn. comprises 5-75 wt. % of the polymer.

e polymer has good builder properties. It is stable der laundry use conditions but depolymerises in acid edia to form fragments which are readily biodegradable waste streams. 22.8.77 as 826426 (8pp927).

LG ★ D25 29407B/15 ★US 4146-496
roxy bleach compsn. for coloured laundry - contains alkali metal roxy-mono:sulphate, and alkali metal N-bromo-aryl lphonamide
COLGATE PALMOLIVE CO 18.05.77-US-798226
A97 E12 (27.03.79) C11d-07/56

eaching compsn. consists of an alkali metal peroxymonolphate bleaching agent (I) and a promoter (II). (II) is an kali metal N-monobromotoluene sulphonamide, alkali etal N-monobromobenzene sulphonamide, or alkali met N-monobromoethylbenzene sulphonamide (alkali metal Na or K). Proportion of active O_2 from (II) is 0.1-2 mes that from (I).

Compsns. do not destroy fabric dyes or fluorescent rightening dyes, and the bleeding of dye from coloured ems to white fabrics is prevented. In add., stains are ffectively removed from fabrics without overbleaching f dyed materials occurring. 18.5.77 as 798226 (10pp478).

OY D25 80455A/45 =US 4146-551
urfactant magnesium salt prepn. - by neutralising sulphonic acid nd/or sulphate ester derivs. with magnesium oxide or hydroxide
LION FAT & OIL KK 28.04.77-JA-048403
*E12 (27.03.79) *DT2817-626 C07c-141/04 C07c-143/16*

repn. of the Mg salt of sulphonic acids (I) and sulphuric sters (II) comprises neutralising (I) or (II) with an aq. ispersion contg. (1) MgO or $Mg(OH)_2$ as neutralising agent nd (2) a neutralising accelerator comprising benzoic acid, itric acid, maleic acid, phosphoric acid, polyphosphoric cid or their water soluble salts under pH <6, pref. 2-6. he neutralisation is esp. effected at 30-70°C.

The process is relatively fast and does not produce arge amts. of by-products. The Mg salts are surfactants vith excellent frothing properties. 24.4.78 as 898794 4pp945).

RCH D25 15954A/09 =US 4146-571
odium percarbonate crystals mfr. - by reacting soda and hydrogen eroxide in presence of sodium chloride or sulphate magnesium ons and hexa:metaphosphate
TREIBACHER CHEM WERKE AG 22.10.76-OE-007909
*E34 (27.03.79) *BE-859-882 C01b-15/10*

Sodium percarbonate is prepd. by reacting sodium carbonate and hydrogen peroxide in aq. medium contg. magnesium ions and sodium hexametaphosphate in amts. to effect stabilisation. Sodium chloride or sulphate is added to make carbonate and percarbonate partly insoluble in reaction medium.

A suspension of a first portion is made of the carbonate in water; suspension is mixed with a portion of hydrogen peroxide in the presence of hexametaphosphate and magnesium ions until percarbonate suspension is formed, first portions being 3-50 wt.% predetermined amts. of carbonate and peroxide; remainder of carbonate and peroxide is added with stirring to suspension over 5-30 mins. to ppte. percarbonate; continuing stirring after completion until peroxide concn. is constant; and sepg. pptd. percarbonate from soln.

Prod. is used as an additive to washing liqs. to produce active oxygen in wash water. 25.10.77 as 845378 (3pp931).

EUTE- D25 60895A/34 =US 4146-575
Sodium tri:poly:phosphate prepn. - by stepwise neutralisation of phosphoric acid with caustic soda maturation and phased concn. and pptn. of impurities
EUTECO SPA 19.11.76-IT-029543
*E34 (27.03.79) *FR2371-382 C01b-25/26 +C01b-15/16*

Sodium tripolyphosphate is prepd. by neutralising an aq. soln. of phosphoric acid by addn. of aq. NaOH. The pptd. impurities are sepd. from the resultant sodium phosphate soln., evaporated to dryness and the residue calcined.

Neutralisation is at <85°C. Maturation of neutralisation prod. is at 70-85°C for >1 hr. before sepg. pptd. im- soln. having sodium phosphate

content of ≥40 wt.% prior to evapn. is heated at 100-200°C, at <b. pt. and at >atmos. pressure to induce complete pptn. of magnesium cpds. dissolved in soln.

Prod. is prepd. from aq. phosphoric acid obtd. by the wet method, contg. dissolved magnesium cpds. 3.11.77 as 848422 (4pp931).

PROC D25 50655Y/29 =US 4147-649
Heavy-duty detergent compsns. - based on mixt. of nonionic and anionic surfactants, organic vehicle and water (BE 30.6.77)
PROCTER & GAMBLE CO 02.01.76-GB-000057
A97 E19(25) *(03.04.79) *DT2658-073 C11d-01/83*

Heavy duty liq. detergent compsn. is stable, conc., and homogeneous and consists of (1) 35-65 wt,% (A) a nonionic surfactant $R_1O(C_2H_4O)_x$-H (where R_1 is hydrocarbyl gp. derived from a prim. monohydric 16-19C alcohol which is 70% branched and x is 9-13); (B) a non ionic surfactant R_2O-$(C_2H_4O)_y$-H, (where R_2 is a hydrocarbyl gp. derived from a prim. or sec. 12-15C aliphatic alcohol with ≥40% bonding, and y is 3-6), the wt. ratio A:B being 5-2:1; and (C) a 18C alkyl benzene sulphonic acid salt of triethanolamine, the wt. ratio A+B:C being 4-2:1; (2) 3-15 wt.% carrier selected from ethanol, n-propanol, isopropanol, alkali metal salts and ethanolamine salts of cument sulphonic acid or their mixtures; (3) 0.01-0.2 wt.% of a silicone suds controlling agent and (4) water. 22.12.76 as 753349 (10pp1383).

CHEM- ★ D25 29624B/15 ★US 4147-650
Aq. slurry detergent esp. for dishwashing machines - contains caustic, tri:poly-phosphate and sodium polyacrylate
CHEMED CORP 25.10.77-US-844558 (23.02.76-US-660588)
A97 E34 (A14) (03.04.79) C11d-07/56

Slurry detergent comprises (wt.%; solids on dry basis) water 50-70; Na or K hydroxide 5-15; anhydrous Na or K metasilicate 0-10; Na or K silicate (20%) 1:2.5 ratio 0-4, NaOCl 0-3; $Na_5P_3O_{10}$ 15-25; Na polyacrylate of av. mol.wt. 85000-95000 1-2. Esp. NaOH is 10%; Na polyacrylate 2% and NaOCl 2.25%.

The slurries are not subject to caking; are easily and uniformly dispensed, and allow larger concns. of complex phosphates to be incorporated. Na polyacrylate synergises the water-softening capacity of the polyphosphate. 25.10.77 as 844558 (6pp1251).

STAU ★ D25 29625B/15 ★US 4147-652
Aq. liq. cleaning concentrates for washing bottles, etc. - contains alkali metal hydroxide, nonionic surfactant, and alkali glucoside or glycidyl ether
STAUFFER CHEMICAL CO 03.05.78-US-902301 (13.12.76-US-750036)
A97 (03.04.79) C11d-01/68 C11d-03/02 C11d-07/06

Liq. cleaning concentrate contains: (I) 10-35 wt.% alkali metal hydroxide; (II) 0-50 wt.% non-ionic surfactant contg. a polyoxyethylene gp.; (III) 0-50 wt.% alkyl glucoside or glycidyl ether of a 12-24C alcohol or an alkyl phenol; and (IV) H_2O to 100 %. Total of (II) and (III) is 10-50 wt.%.

The compsns. are highly effective for washing bottles and other food and drink containers. The compsns. provide concd. alkaline solns. of high surfactant content, but do not required solid caustic alkalis in their prepn.. , 3.5.78 as 902301 (4pp478).

MONS D25 74391A/41 =US 4147-654
(N)-Acetyl-di:glycol:imide - useful as rapid, low temp. activator of peroxide bleaches
MONSANTO CO 02.09.77-US-830250 (08.05.78-US-904065)
*E13 (03.04.79) *US4118-568 C07d-265/32 C11d-03/39 +C11d-07/54*

Compsn. comprises N-acetyldiglycolimide (I) and H_2O_2 or a peroxide which forms H_2O_2 in aq. soln. Mole ratio of (I):H_2O_2 (or precursor) is 0.1-10. The compsn. may also contain washing agents. The compsn. is used for bleaching fabrics, and is active at low temps. e.g. 25°C.

US 4118568 claimed cpd. (I). 8.5.78 as 904065 Div. ex. 4118568 (4pp945).

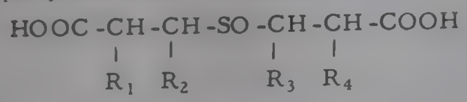
TEXC D25 79398X/43 =US 4147-673

Water-sol., biodegradable detergent compsn - contg salts of sulphinyl dipropionic acid as sequestrant and detergent

TEXACO BELGIUM NV 11.04.75-US-567331

*E17 (03.04.79) *BE-840-623 C11d-01/14 C11d-03/34*

A detergent compsn. contains 3-9 wt.% xylenesulphonate or lower alkylsulphonate hydrotrope, 15-20 wt.% linear alkylsulphonate, up to 5 wt.% fatty acid amide foam stabiliser and as sequestrant and detergent builder 0.1-1 wt.% a water soluble alkali metal salt of a sulphinyl dipropionic acid of formula (I)



$$HOOC-\underset{R_1}{CH}-\underset{R_2}{CH}-SO-\underset{R_3}{CH}-\underset{R_4}{CH}-COOH$$

(I)

in which R_1, R_2, R_3 and R_4 are the same or different and are H or lower alkyl, partic. Me.

Pref. acid is sulphinyl dipropionic acid which is a suitable replacement for polyphosphates in detergent compsns. and has low biological and chemical oxygen demand. 11.4.75 as 567331 (3pp1393).

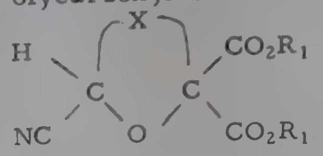
MONS D25 78212A/43 =US 4147-

6-Cyano-tetra:hydro-pyran-2,2-di:carboxylate(s) - intermediates tri:carboxylate(s), useful as detergent builders, sequestrants etc.

MONSANTO CO 05.01.77-US-756946 (27.07.78-US-928331)

*E13 (03.04.79) *US4120-874 +C07d-319/10*

Polycarboxylates of formula (I) are new.



(I)

In (I), R_1 is lower alkyl and X is $-CH_2OCH_2-$, $-CHCO_2R-O-CHCO_2R-$, $-CH_2OCHCO_2R-$, or $-CHCO_2R-O-CH_2-$; R is alkali metal, NH_4, trialkan amine or $\leqslant$ 20C alkyl. Pref X is $-CH_2OCH_2-$.

(I) are intermediates for water softeners, detergent builders, scale dissolvers etc.. The parent patent discloses cpds. (I; where X is $(CH_2)_3$). 27.7.78 as 928331 (6pp918).

CPI INDEXES

ALERTING PATENTEE INDEX (II)

Weekly by section and overall, lists all current patents in atentee code order and, within a given patentee, in earliest riority date order. The first line gives patentee code, arliest priority date, patentee name, CPI classes and finally he current patent number. The second line gives the first art of the title, followed by the accession number.

```
EIGE/ 24.01.75  EIGENMANN L   A93  *DT 2602-948
   Bonding fluid for road marking strips - 60224X/32
EIGE/ 27.01.75  EIGENMANN L   A93 L02(A21)  *DT 2602-947
   Bonding fluid for road marking strips - 60223X/32
```

Not in Basic Abstracts Journal

CPI CLASS INDEX (IV)

Weekly only. Headings are all the CPI classes within the section to which an Alerting Bulletin relates, arranged in numerical order. Posted under each class heading is a list, in country then patent number order, of all basic or equivalent documents referenced or cross-referenced under that heading.

```
   M22
*BE -836-489
*CA -987-881
=DS 1569-023
=DS 2245-330
*DS 2517-206
*DS 2519-679
=DS 2520-359
*DT 2450-918
*DT 2451-494
=DT 2451-607
```

In Country Alerting Bulletin only

BASIC NUMBER INDEX (V)

Weekly by section and overall, lists all entries by accession number. Each heading consists of the accession number in bold, followed by the CPI section letters. There then follows a list of all the family members, commencing with the basic and finishing with the current week's patent. For each family member the CPI week of issue is quoted, and a plus sign indicates that a multiple priority has been claimed.

```
09125-X ACDF
  US 3933-788   X05+
  CA -990-674   X26
09192-X BC
  US 3933-948   X05
  BE -832-423   X10
  NL 7509-762   X10
  DT 2535-514   X11
  SW7509-042    X15
  NO7502-837    X16
  SF 7502-292   X19
  ZA 7504-766   X21
```

In all Editions

PATENT NUMBER INDEX (VII)

Weekly by section and overall. Lists left to right the patent type (* for basic, = for equivalent or # sign for non-convention equivalent or where the priority has been artificially "added" to the specification), patent number, accession number and CPI classes.

```
US 3963
#636 36477U  A97D15M14
*645 49861X  A41E19J04
=646 19776V  A41E19J04
=647 21100X  A17+R4
=650 06289S  A22
#651 24399W  A97K05L02M22
=652 73248V  A12
=653 70544V  A81G03
*654 49862X  A88H01Q4
*655 49863X  A81G03
```

In all Editions

BASIC PATENTEE INDEX (X)

Weekly by section in BAJ only. Entries under any given patentee code heading are in earliest priority date order. The title, truncated to 105 characters, is followed by the accession number and current patent number. The last line of each entry consists of the patentee name, the priority details (earliest then latest if there is more than one) and finally the Derwent classes. This index is cumulated quarterly and annually by section as hard copy. Overall A—M cumulations of from a quarter up to 5 years are available as COM.

```
CALI
Nitrile rubber smooth rolled sleeve for well impression packer - also contg
                                                 49862X/26  *US 3963-654
natural rubber, hydrated
   CHEVRON RESEARCH CO 25.06.73-US-373341 +29.07.74-US-492377 A88 H01
Mica contg. plastified sulphur mixt - for coating walls and floors or solidifying
                                                 49433X/26  *DT 2554-327
earth in dams
   CHEVRON RESEARCH CO 03.12.74-US-529258 +13.11.75-US-631781 A82L02
CANA
Emulsifying agents of microbial origin - used esp. for oil spills, are made by
                                                 48076X/26  *CA -990-668
cultivating a species of
   CANADIAN PAT & DEV LTD 31.08.72-US-285159 A97 D16 H03
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In Basic Abstracts Journal only

MANUAL CODE INDEX

IN Basic Abstracts Journal only

At the start of each main group of codes, the manual code and its descriptor are printed in the middle of the column. Each sub-division of a manual code group appearing during the week is given, accompanied by its descriptor. All manual codes occurring during the week within each sub-division are then listed, with accession numbers posted against them.

In all there are about 3,600 manual codes in CPI, each one having an average of less than 200 documents assigned to it per year. The full classification is set out in the Manual Code Instruction Manual, which also contains a keyword index of terms for easy reference.

COUNTRY COVERAGE

"Major" Countries

Covered completely in CPI and WPI from the commencement of the service except: Research Disclosure 1978, Europe and PCT 1979, Sweden transferred from "Minor Countries" 1979. Average weekly numbers are listed alongside.

Fast publishing

Belgium	180	
Europe	150	
France	740	
Germany, W. unexamined	1050	
Japan unexamined	845*	
Netherlands unexamined	240	
PCT	40	
Research Disclosure	20	
South Africa	100	
Sweden	260	
United Kingdom unexamined	600	3325

Slow publishing

Canada	450	
Germany, E.	100	
Germany, W. examined	465	
Japan examined	340*	
Netherlands examined	60	
Soviet Union	1200	
Switzerland	260	
United Kingdom examined	300	
United States	1200	4375

*Only CPI coverage for Japan.

"Minor" Countries

Complete coverage, but only introduced during 1975, with exception of Italy 1978.

Fast publishing

Brazil	140	
Denmark	120	
Finland	60	
Norway	80	
Portugal	30	430

Slow publishing

Austria	125	
Czechoslvakia	180	
Hungary	35	
Israel	40	
Italy	155	
Rumania	25	560

MINOR AND MAJOR COUNTRIES

If the first publication of an invention takes place in one of the 'major' countries listed above, then this publication is called the basic patent, a WPI accession number is assigned, and this is used for all subsequent members of the family.

If, however, the first publication occurs in one of the 'minor' countries listed above, then the document is regarded as a provisional basic. No accession number is assigned, since an abstract is not provided. If this provisional basic is then followed by further family members also from 'minor' countries, these produce entries in the same indexes even though an accession number has still not been assigned.

However, as soon as a member of the family is published in one of the 'major' countries, then this is regarded as the first disclosure. An accession number is assigned, and will apply also to all the earlier members of the family (from the 'minor' countries). Hence it is possible to see, in Index V, entries where the basic has a later week number than some of its equivalents.

For CPI, if the first publication occurs in Sweden, South Africa or Japan — in the case of Non-Japanese nationals — then the document is treated as a provisional basic as outlined above. Other than for Japan where a heading is given, an Alerting abstract is included in CPI at this stage.

Subsequently, when a documentation abstract is available an accession number is assigned to the document and the abstract published in the BAJ and related products. Headings will be included in the Alerting Bulletins for Sweden and South Africa together with abstracts for the Japanese at this later stage.

Entries are included in WPI Gazettes at both stages. At the later stage both a basic and an equivalent heading will be given for each such patent number.

COUNTRY CODES

For patent number (not priority) purposes, DS distinguishes accepted West German specifications (DAS) from the unexamined applications (OLS) which are given the norma DT code. in the case of Japan J5 represents the unexamined applications, and J7 the examined of the present series.

Argentina	AR	Luxembourg	LU
Australia	AU	Malawi	MW
Austria	OE	Mexico	MX
Belgium	BE	Monaco	MC
Brazil	BR	Netherlands	NL
Bulgaria	BG	New Zealand	NZ
Canada	CA	Norway	NO
Chile	CE	Pakistan	PK
Colombia	CO	PCT	WP
Czechoslovakia	CS	Philippines	RP
Denmark	DK	Poland	PO
Europe	EP	Portugal	PT
Finland	SF	Rhodesia	RH
France	FR	Rumania	RU
Germany, East	DL	South Africa	ZA
Germany, West	DS	South Korea	KS
Germany, West	DT	Spain	ES
Greece	GR	Sudan	SD
Hungary	HU	Sweden	SW
Iceland	IS	Switzerland	CH
India	IN	Syria	SR
Ireland	EI	Trinidad	TD
Israel	IL	Turkey	TR
Italy	IT	Untd. Kingdom	GB
Japan	JA	U.S.A.	US
Japan, unex.	J5	U.S.S.R.	SU
Japan, ex.	J7	Yugoslavia	YU

ACTI- 20.10.76 ACTIVOX INC D15 *US 4146-478
Closed spiral path waste water treatment apparatus - 29399B/15
ADAM/ 05.02.75 ADAMEK M D18 *CS 7500-731
Synthetic tanning agents prepn. - B/15
AGAH- 02.09.77 AGA HEATING AB D15 =SW 7808-917
Combined biological dry toilet and waste water purifier - 20411B/11
AGEN 07.06.76 AGENCY OF IND SCI TECH D15 J01 =US 4147-665
Magnesia adsorbent for purifying waste water - 90533Y/51
*AGEN 05.08.77 AGENCY OF IND SCI TECH A97 D15 (A14) *J5 4028-288
Metal ion trapping surfactant - 28406B/15
*AHSC 11.10.77 AMER HOSPITAL SUPPL CORP A89 B04 D16 J04 (A96) *BE -871-117
Determn. of isoenzyme(s) having different electric charges - 27886B/15
AIRL 25.04.77 AIR LIQUIDE L' D13 =PT --67-926
Rapidly freezing liq. and pasty foods to form granules - 74428A/42
AIRP 24.01.73 AIR PRODUCTS & CHEM INC D15 =DS 2362-334
Treatment of industrial waste waters - 36558V/20
AJIN 29.10.70 AJINOMOTO KK B05 D13 E14 #DS 2053-188
Aspartyl phenyl alanine esters as sweet - 23731S/14
AJIN 26.02.77 AJINOMOTO KK B04 D16 E13 (B02) =US 4147-692
7-Glycyl:propylamino-4-methyl:coumarin - 14881B/08
*AKIY- 04.08.77 AKIYAMA JOZAI KK A96 B04 D13 *J5 4028-871
Conc. onion extract-cyclodextrin inclusion cpd. - 28607B/15
ALBR 05.10.73 ALBRIGHT & WILSON LTD D25 E11 =CA 1050-381
Amine polyphosphates as sequestering agents - 16072W/10
ALBR 18.08.77 ALBRIGHT & WILSON LTD D21 E16 (D25) =NO 7802-798
Surfactant N-carboxy-alkylated acylated ethylene di:amine cpds. - 18420B/10
*ALDA/ 00.00.76 ALDAG W D15 *DT 2742-801
Water treatment plant - 27976B/15
ALFA 07.03.74 ALFA-LAVAL AB D13 =CA 1050-438
Sepn of skimmed milk from milk or cream - 41024W/25
ALFA 26.08.77 ALFA-LAVAL STALLTEC D15 J02 =DK 7803-756
Liquid aerating stirrer e.g. for manure or sewage - 18516B/10
ALFA 26.08.77 ALFA-LAVAL STALLTEC D15 J02 =SW 7808-354
Liquid aerating stirrer e.g. for manure or sewage - 18516B/10
AMCY 27.04.73 AMERICAN CYANAMID CO B04 C03 D16 (D13) =CS 7402-854
Isolation of antibiotic AV-290 from Streptomyces candidus - 79238V/46
AMCY 19.05.75 AMERICAN CYANAMID CO D21 E16 =GB 1543-976
Clear cream rinse compsns. for conditioning shampooed hair - 93644X/50
AMCY 07.02.77 AMERICAN CYANAMID CO A91 D15 (A14 A26) =US 4147-627
Poly:anionic and poly:cationic polymer mixt. - 59073A/33
*AMFA- 23.09.77 AMFAC FOODS INC D14 *DT 2810-040
Potato chip cutter - 28078B/15
*AMFE= 15.12.76 A MEDICINE FEEDS IN D13 *SU -608-514
Dry base for artificial human milk mfr. - 29030B/15
*AMHP 16.06.75 AYERST MCKENNA & HA B02 C02 D22 *CA 1050-550
Octa:hydro-benzo-cyclo-hepta-pyrido-iso-quinoline derivs prepn. - 27940B/15
ANDZ 14.05.75 MASCH ANDRITZ AG D15 F07 J01 =US 4147-101
Dewatering press for fabrics or fibrous materials - 90877X/49
ANVR 04.07.77 AGENCE NAT VALORISATION D16 =FR 2396-974
Detection of microorganisms, esp. bacteria in media - 01932B/02
ARMO 09.06.76 ARMOUR PHAR CO A31 D21 J04 =US 4147-766
Safe decodorant aerosol particles - 00386A/01
ASAH 13.04.72 ASAHI KASEI KOGYO A32 B04 D16 F01 =DS 2318-831
Polymeric microfibril aggregates - 67771U/45
ASAH 25.03.74 ASAHI KASEI KOGYO KK A97 B04 D16 J04 =DS 2512-920
Semi permeable, cellulose microcapsules contg. powdered adsorbent - 68361W/41
ASAH 08.07.77 ASAHI KASEI KOGYO A88 D15 J01 (A26) =FR 2396-575
Poly:aryl ether sulphone semipermeable membrane - 04536B/03
ASAH- 22.09.77 ASAHIMATSU KORID D14 =NL 7809-667
Steam pressure cooking autoclave for soya beans etc. - 08060B/05
ASAH- 22.09.77 ASAHIMATSU KORID D14 =NL 7809-668
prodn. of clean peeled soya beans etc. - 08059B/05
ASAO 07.06.76 ASAHI KOGAKU KOGYO D21 =DS 2725-665
Tooth and bone prostheses prodn. - 88592Y/50
*ASBI= 13.06.74 AS USSR BIOCHEM MIC B02 D16 *SU -608-833
Riboflavin microbiological prodn. - 29182B/15
ASKO- 02.09.77 ASKO-UPO OY D15 =SW 7808-917
Combined biological dry toilet and waste water purifier - 20411B/11
*ASMI= 14.12.76 AS USSR MICROBIOL INST D16 (D13) *SU -608-835
Penicillium roqueforti Thom fungal strain - 29184B/15
*ASMI= 14.12.76 AS USSR MICROBIOL INST D16 *SU -608-836
Fungal strain Rhizopus nigricans Ehrenb F-2018 - 29185B/15
ATLA 27.09.77 ATLAS AS D14 #DT 2743-338
Continuous peeling of fruit or vegetables - 91772Y/51
*AUHE= 29.11.76 AS UKR HEAT PHYS D15 *SU -608-767
Sea-water desalinator - 29121B/15
*AUTO- 01.12.76 AUTOMATORS INC D14 *US 4147-485
Moulding food esp. meat patties, with wt. control - 29555B/15

*BABC- 20.02.75 BABCOCK WATER TREAT D15 *GB 1544-077

BACT- 25.04.75 BACTEX INC B04 D16 =CA 1050-423
Neisseria gonorrhoeae filament crystals and piline GC isolation, - 83025X/45
BADI 18.11.74 BASF WYANDOTTE CORP A35 D15 J01 =CA 1050-439
Purifying effluent water streams contg org contaminants - 20397X/11
BADI 05.07.75 BASF AG B05 D21 =GB 1544-091
Synergistic insect repellent compsns. - 05578Y/04
BADI 28.08.75 BASF AG A14 D15 F09 H01 (A97) =CA 1050-680
High mol. wt. acrylamide copolymer retention and flocking agents - 18316Y/11
BADI 02.04.77 BASF AG D18 =DS 2714-813
Calcium oxide and sulphide free liming - 73034A/41
BADI 23.09.77 BASF AG D25 E16 =DT 2742-805
Stabilising nonionic surfactant against alkali discolouration - 23957B/13
BADI 23.09.77 BASF AG D25 E16 =NL 7809-613
Stabilising nonionic surfactant against alkali discolouration - 23957B/13
BAIM- 08.12.75 BAUMGARTNER PAPIERS S D18 =GB 1544-116
Continuously producing cigarette filter tips - 25317Y/15
*BANS- 28.09.77 BANSS MASCH KG D12 *DT 2743-521
Pigs carcass bristle removing machine - 28011B/15
*BANS- 28.09.77 BANSS MASCH KG D12 *DT 2743-522
Conveying rack for empty animal hooks in slaughter house - 28012B/15
*BARA/ 27.02.78 BARABAS J D13 *CS 7801-210
Dairy cream stabilisation - B/15
*BART/ 27.06.77 BARTAK R C03 D13 (D15) *CS 7704-201
Agricultural products hydrolysate processing, particularly excrement - B/15
BATT 01.04.77 BATTELLE MEMOR INST D17 =DK 7801-445
Sugars prodn. by hydrolysis of lignocellulosic material - 72708A/41
BATT 22.09.77 BATTELLE DEV CORP C03 D16 =NL 7809-563
Viral and bacterial microbial insecticide micro-granule - 23954B/13
BATT 22.09.77 BATTELLE DEV CORP C03 D16 =WP 7900-155
Viral and bacterial microbial insecticide micro-granule - 23954B/13
*BAUE/ 00.00.72 BAUER O D15 *DT 2742-832
Raw sludge prepn. and mixture with coal dust - 27979B/15
*BEAU/ 06.07.77 BEAUVAIS M D14 (D16) *FR 2396-516
Deaeration of mushrooms, etc. for impregnating with liq. - 28192B/15
BECI 28.09.77 BECKMAN INSTRUMENTS INC B04 D15 J04 (D16) =GB 2005-018
Detecting toxicity in aq. liquids by photometry - 10012B/06
BECK- 30.12.72 NATURIN-W BECKER A97 D12 (A94) =CS 7309-063
Laminated tubular film for packaging cookable sausage - 53170V/29
BECK- 31.12.75 NATURIN-W BECKER A97 D12 (A25) =DS 2559-318
Polyurethane films for sausage casings - 46971Y/27
BEEC 28.03.74 BEECHAM GROUP LTD B04 D16 =CA 1050-460
Antibiotic MM 13902 from Streptomyces olivaceus - 67720W/41
BEEC 28.03.74 BEECHAM GROUP LTD B04 D16 =US 4146-610
Antibiotic MM 13902 from Streptomyces olivaceus - 67720W/41
BEGH- 20.09.77 BEGHIN-SAY A96 D22 F07 =GB 2004-812
Stratified absorbent prod. used as dressing or protective slip - 01969B/02
*BIAL- 14.03.77 BIALETTI R & C SPA D11 *US 4146-333
Domestic dough mixer - 29339B/15
*BIGN/ 24.06.77 BIGNELLI M D17 *BR 7704-123
Rotary sieve for cleaning sugar cane - B/15
BIOR- 20.09.74 BIO RES CENTER CO D16 E17 (D17) =DS 2541-960
Ethanol prodn from cellulose - 24417X/14
BLAN/ 22.09.77 BLAND B J C03 D13 E17 =DT 2833-727
Particulate compsn. for preserving agricultural products - 87894A/49
BLAN/ 22.09.77 BLAND B J C03 D13 E17 =NL 7808-377
Particulate compsn. for preserving agricultural products - 87894A/49
*BLEC/ 17.03.77 BLECHA S B04 D16 J04 *CS 7701-765
Multifunctional system for bacteriological analysis - B/15
BLUE- 11.05.76 BLUE CROSS LAB INC D13 H07 =CA 1050-338
Solid stick pan lubricant - 37876Y/21
BLUE- 25.08.77 BLUE WING CORP C03 D13 =DK 7803-767
Microencapsulation of lipids in protein to prepare foods - 01951B/02
BLUE- 25.08.77 BLUE WING CORP C03 D13 =GB 2004-727
Microencapsulation of lipids in protein to prepare foods - 01951B/02
BLUE- 26.08.77 BLUE WING CORP C03 D13 =DK 7803-768
Protein-contg. feed additive for ruminants - 20301B/11
BLUE- 26.08.77 BLUE WING CORP C03 D13 =GB 2004-728
Protein-contg. feed additive for ruminants - 20301B/11
BLUE- 26.08.77 BLUE WING CORP C03 D13 =SW 7808-945
Protein-contg. feed additive for ruminants - 20301B/11
*BOHU/ 21.11.77 BOHUNICKY K D11 *CS 7707-636
Confectionery products fermentation progress evaluation - B/15
*BOKU/ 28.03.74 BOKUCHAVA M A D13 *SU -608-516
Tea heat treatment appts. - 29032B/15
BOSC 11.08.76 BOSCH-SIEMENS HAUS D15 =DS 2636-054
Ion exchange regeneration salt container - 14266A/08
BRAS- 11.01.72 BRASSERIES KRONENBO D16 =CS 7300-247
Brewery vat - 43091U/31

BRAU- 05.07.77 BRAUN K O KG A96 D22 F07 =FR 2396-543
Readily torn elastic bandage for surgical and sports usage - 80224A/45

*BRBE- 30.09.77 BRIT BEEF CO LTD D12 *GB 2004-831
Conveyor system for animal carcasses - 28273B/15

BRIM 29.11.74 BRISTOL MYERS CO B03 C02 D13 =CA 1050-536
3′-Deoxy-butirosin A - 44043X/24

*BRIM 24.07.78 BRISTOL MYERS CO D21 *US 4147-750
Wax based stick applicator prodn. - 29661B/15

*BROW/ 19.07.77 BROWN M J D15 *US 4146-479
Magnetic water conditioner for reducing scale formation - 29400B/15

BURN- 02.08.77 BURNS FOODS LTD D12 =J5 4028-852
Food product similar to bacon prepd. by extrusion - 19718A/11

BURR- 08.12.75 BURRUS F J & CIE D18 =GB 1544-116
Continuously producing cigarette filter tips - 25317Y/15

*BUTT= 14.12.76 BUTTER CHEESE IND D16 (D13) *SU -608-835
Penicillium roqueforti Thom fungal strain - 29184B/15

*BUTT= 14.12.76 BUTTER CHEESE IND D16 *SU -608-836
Fungal strain Rhizopus nigricans Ehrenb F-2018 - 29185B/15

CALG 01.10.73 CALGON CORP A91 D15 F09 =US 4147-681
Self-inverting di:methyl di:allyl ammonium chloride polymer emulsion - 25068A/13

CANP 15.05.74 CANADA PACKERS LTD D25 =CA 1050-385
Powdered detergent having low bulk wt. - 79117W/48

CANP 20.05.77 CANADA PACKERS LTD D13 E13 =US 4146-651
Ascorbic acid acetal and ketal derivs. - 84037A/46

CARL- 06.08.76 CARLE AND MANOTANARI SPA D13 =GB 1544-194
Appts. for removing chocolates from moulds onto moving belt - 12571A/07

CGRR 05.07.77 CGR-MEV D15 =FR 2396-724
Effluent and toxic sludge treatment - 08330B/05

CHAL- 23.06.77 CHALLENGE-COOK BROS D18 =BR 7803-971
Tumbler drum for treating hides - 75993A/42

CHCC 19.01.77 CHISSO CORP A97 D18 F04 (A18) =GB 1543-905
Synthetic fibre tobacco filters - 55363A/31

CHEM 28.09.77 CHEM WERKE HULS AG D25 E17 =DT 2743-607
Aq. cleaning solns. contg. alkyl glycol ether sulphate(s) - 25905B/14

*CHEM- 23.02.76 CHEMED CORP A97 D25 E34 (A14) *US 4147-650
Aq. slurry detergent esp. for dishwashing machines - 29624B/15

CHIN 02.05.74 CHINOIN GYOGYSZER B02 C02 D22 (D21) =CA 1050-552
2-(5-Nitro-2-furoyl-amino)-1-carbamoyl-benzimidazoles - 67346W/41

*CHUS 22.09.77 CHUGAI SEIYAKU KK B04 D16 *DT 2841-380
Fatty acid ester(s) of hydroxy:naphthyl:azo benzene-sulphonate cpds. - 28138B/15

CIAC/ 21.04.75 CIACCIO L L D15 =GB 1543-969
Oxygen demand determn. in a biological system - 85306X/46

CIBA 30.04.74 CIBA GEIGY LTD A97 D15 M14 =CA 1050-386
Inhibiting scale deposition from salt water - 75744W/46

CIBA 13.03.75 CIBA GEIGY AG A97 B02 C02 D16 =GB 1543-986
Antifungal antibiotic papulacandin - 74329X/40

CIBA 21.05.76 CIBA GEIGY CORP B05 C03 D22 E11 =US 4147-780
Substd. (1)-amino-methane-phosphonous acid derivs. - 82995Y/47

CIBA 04.07.77 CIBA GEIGY AG A60 D25 E23 F06 =FR 2396-755
Bis:triazinyl-amino-stilbene derivs. - 01921B/02

CIBA 07.07.77 CIBA GEIGY AG A41 B07 D25 E13 (A18 A81 B04 D21) =FR 2396-753
Monomeric vinyl ether(s) of hydantoin(s) - 04555B/03

*CIBA 28.09.77 CIBA GEIGY AG D25 E34 *DT 2841-445
Aq. or powdery detergent compsns. - 28144B/15

CLAI 09.09.77 CLAIROL INC D22 =US 4147-921
Heatable article for application to the body - 22415B/12

CNSF 15.06.77 CONSOLIDATED FOODS CORP D15 =BR 7803-778
Drinking water treatment - 03428B/02

*COHN/ 17.03.77 COHN C C D18 *US 4146-040
Flame retardant cigarettes - 29315B/15

*COLE/ 23.11.76 COLEMAN E D14 *US 4145-962
Cracking nuts without damage to kernel - 29306B/15

COLG 26.06.75 COLGATE PALMOLIVE CO B03 D21 E13 (D13) #CA 1050-431
Sweeting agent for dental powder, paste, chewing gum or mouthwash - 78772W/48

*COLG 10.02.76 COLGATE PALMOLIVE CO D22 *GB 1543-915
Absorbent article for perineum region use - 28247B/15

*COLG 18.05.77 COLGATE PALMOLIVE CO A97 D25 E12 *US 4146-496
Peroxy bleach compsn. for coloured laundry - 29407B/15

COLG 21.04.78 COLGATE PALMOLIVE CO B05 D21 #PT --67-930
Non-staining oral hygiene compsns. - 30312A/17

CORP 25.11.74 CPC INTERNATIONAL INC D17 J04 =HU T016-189
Fluidisation of difficult powders esp starch for dextrin - 44030X/24

CRDC 10.06.77 CORDIS DOW CORP A32 D15 J01 (A88) =BR 7803-729
Moulding resin baffles at intervals along filamentary bundles - 89666A/50

*CRGI 21.08.72 CARGILL INC C03 D13 *US 4147-810
Improving the digestibility of feed vegetable protein - 29683B/15

CSIR 22.09.77 COMMONWEALTH SCIENT ORG A97 D15 (A14) =DT 2841-122
Clarifying water by contacting with mineral or clay coagulant - 26565B/14

CSIR 22.09.77 COMMONWEALTH SCIENT ORG A97 D15 (A14) =NL 7809-624
Clarifying water by contacting with mineral or clay coagulant
26565B/14

CUPE/ 12.09.73 CUPERY M E D15 E13 =CA 1050-555
N-Beta hydroxyalkylimidazoles and benzimidazoles - 77384V/44

*DAII 08.08.77 DAIICHI KOGYO SEIYAKU D23 E15 *J5 4030-136
Macrocyclic ketone prodn., for use as perfume - 28824B/15

*DAIL 05.08.77 DAICEL KK D22 E12 *J5 4028-826
Deodorant partic. for combating odour of basic cpds. - 28584B/15

*DAIR= 31.01.77 DAIRY IND RES INST D13 (D16) *SU -608-513
Prodn. of soured milk drink from skimmed milk - 29029B/15

DANA 26.09.77 DANFOSS A/S D25 E17 M12 (E14) =GB 2004-907
Fluid for cleaning worked metal articles - 26399B/14

*DASU- 21.09.77 DANSKE SUKKERFABRIK A91 D13 (A25 A97) *DT 2840-926
Anion exchanger resins for purificn. of fruit juice - 28122B/15

DDSK- 24.01.77 DDS-KROYER A/S D17 =CS 7800-493
Starch hydrolysates prepd. from wheat, barley or rye - 38592A/22

*DEDE/ 06.03.78 DEDEK L B04 D16 *CS 7801-394
Inactive, lyophilised vaccine for aujez illness - B/15

DEGE- 20.12.75 DEGESCH GMBH D13 E13 (E17) =CS 7607-839
Treating mouldy foodstuffs to neutralise toxic products - 43477Y/25

DEGG- 09.07.77 DEGGENDORFER WERFT EIS D15 =FR 2396-723
Water desalination system - 06241B/04

DEGM 16.09.75 DEGREMONT SA D15 J04 =GB 1543-970
Appts. for measuring mobility of colloids in electric field - 05743Y/04

DEGS 07.09.73 DEUTSCHE GOLD & SILBER D15 J01 =CA 1050-384
Cation exchanger aluminium silicates - 19560W/12

DEGS 05.08.77 DEUTCHE GOLD AND SILVER D15 E33 J01 =J5 4028-300
Mfr. of aluminosilicate cation exchangers contg. surfactants - 09982B/0

DEGS 05.08.77 DEUTSCHE GOLD & SILBER D15 E33 J01 =J5 4028-300
Mfr. of aluminosilicate cation exchangers contg. surfactants - 09982B/0

*DEJI- 06.10.77 DEJ INT RES CO D13 *BE -870-964
Prim. extn. of coffee from ground roast coffee beans - 27848B/15

*DEUT/ 19.08.77 DEUTSCH D H D16 J04 *US 4147-480
Gas circulation system with hollow gas flow element - 29551B/15

*DEUT/ 19.08.77 DEUTSCH D H D16 J04 *US 4147-481
Gas circulation system with gas flow sheet - 29552B/15

*DIAS 22.03.76 DIAMOND SHAMROCK CORP D21 E37 J03 L02 *US 4147-605
Prodn. of silica and other sols - 29602B/15

*DOHN/ 04.05.77 DOHNALEK R C03 D13 *CS 7702-938
Straw processing - B/15

*DOMT 07.01.77 DOMTAR LTD D15 E36 J03 *US 4147-626
Mercury metal removal from chlor-alkali plant effluent - 29614B/15

*DOWC 24.03.78 DOW CHEMICAL CO A60 B02 C02 D22 *US 4147-784
4-oxo-1,3-di:thiolo-pyridazine-2-ylidene-propane di:nitrile(s) 29677B/15

DRAG- 27.06.77 DRAGOCO GERBERDING D21 E17 =GB 1544-059
Glycerine:tri-3,5,5-tri:methyl-hexanoate - 06187B/04

*DUPO 30.01.78 DU PONT DE NEMOURS CO D18 E16 (E17) *US 4147-511
Solvent-drying wet animal hides - 29561B/15

*EART- 06.08.77 EARTH SEIYAKU KK A97 D25 E34 *J5 4029-303
Liq. cleaning compsn. for ovens - 28629B/15

EAST 02.09.77 EASTMAN KODAK CO A96 C03 D13 =SW 7809-223
Pill for ruminants resistant to conditions in the rumen - 24176B/13

EBAI 31.01.73 EBARA INFILCO KK D15 J01 =J4 9099-970
Colloidal impurities sepn. from liq. - 28967B/15

*EBAI 31.01.73 EBARA INFILCO KK D15 J01 *J7 9005-395
Colloidal impurities sepn. from liq. - 28967B/15

EBAI 03.06.74 EBARA INFILCO KK A91 D15 J01 (A11) =J5 0153-777
Waste water treatment by reverse osmosis - 28987B/15

*EBAI 03.06.74 EBARA INFILCO KK A91 D15 J01 (A11) *J7 9005-797
Waste water treatment by reverse osmosis - 28987B/15

EBAI 07.01.75 EBARA INFILCO KK D15 J01 =J7 9005-626
Diaphragm process for organic waste water treatment - 06547Y/04

*EBAI 04.08.77 EBARA INFILCO KK D15 *J5 4028-448
Denitrifying biologically polluted water - 28491B/15

ELIL 05.08.77 ELI LILLY & CO A96 D21 G02 (A14 A82) =J5 4028-836
Nail varnish based on aq. polymer emulsion - 42204A/24

ELLE/ 05.08.77 ELLENBERGER B C03 D13 =J5 4029-386
Hydrolysing casein with aq. acid avoiding darkening - 87876A/49

EMRI/ 05.07.77 EMRICH W D22 =FR 2396-520
Genital-anal protection pad for underwear - 08155B/05

*ENER= 04.01.74 ENERGOTSVETMET IND D15 M12 (M25) *SU -608-768
Hydroxide residues from neutralising heavy metal contg. effluent
29122B/15

ERAP 08.07.77 SOC NAT ELF AQUIT A96 D22 E17 =FR 2396-545
Compsns. contg. di:thiol cpds. for protecting the skin against UV
80241A/45

*ERAP 29.09.77 ELF AQUITANE D15 *GB 2004-997
Sludge incineration process - 28289B/15

DO/ 02.06.76 ERDOS G A96 B05 D21 *HU T016-183
Prepn. of insect-repellent creams - B/15
PA- 22.10.73 ERPAC D15 F09 =DS 2441-238
Compact industrial effluent flotation appts - 07546W/05
PA- 08.03.77 ERPAC D15 J01 =US 4146-472
Flotation sepn. of suspended impurities from waste water - 60481A/34
SO 15.12.69 EXXON RES & ENG CO C03 D16 (D13) =DS 2059-277
Fermentation process for superior quality - 43213S/25
SO 01.04.74 EXXON RES & ENG CO D16 H03 (D15) *US 4146-470
Dispersal of oil slicks - 29396B/15
TE- 19.11.76 EUTECO SPA D25 E34 =US 4146-575
Sodium tri:poly:phosphate prepn. - 60895A/34
XTE- 27.09.77 EXTERMA-GERM PROD A94 D22 E14 F06 (D25) =DT 2841-
49
Impregnated material esp. with antimicrobial compsn. - 10007B/06

ABR 02.04.75 FABRE P SA A96 B04 C03 D16 =GB 1543-962
Acellular vaccines prodn. - 75678X/41
ARB 10.11.72 BAYER AG A60 D18 E21 F06 =J7 9005-409
Basic azo dyes from benzothiazoles and indolines - 38274V/21
ARB 22.06.74 BAYER AG B03 C02 D21 =CA 1050-430
Cosmetics contg. antimycotic azoles - 01986X/02
ARB 28.11.74 BAYER AG B02 C02 D13 =US 4147-693
Alpha-(imidazolidinonyl carbonylamino) penicillins and cephalosporins - 46019X/25
ARB 12.06.76 BAYER AG D18 E19 =GB 1543-889
Chromium tanning opt. pickled hides - 00256A/01
ARB 30.03.77 BAYER AG B03 C02 D21 #GB 1544-068
Amino sugars which inhibit glycoside hydrolases - 70740Y/40
FARB 19.08.77 BAYER AG A93 D22 E13 G04 (A26) =NO 7802-677
Silicone sealant compsns. contg. benzimidazolyl carbamate cpds. - 18204B/10
FARB 27.08.77 BAYER AG B03 C02 D13 =DK 7803-776
Tri:hydroxy-piperidine derivs. - 18396B/10
FARB 03.09.77 BAYER AG D18 =SW 7809-178
Chrome tanning of hides and pelts - 20218B/11
FARH 09.07.77 HOECHST AG A97 D25 E11 =FR 2396-797
Liquid cleaning prod. for articles with a hard surface - 01923B/02
FARH 20.08.77 HOECHST AG D13 E17 (D21 E16) =NO 7802-821
Simultaneous prepn. of fatty acid nitrile(s) and glycerol - 18378B/10
FARH 19.09.77 HOECHST AG D15 E19 M14 =GB 2004-911
Anticorrosion compsn. for ferrous metals - 22078B/12
FERR/ 04.07.77 FERRARI L A96 B04 C03 D13 =FR 2396-764
Lysozyme isolation on ion-exchange resins with carboxylic acid gps. - 84134A/47
FILI/ 12.12.77 FILIP J B03 D16 K08 (B02) *CS 7708-285
Enzymatic synthetics of radioactive thymidine and deoxyadenosine - B/15
FIND- 29.09.77 PRODUITS FINDUS SA D11 *DT 2841-398
Pizza bottom mfr. - 28140B/15
FINI- 23.04.76 MACH FINIS BV D14 =CS 7702-690
Vegetable peeling machine with air and water sprays - 59474Y/34
FINN- 14.01.77 FINNPIPETTE OSMO A B04 D16 J04 =US 4147-752
Immunological determn. and enzymatic reactions - 51646A/29
FIRM 17.01.75 FIRMENICH SA B03 C02 D23 E15 #US 4147-672
Organoleptic oxygenated alicyclic derivs - 52777W/32
FIRM 17.06.77 FIRMENICH SA D23 E13 (D13 D21) =GB 2004-864
Tri:cyclic norbornane derivs for perfumery use - 02215B/02
FMCC 30.09.75 FMC CORP D15 J02 =CA 1050-587
Agitator for dispersing gases in liquids - 25601Y/15
FMCC 03.10.77 FMC CORP D25 E14 F06 (E13) =GB 2004-928
Low temp. bleaching of soiled and/or stained fabrics - 70479A/39
*FMCC 30.12.77 FMC CORP D22 E17 *US 4147-720
Aliphatic di:peroxy-di:carboxylic acid prodn. - 29650B/15
*FORM/ 08.12.76 FORMAN L D13 *CS 7608-033
Butter-based spread prodn. - B/15
*FRES- 16.03.78 FRESENIUS E CHEM B05 D21 E12 *DS 2811-522
Dental disinfectant compsns. - 27948B/15
*FRIM/ 04.03.77 FRIMM R B04 D16 *CS 7701-462
Cephalosporin C isolation from fermentation medium - B/15
*FRIT- 04.05.76 FRITO-LAY INC D11 *US 4108-033
Rotary cutting device - 29274B/15
FUJI 07.05.75 FUJISAWA PHARM IND KK B03 D16 =CA 1050-459
(3)-Amino-(1)-carboxy-(4)-hydroxybenzyl-(2) azetidinone prepn. - 17269Y/10
FUJI 14.11.75 FUJISAWA PHARM IND KK B03 D16 =US 4146-536
Antibiotics nocardicine E and F - 34513Y/20
FUKO 24.08.77 FUJI OIL KK A11 D12 (A97) #GB 1544-155
Protein-coated cellophane film prodn. - 16720A/09

*GAIS/ 17.11.76 GAISER C J D22 *US 4146-566
Volatile component dispensing package for room deodorant - 29431B/15
GBFE- 10.06.74 GB FERMENTATION IND D16 =CA 1050-458
Recovering lipolytic enzyme from microbial rennet - 57020W/34
*GEME/ 17.10.77 GEMEINER P A97 B04 D16 *CS 7706-722
Proteins fixing on water-soluble polymers - B/15
GENA 14.06.74 GAF CORP A97 D22 E19 (E37) =CA 1050-382
Surface active iodine mixts. - 01277X/01
*GENE 03.10.77 GENERAL ELECTRIC CO A91 D15 J01 K06 *DT 2842-729
Regenerating spent anionic and cationic exchange resin mixt. - 28180B/15
GENI/ 22.09.77 GENIEYZ F D21 E17 (E15) =DT 2841-346
Compsn. for treating baldness and skin sores - 23952B/13
GENI/ 22.09.77 GENIEYZ F D21 E17 (E15) =GB 2004-741
Compsn. for treating baldness and skin sores - 23952B/13
GENO 29.08.77 GENERAL FOODS CORP A97 D13 E23 =SW 7809-106
Stabilising erythrosine in acid food prods.,*esp. drinks - 04084B/03
GENO 29.08.77 GENERAL FOODS CORP D13 E24 =SW 7809-107
Solubilising erythrosine food dye under acid conditions - 01971B/02
GENO 28.09.77 GENERAL FOODS CORP D13 =DT 2833-752
Decaffeination of tea and coffee extracts - 68805A/38
GENO 28.09.77 GENERAL FOODS CORP D13 =GB 2004-767
Decaffeination of tea and coffee extracts - 68805A/38
GIBS/ 21.07.70 GIBSON M D15 H04 =CS 7105-295
Aerobic fermentation - 07991T/05
GIVA 11.08.77 GIVAUDAN L & CIE SA D13 E13 =J5 4030-152
4-Cyano-tetra:hydro-furan-3-one(s) and 4-hydroxy derivs. - 14604B/08
*GOLD 03.07.78 GOLDSCHMIDT TH AG B03 C02 D22 *BE -872-502
1,3-Di-n-decyl-2-methyl-imidazolium chloride and bromide - 27893B/15
*GONZ/ 13.04.78 DELSER GONZALEZ C D13 *PT --67-899
Machine for stoning and stuffing olives - B/15
GOOR 16.05.77 GOODRICH B F CO A14 D22 F01 =BR 7803-059
Water absorbent compsn. for disposable nonwoven articles - 06200A/03
*GPOL= 22.07.76 GEOR POLY D13 *SU -608-738
Sealed tea container - 29112B/15
GRAC 02.08.77 GRACE W R CO B02 D16 =US 4147-798
Tetra:cyclic antitumour agent quadrone - 87867A/49
*GRAI 09.12.77 GRAIN PROCESSING CORP D16 *BE -872-607
Prepn. of roasted non-malted barley - 27923B/15
GRAU- 25.05.76 GEBR GRAU AND CO KG D23 E15 =US 4146-505
Perfume compsns. contg. isomeric tricyclodecanes - 88397Y/50
*GREC 20.10.77 GREEN CROSS CORP B04 D13 *US 4147-779
Preventing intestinal diverticulum - 29674B/15
*GROT- 26.10.77 GROTE PEPP-A-MATIC D11 *US 4145-990
Depositing grated cheese on pizza shell - 29310B/15
*GRUB/ 26.09.77 GRUBELNIK H D11 *DT 2743-217
Dough stretch rolling machine - 27994B/15
*GUIL/ 07.07.77 GUILLEMOT H D12 *FR 2396-511
Prepn. of pork meat excluding ham - 28190B/15

HAAR 02.02.74 HAARMANN & REIMER GMBH D21 E14 =DS 2405-004
Para-isopropyl(tert,-butyl)-alpha-methyl hydrocinnamic alcohol - 54226W/33
*HAAS/ 03.01.78 HAAS Z D16 E12 *CS 7800-064
Calcium citrate isolation - B/15
HABE- 28.12.70 HABER INSTRUMENTS B04 D16 E24 J03 (J04) =US
4146-454
Electromolecular propulsion of cpds. in semiconducting media - 03968Y/03
HATC/ 05.07.77 HATCHER D B C03 D22 E12 F09 =FR 2396-629
Treatment of wood etc. with water-insoluble acidic fungicides - 04522B/03
HAYB 24.01.69 HAYASHIBARA CO D17 (D13) =DS 2003-350
Heat resistant slightly viscous starch syrup - 54027R/30
HENK 07.09.73 HENKEL KG AUF AKTIEN D15 J01 =CA 1050-384
Cation exchanger aluminium silicates - 19560W/12
HENK 21.06.75 HENKEL KG AUF AKTIEN D21 E23 =GB 1544-124
Oxidn. hair dyeing compsns. contg. 4,7-diamino indazole derivs. - 02236Y/02
HENK 16.08.75 HENKEL KG AUF AKTIEN C03 D22 E17 F06 (D21) =DS
2536-617
Permonocarboxylic aq. concentrate stable to storage - 12715Y/08
HENK 23.10.76 HENKEL KG AUF AKTIEN D23 E13 =US 4146-506
Perfume compsn. contg. 4-isopropyl-5,5-di:methyl 1,3-dioxan cpds. - 32352A/18
HENK 22.04.77 HENKEL KOMMANDITGES A97 D25 E33 (A25 E19) =BR
7802-460
Phosphate free washing powder compsn. contg. aluminosilicate - 76322A/43
HENK 05.08.77 HENKEL KG D15 E33 J01 =J5 4028-300
Mfr. of aluminosilicate cation exchangers contg. surfactants - 09982B/06
*HENK 08.10.77 HENKEL KG AUF AKTIEN A97 D14 *BE -871-061
Cleaning product for fruit, vegetables and other foods - 27862B/15
HENN- 29.08.77 HENNINGSEN FOODS D14 J08 =SW 7809-034
Horizontal spray dryer for food products etc. - 01958B/02
*HETO 06.12.76 HETEROORG CPDS AS USSR A97 D13 *SU -608-520
Producing textured fibrous meat substitutes - 29036B/15
HIES 30.06.76 HITACHI PLANT ENG CO N D15 E36 J01 =GB 1544-167
Processing waste water contg. sulphur cpds. - 04745A/03
*HIJI/ 01.08.77 HIJI Y B04 D13 *J5 4028-867
Non-intestinally absorbed sweeteners - 28603B/15
HILL/ 24.12.74 HILLE B D13 J08 =CS 7508-824
Plates for plate-type heat exchanger - 59852X/32

*HIRA/ 09.08.77 HIRANO T D15 *J5 4029-883
Desalination and purificn. of sea water - 28771B/15

HITA 07.02.75 HITACHI KK D15 =DS 2604-674
Microbiological oxidn. of waste waters contg. organic material - 00237Y/01

HITA 30.06.76 HITACHI KK D15 E36 J01 =GB 1544-167
Processing waste water contg. sulphur cpds. - 04745A/03

HITA 09.09.77 HITACHI KK D15 K07 =GB 2005-060
Radioactive waste disposal control - 26366B/14

*HLAV/ 14.02.78 HLAVINKA J D12 *CS 7800-939
Mechanical skinning of animals - B/15

HOBA- 06.06.77 HOBART CORP D14 =BR 7803-504
Hand operated high speed food mixer - 72303A/40

HOFF 14.08.70 HOFFMANN-LA ROCHE LTD B04 C03 D16 =CA 1050-462
Antibiotic x-5108 - 13520T/09

HOKU- 12.09.77 HOKUREN FEDERATION D15 =DT 2839-386
Reducing COD of effluent water - 25184B/13

*HOMO/ 20.12.77 HOMOLKA J B04 D16 *CS 7708-575
Cholinesterase activity determination - B/15

*HORI- 08.08.77 HORIUCHI ITARO SHOT B04 D13 *J5 4028-869
Bitter extract removal from Periandra plant - 28605B/15

*HORI- 08.08.77 HORIUCHI ITARO SHOT B04 D13 *J5 4028-870
Decolourised, refined sweet extract prepn. - 28606B/15

HORN- 27.07.71 HORNBACH A & W OHG D15 =DS 2137-474
Sand-trap for water treatment plants - 09882U/08

*HORY/ 26.08.77 HORYNA J D15 *CS 7705-596
Amine continuous elimination from industrial wastes - B/15

HOSO 07.06.76 HOKKAIDO SODA KK D15 J01 =US 4147-665
Magnesia adsorbent for purifying waste water - 90533Y/51

*HOTA/ 20.09.77 HOTARD S R D12 *US 4146-945
Simultaneously splitting pair of suspended carcasses - 29506B/15

*HOUD 03.10.77 HOUDAILLE INDS INC D15 *GB 2004-858
Activated sludge appts. - 28277B/15

*HUZA/ 19.04.78 HUZA F D13 *CS 7802-519
Square cheese maturing, salting and storage - B/15

HYCO- 26.09.77 HYCOR CORP D12 =DT 2839-847
Doctor blade cleaning assembly - 29403B/15

*HYCO- 26.09.77 HYCOR CORP D12 *US 4146-484
Doctor blade cleaning assembly - 29403B/15

ICIL 16.07.74 IMPERIAL CHEM INDS LTD A97 D18 =US 4147-172
Smoking mixt. compsn. - 09601X/06

ICIL 07.04.75 IMPERIAL CHEM INDS LTD D15 J01 =CS 7602-307
Flotation treatment of waste water and sewage - 79361X/43

ICIL 03.08.76 IMPERIAL CHEM INDS LTD D15 =J5 4028-064
Sepg. sludge from clarified liq. in waste water purificn. - 10237A/06

ICIL 09.08.77 IMPERIAL CHEM INDS LTD D16 (D13) =J5 4029-875
Industrial aerobic fermentation - 11897B/07

ICIL 30.08.78 IMPERIAL CHEM INDS LTD A32 D21 (A88) =GB 2004-952
Extruder for high-friction pastes for mfr. of dental fillings - 26394B/14

IDEK 19.01.76 IDEMITSU INDUSTRIES KK A11 B07 C03 D13 (A96 A97 D16) =US 4146-706
Gel-forming polysaccharide prepd. by Arthrobacter cultivation - 52614Y/30

*IHAR 04.08.77 IHARA CHEM KK D15 E11 (D22) *J5 4028-447
Deodorising phosphine-contg. effluent - 28490B/15

*IIDA/ 10.08.77 IIDA T D15 *J5 4029-879
Solar energy evaporator for pure water prodn. from sea water - 28768B/15

IKED- 14.03.75 IKEDA BUSSAN CO D15 H03 J01 =GB 1543-836
Materials derived from coconuts for absorbing mineral oils - 40882Y/23

IMPT 30.08.78 IMPERIAL GROUP LTD D18 J02 =GB 2004-758
Homogenisation of tobacco slurries etc. - 26381B/14

INFL 11.08.76 INT FLAVORS & FRAGR INC D23 E15 (D13) =US 4147-727
Higher carbonyl cpds. having organoleptic properties - 52578Y/30

*INME- 29.06.77 INMEKTOR KY D14 *US 4147-099
Root-crowning appts. comprises carousel with upstanding partitions - 29517B/15

INOZ 17.01.73 INOUE D15 J03 =J4 9095-870
Waste fluid treatment appts. - 28964B/15

*INOZ 17.01.73 INOUE D15 J03 *J7 9005-386
Waste fluid treatment appts. - 28964B/15

INOZ 28.06.73 INOUE D15 J01 =J5 0021-373
Appts. for dewatering sludge - 28968B/15

*INOZ 28.06.73 INOUE D15 J01 *J7 9005-396
Appts. for dewatering sludge - 28968B/15

*IONI 19.04.78 IONICS INC D13 *US 4146-455
Concn. of whey protein - 29388B/15

*IPAR- 14.11.75 IPARSZERU SERTESTAR C03 D13 *HU T016-176
Protein-enriched fodder product - B/15

ISHI/ 30.11.72 ISHIGURO M D15 =J4 9077-444
Cleaning water polluted with organic materials - 28950B/15

*ISHI/ 30.11.72 ISHIGURO M D15 *J7 9005-226
Cleaning water polluted with organic materials - 28950B/15

*ISTS 30.09.77 IST SIEROTER VACC SCLAVO B04 D16 *DT 2822-539
Adenylate kinase inhibitor, esp. for creatine kinase determn. - 28081B/15

ITFE- 21.04.75 INT FEED IMPROV ASS C04 D16 (D15) #CA 1050-455
Inactivated microorganism prodn. - 06537Y/04

*JANO/ 15.12.77 JANOUCH F D13 *CS 7708-392
Adhesives processing - B/15

JAOR 07.02.73 JAPAN ORGANO KK D15 =J7 9005-389
Desalination of water - 04303X/03

*JAOR 04.08.77 JAPAN ORGANO KK D15 *J5 4028-446
Treating ammonium ion-contg. sewage - 28489B/15

JAPN 17.06.76 JAPAN NATIONAL RAILWAY D15 J01 =US 4146-481
Filter of stacked plate type - 23696A/13

*JARV- 31.10.77 JARVIS PRODS CORP D12 *US 4145-811
Reciprocating blade butchery saw - 29291B/15

JOHJ 03.11.75 JOHNSON & JOHNSON A60 D21 E15 =GB 1543-824
Totally trans retinoic acid esters and amides - 32746Y/19

JOHJ 17.06.77 JOHNSON & JOHNSON A96 D25 E16 =BR 7803-841
Mild cosmetic detergent compsn. esp. for shampoos and baths - 91499A/51

*JOHJ 31.08.77 JOHNSON & JOHNSON A81 D22 G03 (A11 A17) *US 4147-831
Pressure sensitive adhesive compsn. - 29695B/15

JOHS 15.09.76 JOHNSON S C & SONS INC D21 E16 (E17) =GB 1544-157
Fluorocarbon-free aerosol propellants - 21905A/12

*KADL/ 16.12.77 KADLEC K B05 D16 E16 *CS 7708-477
L-Lysine fermentation control - B/15

*KALE/ 31.01.77 KALETA D J D22 *US 4147-826
Mounting shed snake skins - 29692B/15

KALI 24.08.77 KALI-CHEMIE AG D25 E33 (E34) =DK 7803-713
Sodium sulphate addn. to sodium aluminium silicate - 18367B/10

*KALI/ 06.09.77 KALINA K D23 E15 *CS 7705-799
Beta-ionone continuous prodn. appts. - B/15

*KANF 03.08.77 KANEGAFUCHI CHEM KK D13 *J5 4028-849
Fibrous complex food - 28595B/15

KAOS 01.08.77 KAO SOAP KK D25 E13 (D16) =J5 4028-895
Dehydration purification of hydrated sophorolipid - 14599B/08

*KASH- 03.08.77 KASHIWA KAGAKU KOGY D21 E19 (E37) *J5 4028-833
Oxidising agent for use in hair dye - 28587B/15

*KASH- 03.08.77 KASHIWA KAG D21 E24 *J5 4028-834
Creamy hair-dye component contg. hydrogen peroxide - 28588B/15

*KAWA- 12.08.77 KAWAKEN FINE CHEM K D25 E19 *J5 4030-207
Solid detergent having reduced irritation and improved lathering - 28868B/15

*KAWA/ 03.08.77 KAWASHIMA Z D13 *J5 4028-866
Healthy seasoning prepn. - 28602B/15

KEMP/ 07.07.77 KEMPER K D11 =FR 2396-509
Suction chamber dough dividing machine - 04326B/03

KERN- 00.00.73 GES KERNENERG SCHIF D15 =DS 2446-157
Water desalination device using reverse osmosis - 28467X/16

*KIBU- 09.08.77 KIBUN KK D13 *J5 4028-847
Oil-contg. konjak prepn. - 28594B/15

*KIFO= 28.06.76 KIEV FOOD IND TECHN B04 D16 *SU -608-804
Immobilised enzyme for food, drug and chemical use - 29155B/15

*KILI/ 15.09.77 KILIAN T D11 *DT 2741-503
Baking oven hearth plane - 27954B/15

*KINO/ 04.08.77 KINOSHITA S D15 E33 L02 M25 *J5 4028-266
Device for conveying sludge with hardening cement and adhesives 28391B/15

*KIRI- 05.08.77 KIRISAN KASEI KK D25 E16 (E34) *J5 4028-283
Bleaching agent prodn. with increased amt of effective chlorine 28403B/15

KITA 10.07.76 KITASATO INST B04 D16 =US 4147-774
Antibiotic PO-357 - 18361A/10

*KITA/ 02.08.77 KITAMURA Y D13 *J5 4028-839
Prepn. of instant food having fried bean curd like structure - 28591B/15

*KNAU/ 30.09.77 KNAUTH H D17 *DT 2744-067
Continuous hydrolysis of vegetable matter - 28033B/15

KOHL- 29.07.76 KOHLENSAURE-W BUSE D12 J07 =US 4145-894
Carbon di:oxide snow machine - 12425A/07

*KOHO/ 11.02.77 KOHOUT J D25 *CS 7700-892
Mixed detergent - B/15

*KOSI/ 04.08.76 KOSIKOVA B D25 *CS 7605-086
Non-ionic biodegradable surfactants prodn. - B/15

*KOSI/ 16.02.77 KOSIKOVA B D25 *CS 7701-019
Non-ionic, biodegradable surfactants - B/15

KRPP 06.07.77 KRUPP F GMBH D14 (D23) =FR 2396-642
Industrial screw press for extn. of juice, esp. palm oil - 80234A/45

*KUBA/ 31.08.76 KUBANEK V D16 *CS 7605-643
Stabilising colloidal and organoleptic properties of drinks - B/15

*KUBI 03.08.77 KUBOTA KK D15 *J5 4028-449
BOD and ammoniacal nitrogen removal from night soil digested liquo
28492B/15

*KUBI 04.08.77 KUBOTA KK D15 *J5 4028-451
Waste water purificn. by denitrification - 28493B/15
KULL/ 02.03.76 KULLING H B07 D14 J04 =US 4145-818
Removal of a vaporised liq. from a gas stream - 65269Y/37
*KUPO= 21.07.76 KAUN POLY D13 *SU -609-090
Milk albumin condensate portable tester - 29260B/15
*KURB 08.08.77 KURABO IND KK D15 E24 *J5 4029-337
Indigo dye recovery from waste washing liq. - 28653B/15
KURE 24.08.76 KUREHA KAGAKU KOGYO B04 D16 (B07 D13) =GB 1544-034
Culture of basidiomycetes of coriolus species - 15867A/09
*KURK 05.08.77 KURITA WATER IND KK D15 *J5 4028-267
Sludge-treating device - 28392B/15
*KURK 08.08.77 KURITA WATER IND KK D15 J09 *J5 4028-775
Appts. for treating liq. waste - 28552B/15
*KURS 04.08.77 KURARAY KK A81 D21 E19 G03 (A14 A96) *J5 4028-339
Adhesive for hard tissues, e.g. bones, in humans - 28440B/15
*KURS 30.09.77 KURARAY KK D13 (D12) *DT 2842-266
Stable, elastic, chewable fibrous milk protein meat substitute - 28172B/15
*KYOW 08.08.77 KYOWA FERMENTATION KK D12 (D16) *J5 4028-855
Improving the elasticity of marine paste foods - 28598B/15
*KYOW 08.08.77 KYOWA FERMENTATION KK D12 (D16) *J5 4028-856
Prepn. of marine paste with improved elasticity - 28599B/15

*LABO 02.12.77 LABOFINA SA D23 (D13) *BE -872-476
Hydrogenation catalyst for oils, esp. cooking oils - 27888B/15
*LABO 02.12.77 LABOFINA SA D23 (D13) *BE -872-477
Hydrogenating oils, esp. cooking oils, using nickel catalyst - 27889B/15
LABO- 20.03.76 LABOR MUSZERIPARI D22 =US 4146-570
Automatically venting steam steriliser - 69198Y/39
*LAKO/ 13.06.77 LAKOTA V C03 D13 *CS 7703-861
Calcium-sodium phosphate feedstuff additive - B/15
*LANG- 14.06.77 LANGEN H J ZONEN D12 *BR 7703-858
Meat processing appts. - B/15
*LAVA- 27.08.76 LAVATHERM MOSODAI G D15 J01 *HU T016-217
Appts. for the thermal degassing of boiler feed water - B/15
*LEEN= 03.10.75 LEGD ENG-COWS INST A88 D15 J01 *SU -608-538
Filter for removal of impurities from water and oils - 29042B/15
LEIT 17.01.75 LEITZ WETZLAR E A96 D21 L02 =DS 2501-683
Composite prosthetic matl. - 59928X/32
*LENI- 31.10.75 LENIN MEZOGAZDASAGI C03 D13 *HU T016-177
Processing poultry droppings for recycle - B/15
LEPE 27.07.74 GRUPPO LEPETIT SPA B04 D16 =CS 7505-230
Gardimycin antibiotics - 85017W/52
*LIBU= 21.07.76 LITH BR BUTTER CHEE D13 *SU -609-090
Milk albumin condensate portable tester - 29260B/15
LIFE- 08.07.77 LIFE SAVERS INC A97 D13 =FR 2396-514
Chewing gum with long lasting sweetness - 04517B/03
LIGG 05.04.74 LIGGETT & MYERS INC D18 E14 (E32 E33) =CA 1050-254
Tobacco compsn. with reduced polycyclic aromatics formation - 57201W/35
LIOY 28.04.77 LION FAT & OIL KK D25 E12 =US 4146-551
Surfactant magnesium salt prepn. - 80455A/45
*LISS/ 18.03.76 LISS Z A82 D18 F08 *CS 7601-744
Fine leather prodn. for gloves or clothes - B/15
LITT 15.04.76 LITTLE A D INC A97 B05 C03 D15 =US 4147-624
Desorption of adsorbates from adsorbents - 77876Y/44
*LITT- 07.11.77 LITTON BIONETICS IN B04 D16 J04 *US 4146-365
Apparatus for detecting one chemical - 29343B/15
LUBB/ 01.03.76 LUBBERT G D16 =CS 7700-341
Purification of bio materials, esp. yeast suspensions - 39969Y/23

*MACK/ 26.08.77 MACKRLE S D15 *CS 7705-583
Waste water biological purification appts. - B/15
*MARG- 05.12.78 MARGARINERIE AIGREM D13 *BE -872-537
Producing solid cooking fat as flakes, granules, powder etc. - 27904B/15
*MARI/ 22.02.77 MARIASSY G A96 D16 *CS 7701-151
Plastic material pads prodn. - B/15
*MARV/ 18.04.77 MARVAL E D13 *CS 7702-527
Vegetable products protection and treatment - B/15
*MARV/ 18.04.77 MARVAL E D13 *CS 7702-543
Vegetable products protection and treatment - B/15
*MASU/ 30.11.76 MASUDA G B04 D16 *US 4146-433
Assessing antibacterial activity of antibiotics on agar plate - 29372B/15
MAUG 09.07.77 AUGSBURG NURNBERG AG D15 =FR 2396-723
Water desalination system - 06241B/04
*MAYO/ 03.02.78 MAYO A R D17 *US 4147-557
Sugar cane mill with rake feed conveyor - 29580B/15
MEAC 22.08.77 MEAD CORP A92 D13 =NO 7802-838
Aseptic packaging of acid foodstuffs - 15978B/09
MEIJ 06.07.77 MEIJI SEIKA KAISHA B03 C02 D16 =FR 2396-766
Tunicamine derivs. prepd. e.g. by acid hydrolysis of tunicamycin - 04557B/03
*MEIJ 09.08.77 MEIJI KK D13 *J5 4028-863
Prepn. of cocoa of intensified taste and flavour - 28600B/15
*MEIJ 04.10.77 MEIJI SEIKA CO LTD B04 D16 *DT 2841-374
Broad-spectrum antibiotic BN-200 - 28137B/15
*MEIT 05.08.77 MEITO SANGYO CO KK D23 E33 (D16) *J5 4028-305
Decomposition of oils and fats - 28416B/15
*MELN/ 04.01.77 MELNIKOV I A D16 *SU -608-831
Microorganisms culture unit - 29180B/15
*MERA- 29.09.77 MERAK SPA A94 D18 F01 (A17) *GB 2004-729
Olefin polymer fibre cigarette filter - 28262B/15
*MERE 23.09.77 MERCK PATENT GMBH D16 G04 *DT 2742-874
Oxygen-absorbing compsn. for anaerobic bacteria culture medium - 27983B/15
*MERI 03.02.76 MERCK & CO INC B04 D16 *US 4147-772
Stabiliser for lyophilised and liq. viral vaccine - 29672B/15
*MERI 19.11.76 MERCK & CO INC B02 C02 D22 (D13) *US 4146-633
Antibiotic delta-three thienamycin and its protected derivs. - 29452B/15
MERI 30.05.78 MERCK & CO INC A60 B02 C02 D22 =US 4146-642
Imidazo-(1,2-a)-pyridyl-carbamate derivs. - 74685A/42
*METG 03.10.77 METALLGESELLSCHAFT AG D15 E35 H09 (E14) *DT 2744-437
Processing waste waters from coal degasification or gasification - 28060B/15
METR- 15.01.76 METRAPLAN-SPAA D18 =CA 1050-576
Skin stacking machine - 52554Y/30
*MFEN- 26.09.77 M+F ENG AG D14 *DT 2831-592
Domestic soft ice appliance - 28086B/15
MICR- 06.09.77 MICROLIFE TECHNICS D16 (D13) =US 4147-807
Bacteria concentrate for fermenting sausages and other meat prods. - 20240B/11
MILE 03.09.74 MILES LABORATORIES INC D16 E13 (D17) =HU T016-267
Pretreatment of bacterial cells - 07460X/05
MILE 08.12.75 MILES LABORATORIES INC B04 D16 =CA 1050-456
Osmotically fragile microorganism cultivation - 55894X/29
*MIME= 16.12.76 MINSK MEAT DAIRY D13 *SU -608-503
Cheese forming column - 29027B/15
*MINN 26.09.77 MINNESOTA MINING CO D21 M22 *DT 2842-026
Infiltrated, homogeneous metal object - 28158B/15
MITA 02.04.76 MITSUI & CO LTD D13 =DS 2714-396
Precooked rice prepn. - 72836Y/41
MITP 17.01.75 MITSUBISHI PETROCH KK D15 L02 =J5 1082-957
Treating calcium hydroxide-contg. waste water from concrete 28972B/15
*MITP 17.01.75 MITSUBISHI PETROCH KK D15 L02 *J7 9005-627
Treating calcium hydroxide-contg. waste water from concrete 28972B/15
MITQ 21.09.72 MITSUBISHI ELECTRIC CORP D15 J01 =J4 9107-981
Appts. for producing plain water from sea water - 28966B/15
*MITQ 21.09.72 MITSUBISHI ELECTRIC CORP D15 J01 *J7 9005-391
Appts. for producing plain water from sea water - 28966B/15
*MITQ 04.08.77 MITSUBISHI ELECTRIC CORP D15 *J5 4028-268
Appts. for treating sludge which is difficult to filter - 28393B/15
*MITQ 05.08.77 MITSUBISHI ELECTRIC CORP D15 *J5 4028-269
Sludge treatment appts. - 28394B/15
*MITQ 05.08.77 MITSUBISHI ELECTRIC CORP D15 *J5 4028-270
Device for treating sludge contg. dirty mud - 28395B/15
MITT- 29.03.76 MITTEX AG A97 D15 J01 =US 4146-372
Water recovery from the atmosphere - 74340Y/42
*MITU 08.08.77 MITSUBISHI CHEM IND KK D16 *J5 4028-896
Centrifugal sepn. of plasmid from Thermus bacteria - 28612B/15
MIUR 15.11.74 MIURA ENG INT KK D15 =DS 2551-030
Effluent purification - 42313X/23
*MIYA/ 03.08.77 MIYAI J D13 *J5 4028-865
Salt-contg. powder prodn. - 28601B/15
*MNKN 30.09.77 MINAMINIHON RAKUNO KYODO D13 (D12) *DT 2842-266
Stable, elastic, chewable fibrous milk protein meat substitute 28172B/15
*MOCO= 26.01.77 MOSC CONFECTIONERY WKS D13 *SU -608-517
Viscous plastic confectionery compsn. forming appts. - 29033B/15
*MOFO= 05.01.77 MOSC FOOD IND TECHN D16 *SU -608-834
Rhizopus oryzae fungus strain - 29183B/15
*MOFO= 26.01.77 MOSC FOOD IND TECHN D13 *SU -608-517
Viscous plastic confectionery compsn. forming appts. - 29033B/15
*MOMO= 31.01.77 MOSC MOLOKO WKS D13 (D16) *SU -608-513
Prodn. of soured milk drink from skimmed milk - 29029B/15
MONS 22.08.77 MONSANTO CO A25 D25 (A97) =DK 7803-690
Polymeric acetal carboxylate detergent builders - 18418B/10
MONS 22.08.77 MONSANTO CO A25 D25 (A97) =US 4146-495
Polymeric acetal carboxylate detergent builders - 18418B/10
MONS 08.05.78 MONSANTO CO D25 E13 =US 4147-654
(N)-Acetyl-di:glycol:imide - 74391A/41
MONS 27.07.78 MONSANTO CO D25 E13 =US 4147-702
6-Cyano-tetra:hydro-pyran-2,2-di:carboxylate(s) - 78212A/43
*MORA/ 26.05.76 MORAVEK O D15 *CS 7603-520
Elimination or recovery of cpds. - B/15
*MORA/ 26.10.77 MORAVEC R D18 *CS 7706-956
Leather feeding system - B/15

MORG 12.12.77 MORINAGA MILK KK B04 D16 #US 4147-773
Bifidus powder contg. lactulose - 09345A/05
MORI- 03.04.75 MORITA KAGAKU KOGYO D15 E37 M11 (M23) = J7 9005-628
Fixing fluorine component in waste liquor contg. borofluoride - 89492X/48
* MRSC 10.10.77 MARS LTD D13 (D12) *BE -871-112
Reducing odour of fish-based food prods. - 27884B/15
* MULL/ 25.08.77 MULLER G L C03 D13 (C04 D16) *BR 7705-805
Fruit from Japanese cashew-nut tree - B/15
MUNC- 03.10.77 MUNCHMEYER & CO D12 = DT 2744-456
Machine to cut open and clean stomach of chickens, etc. - 11937B/07
MUND 16.05.77 MUNDIPHARMA AG A96 B04 D22 E19 = PT --67-861
Storage-stable iodophor germicide compsns. prepn. - 63439A/36
MUNT 31.08.77 MUNTERS C AB D15 J08 = SW 7709-810
Spray device for distribution of liquid over a treatment bed - 21212B/11

NAAR 25.11.75 NAARDEN INT D23 E15 #US 4147-671
Perfumes with castoreum-like aroma - 44066X/24
* NAGA- 02.08.77 NAGANO MISO KK D13 *J5 4028-838
High protein food prepn. - 28590B/15
* NAKA- 06.08.77 NAKANO SU-MISE KK D12 *J5 4028-854
Salting guts to preserve them - 28597B/15
* NAKA- 09.08.77 NAKANO SU-MISE D13 *J5 4028-898
Prepn. of powdery seasoning for use with sushi - 28614B/15
NARE- 30.08.77 NAT RES LABS D22 E12 #BR 7705-778
Antimicrobial heavy metal complexes with polyfunctional acids - 79262Y/44
* NATR 28.09.77 NATIONAL RES DEV CORP B04 C03 D16 *WP 7900-160
Increasing the immunogenicity of an antigen - 29725B/15
* NAUM/ 09.11.76 NAUMOV L F D15 *SU -608-832
Microorganisms culture foam breaker - 29181B/15
* NAYL/ 18.04.77 NAYLOR L B D15 J01 *GB 2004-757
Water distn. appts. - 28265B/15
* NECA/ 30.03.77 NECAS J D16 *CS 7702-113
Controlled, automatic cultivation on liquid media - B/15
* NECE/ 14.11.77 NECESANY F D15 H09 *CS 7707-720
Waste water purification - B/15
* NELR 18.07.74 NELSON RES & DEV D22 E17 (E12 E35) *US 4147-769
Shelf-stable aerosol microbiocidal compsn. - 29669B/15
NEST 03.08.77 SOC PROD NESTLE SA D13 = J5 4028-843
Vegetable protein extracts - 14456B/08
NEST 29.09.77 SOC PRODS NESTLE D13 (D12) = DT 2837-513
Textured food prod. similar to cooked meat - 14162B/08
NEST 29.09.77 SOC PROD NESTLE SA D13 (D12) = GB 2004-726
Textured food prod. similar to cooked meat - 14162B/08
NEWM/ 12.10.76 NEWMAN M E D15 #CA 1050-372
Heat reclamation from sewage disposal system - 82653X/44
NIDE 13.09.74 NIPPON ELECTRIC KK D15 E31 G01 M14 #DS 2443-942
Removing iron from acid waste liquids by oxidn. - 23801X/13
* NIEI- 17.01.75 NIPPON EIKAN SHIDO CENT D15 L02 *J7 9005-627
Treating calcium hydroxide-contg. waste water from concrete - 28972B/15
* NIJU- 04.08.77 NIPPON JUTAKU KODAN D15 *J5 4028-446
Treating ammonium ion-contg. sewage - 28489B/15
* NISE- 29.07.77 NIPPON SEIRO KK A97 D16 *J5 4029-732
Cultivation or Cortinellus shiitake in porous wood - 28723B/15
* NISE- 09.08.77 NIPPON SEIFUN KK D13 *J5 4028-850
Mfr. of vegetable proteinaceous food for e.g. sausages - 28596B/15
* NISP 05.08.77 NISSIN SHOKUHIN KAISHA D13 *J5 4028-842
Noodles prepn. using aq. ammonia - 28593B/15
NITA- 12.09.77 JAPAN TAX ADMIN D15 = DT 2839-386
Reducing COD of effluent water - 25184B/13
NITN 20.09.76 NIHON TOKUSHU NOYAK B05 C01 D22 = GB 1544-040
(N)-Sulphamoyl phosphoric acid ester amide derivs. - 23602A/13
* NITO/ 05.08.77 NITO Y B03 D13 E13 *J5 4028-868
Low calorie sweetener compsn. - 28604B/15
NMHB 08.04.76 NORDISCH MASCH R BAADER D12 #CA 1050-627
Fish processing machine esp. for filleting - 92658X/50
* NMHB 29.08.77 NORDISCH MASCH R BAADER D12 *SW 7713-780
Fish filleting appts. - B/15
* NOVA/ 21.04.76 NOVAK V D12 *CS 7602-593
Meat product casings based on fibrous substrates - B/15
* NOVA/ 05.09.77 NOVAK J D25 *CS 7705-748
Detergent non-irritating to skin - B/15
NOVO 28.08.74 NOVO INDUSTRI A/S D16 (D17) = CA 1050-454
Immobilised glucose isomerase prepns - 21159X/12
NOVO 23.08.77 NOVO INDUSTRI A/S D16 (D17) = DK 7803-682
Glucose isomerase activated by water-soluble iron salt - 15971B/09

* OGAW/ 02.08.77 OGAWA Y D13 *J5 4028-840
Preserving plants and foods - 28592B/15
OKAZ/ 20.06.74 OKAZAKI T D15 J03 = J5 0161-470
Water-treatment appts. - 28985B/15
* OKAZ/ 20.06.74 OKAZAKI T D15 J03 *J7 9005-792
Water-treatment appts. - 28985B/15
* OKUB/ 10.08.77 OKUBO K A97 D22 *J5 4030-261
Fragrance-retaining synthetic resin foam prepn. - 28903B/15
OLIN 28.10.76 OLIN CORP D18 E15 = GB 1544-014
Aromatised filter cigarette - 33748A/19
* OLIN 13.12.76 OLIN CORP C04 D13 E35 *US 4147-757
Prodn. of ammonium phosphate of low arsenic content - 29664B/15
OREA 21.09.73 L'OREAL SA D22 = DS 2444-183
Cistern additive treats water closet flush water - 16021W/10
OREA 26.06.75 L'OREAL SA D21 E24 = GB 1544-127
Nitro couplers for keratinous fibre dyeing prepns. - 03916Y/03
OREA 20.09.77 L'OREAL SA A96 D21 = DT 2840-785
Cosmetic compsn. for hair or skin contg. cationic polymers - 22076B/12
OREA 23.09.77 L'OREAL SA A96 D21 = GB 2004-743
Aminated polymers used in hair and skin care products - 23958B/13

PAPG 07.07.77 PAPIERFAB GENNEP NV A96 D22 F07 = FR 2396-650
Fleece-lined disposable nappy fitting better on child - 04029B/03
* PAUL/ 04.11.77 PAULOVIC M D25 *CS 7707-204
Rapidly-wetted, non-foaming agent - B/15
PETE- 12.05.77 GERHARD PETER KG D12 = SW 7805-402
Machine fills sausage casing supplied flat wound on reel - 67138A/38
* PETE/ 10.10.77 PETERKA V D25 *CS 7706-546
Cationic surfactant prepn. - B/15
* PETL 15.10.73 PETROLITE CORP D15 E12 H01 *US 4147-647
Removal of gypsum scale - 29623B/15
PFIZ 27.03.74 PFIZER INC A96 B04 D16 = CS 7502-113
Stabilized enzyme compsns - 67308W/41
PFIZ 27.03.74 PFIZER INC A96 B04 D16 = SU -608-479
Stabilized enzyme compsns - 67308W/41
PFIZ 20.10.75 PFIZER INC A97 D13 (A11 D11) = DS 2644-621
Low-calorie flour based on modified polydextrose - 27160Y/16
PFIZ 02.08.76 PFIZER INC D23 E13 (D13) = US 4147-705
Gamma-pyrones prepn. esp. from furfuryl alcohol cpds. - 00033A/01
PFIZ 12.11.76 PFIZER INC D23 E13 (D13) = GB 1543-897
Gamma pyrone(s) esp. maltol and ethyl maltol prepn. - 34952A/20
PHIM 28.04.77 PHILIP MORRIS INC D18 F09 = US 4146-041
Cigarette wrapping material esp. paper - 80461A/45
PHIP 27.10.77 PHILLIPS PETROLEUM CO A97 D17 H01 (A11) = US 4146-486
Acidising or fracture-acidising subterranean formations - 10003A/05
POGC 06.07.77 DAVY POWERGAS D15 E37 J01 M25 = FR 2396-574
Recovering e.g. copper or cyanide from aq. soln. - 80227A/45
POLA 06.12.77 POLAK'S FRUTAL WORKS INC D23 E15 = US 4146-507
Tri:methyl and di:methyl cyclo:hexene nitrile perfumery cpds. - 23317A/13
* POLY/ 26.11.74 POLYAKOV E V C03 D13 *SU -608-519
Improved granulation of urea phosphate feed additive - 29035B/15
* PQCO- 07.12.76 PQ CORP D15 E36 *US 4147-657
Sodium metallo silicate dispersions prepn. - 29627B/15
PRIN 26.01.78 PRINCETON APPLIED D15 J04 = BE -872-499
Effluent stream analysis appts. using mercury drop electrode - 21891B/11
PROC 25.02.74 PROCTER & GAMBLE CO D13 = US 4147-808
Beverage carbonator - 59128W/36
PROC 11.04.74 PROCTER & GAMBLE CO A97 D25 E17 = CA 1050-378
Stain-removing heavy-wash textile detergent - 72755W/44
PROC 11.04.74 PROCTER & GAMBLE CO A97 D25 E17 = CA 1050-379
Stain-removing detergent - 72754W/44
PROC 17.06.74 PROCTER & GAMBLE CO A97 D25 = CA 1050-380
Washing powder contg. alkoxylated surfactant - 00066X/01
PROC 21.04.75 PROCTER & GAMBLE CO A97 D13 E14 = CA 1050-335
Rapid dissolving low calorie beverage - 72386Y/40
PROC 02.01.76 PROCTER & GAMBLE CO A97 D25 E19 (A25) = US 4147-649
Heavy-duty detergent compsns. - 50655Y/29
PROC 02.05.77 PROCTER & GAMBLE CO D22 F07 = US 4147-580
Laminated disposable diaper - 33107Y/19
* PROC 27.06.77 PROCTER & GAMBLE CO D25 *BR 7804-045
detergent compsn. - B/15
PROC 27.06.77 PROCTER & GAMBLE CO D25 E36 = BR 7804-046
Detergent compsn. - B/10
PROC 27.06.77 PROCTER & GAMBLE CO D22 F04 = BR 7804-070
Guiding reinforcing ply into nonwoven web - 02336B/02
PROJ- 17.08.77 PROJEKTIERUNG CHEM D17 = NO 7802-788
Sugars and opt. cellulose and lignin extn. from vegetable material 14176B/08

QUAK 26.09.77 QUAKER OATS CO C02 D13 E13 (C03) = DT 2835-066
Methyl-pyrid-2-yl-methyl mercaptan derivs. - 14177B/08
QUAK 26.09.77 QUAKER OATS CO C02 D13 E13 (C03) = GB 2004-865
Methyl-pyrid-2-yl-methyl mercaptan derivs. - 14177B/08
QUIN- 01.09.76 QUINODERM LTD B01 D21 E19 (E36) = BE -872-627
Dermatological compsn. for treating burns, acne, etc. - 10426B/06

RALS 01.02.73 RALSTON PURINA CO D12 =CA 1050-336
Tuna-type fish meat of lighter colour - 87137V/50

RALS 01.02.73 RALSTON PURINA CO D12 =CA 1050-337
Tuna-type fish meat of lighter colour - 87137V/50

RALS 26.07.75 RALSTON PURINA CO D12 F01 =HU T016-175
Prodn. of protein filaments from cooked meats - 88724X/47

*RALS 14.04.77 RALSTON PURINA CO D13 *US 4146-534
Vegetable protein concentrate prodn. - 29419B/15

*RANC= 26.12.74 RANCHES MECH AUTOM D14 *SU -608-521
Feedstuffs and grain steamer - 29037B/15

*RAYF 14.10.76 FABERGE INC A96 D21 E19 (A25) *US 4146-649
Skin moisturising compsn. - 29454B/15

RECA 25.04.77 RECHERCHES & IND THERAPE B04 C03 D16 =PT --67-868
Fowl pest vaccine - 77499Y/44

REGC 23.09.77 UNIV OF CALIFORNIA B04 D16 =NL 7806-358
Purifying nucleotide sequences for insertion into microorganisms - 80247A/45

REIM/ 06.07.77 REIMER A D18 #FR 2396-799
Animal fur processing - 50709Y/29

RHEH 26.08.77 VKI-RHEINHOLD & MAH D15 H03 J01 =DK 7800-182
Removal of oil from contaminated surfaces - 20153B/11

RHON 05.03.74 RHONE-POULENC INDUSTRIES B04 C03 D16 =CS 7501-488
Antibiotic 31,559 RP with antibacterial, coccidiostatic activity - 62610W/38

RHON 16.02.77 RHONE-POULENC INDUSTRIES D25 E34 =DS 2806-161
Dust-free stabilisation of anhydrous sodium metasilicate - 60856A/34

RHON 22.04.77 RHONE-POULENC INDUSTRIES A81 D22 F04 (A14) =PT --67-940
Nonwovens binder with low water-soluble cpd. content - 76331A/43

RHON 04.07.77 RHONE-POULENC INDUSTRIES D23 E17 =FR 2396-735
Optically active citronellal synthesis - 02383B/02

RICH- 28.01.77 RICH PRODUCTS CORP D13 =US 4146-652
Food stabilised against microbial decay - 57151A/32

*RICT 12.08.76 RICHTER GEDEON VEGY D15 J01 *HU T016-284
Appts. for the thermal degassing of boiler feed water - B/15

RICT 25.08.77 RICHTER GEDEON VEGY C03 D15 (D13 D15) =DK 7803-741
Sewage sludge used to mfr. nutritious animal feed - 16007B/09

RIEG 05.07.77 RIEGEL TEXTILE CORP D15 F06 =FR 2396-725
Treating used vat dye liquor to recover conc. dye soln. - 01922B/02

*ROHM 24.04.73 ROHM & HAAS CO A96 D22 *US 4146-027
Non-adherent wound dressing - 29313B/15

*RORE 24.06.76 RORER W H INC A96 D21 *US 4147-782
Aq. pharmaceutical detergent compsn. - 29676B/15

*ROSA/ 18.09.76 ROSANO H L A97 B07 D13 J04 (D21) *US 4146-499
Oil in water microemulsion prepn. - 29408B/15

ROUR 02.08.74 ROURE BERTRAND DUPO D23 E15 =US 4146-740
Norpatchoulenol mfr. by oxidative decarboxylation of corresp. acid - 14345X/08

*RUHL 22.09.77 RUHRKOHLE AG A81 D15 J01 *DT 2742-680
Granular filter material e.g. for water treatment - 27965B/15

RUHR 25.05.76 RUHRCHEMIE AG D23 E15 =US 4146-505
Perfume compsns. contg. isomeric tricyclodecanes - 88397Y/50

*RUTM/ 06.04.77 RUT M C03 D16 E17 (D13) *CS 7702-263
Fodder yeast prodn. from synthetic ethanol - B/15

*RYZH/ 19.09.75 RYZHIKOV V I D16 *SU -609-035
Spray-dryer protection from static electricity - 29238B/15

*SABA/ 17.11.77 SABADOS J D15 E17 *CS 7707-578
Reduction of toxicity of aq. effluent contg. formaldehyde - B/15

*SABL- 05.07.77 SABLA D15 *FR 2396-727
Biological purificn. of waste water, esp. domestic - 28204B/15

SAKB 13.02.71 OTSUKA KAGAKU YAKUHIN D15 =J4 7019-204
Hydrazine-type deoxygenating agent contg. hydroquinone - 28949B/15

*SAKB 13.02.71 OTSUKA KAGAKU YAKUHIN D15 *J7 9005-225
Hydrazine-type deoxygenating agent contg. hydroquinone - 28949B/15

*SAND/ 28.09.77 SANDERSON A R B04 C03 D16 *WP 7900-160
Increasing the immunogenicity of an antigen - 29725B/15

SAND/ 26.09.78 SANDERSON A R B04 C03 D16 =GB 2004-744
Increasing the immunogenicity of an antigen - 29725B/15

*SANY 10.08.77 SANKYO KK B05 C03 D13 *J5 4029-772
Low cholesterol content poultry eggs prodn. - 28727B/15

*SAOC 09.08.77 SANRAKU OCEAN D16 *J5 4028-892
16M-Macrolide-3-hydrolase - 28609B/15

SAOC 09.08.77 SANRAKU OCEAN B02 C02 D22 (D13) =J5 4030-195
De:thia-penicillin derivs. from new Streptomyces species - 72706A/41

*SAOK 08.08.77 SANYO KOKUSAKU PULP B03 D13 E13 *J5 4030-199
Purificn. of Stevia sweetening agents - 28866B/15

SARS 14.05.76 SARTORIUS MEMBRANFI GMBH A88 D15 J01 (A11 A32) =US 4147-622
Cellulose triacetate osmotic membranes prepn. - 82861Y/46

SCHI/ 09.09.77 SCHISCHKOVA Z P C03 D16 (D13) #DT 2740-785
Culture media contg. vegetable matter and peat hydrolysates - 26539B/14

*SCHR/ 27.09.77 SCHRODER K W D14 *DT 2743-308
Ice-cream portioning spoon - 27997B/15

SCHW- 28.07.77 VEB SYNTHES SCHWARZ A96 D22 (A25) =DT 2845-686
Medical dressing prepd. from soft polyurethane foam - 86171A/48

*SCHW/ 06.10.76 SCHWARTZ S H D22 E36 (E33) *US 4147-775
Non-irritating topical antiseptic compsn. - 29673B/15

*SCOL 27.12.76 SCHOLL INC B05 C03 D22 *US 4147-770
Topical compsns. contg. vanillin, ethanol salicylic acid etc. - 29670B/15

SEAR 29.10.70 SEARLE GD AND CO B05 D13 E14 #DS 2053-188
Aspartyl phenyl alanine esters as sweet - 23731S/14

*SEDA/ 16.09.76 SEDA L D17 *CS 7606-011
Sugar mixture separation - B/15

SEGU- 07.07.77 SEGUIN ET CIE D16 =FR 2396-798
Compsn. for treating alcoholic drinks esp. brandy - 08341B/05

SHEL 12.08.74 SHELL CANADA LTD C03 D16 H04 (D13 H08) =CA 1050-457
Prodn of edible protein biomass - 13096X/08

SHIN/ 06.07.77 SHIN S K D18 #FR 2396-519
Cigarette holder with filter tip - 16188A/09

*SHIR- 04.08.77 SHIRAI SHI CHUO KENK B06 D21 E33 *J5 4028-835
Dentifrice base comprising calcium carbonate granules - 28589B/15

SHIS 08.05.71 SHISEIDO KK D23 =J7 9005-401
Synthetic oils - 10187V/06

*SHIS 09.08.77 SHISEIDO KK A96 D21 E11 (A26) *J5 4028-832
Cosmetic with soft touch and excellent extensibility - 28586B/15

*SHRK 04.08.77 SHIRAISHI KOGYO KK B06 D21 E33 *J5 4028-835
Dentifrice base comprising calcium carbonate granules - 28589B/15

SICK/ 03.12.74 SICK P D16 =DS 2457-044
Continuous growth of micro-organisms - 77973X/42

SIEI 18.03.77 SIEMENS AG D15 J03 =US 4146-436
Electrochemical determination of heavy metals in flowing water - 51691A/29

SIMO- 22.09.77 SIMON-JOHNSON INC D12 =GB 2004-730
Poultry vent hole enlarging appts. - 11641B/06

SIMO- 22.09.77 SIMON-JOHNSON INC D12 =NL 7809-630
Poultry vent hole enlarging appts. - 11641B/06

*SKUR/ 28.04.77 SKURSKY L B04 D16 *CS 7702-800
Alcohol-dehydrogenase isoenzyme isolation - B/15

*SMRZ/ 11.02.77 SMRZ R D25 E16 *CS 7700-893
Condensates of formaldehyde with ethylamine and ethanolamine - B/15

SNAM 09.04.75 SNAM PROGETTI SPA B04 D16 J04 =CS 7602-335
Modifying proteins by reaction with quinones - 79729X/43

SNAM 05.07.77 SNAMPROGETTI SPA D17 E13 (D16) =FR 2396-765
Fructose prepn. from glucose solns. - 01939B/02

*SNAM 05.10.77 SNAMPROGETTI SPA C03 D16 (D13) *BE -871-048
Novel strain of Candida valida yeast - 27860B/15

SNOW 23.12.76 SNOW BRAND MILK PRODUCTS D13 J03 =US 4146-456
demineralisation of milk by electrodialysis in two stages - 48161A/27

*SNOW 09.08.77 SNOW BRAND MILK PRODUCTS D16 *J5 4028-897
Highly viscous polysaccharide prepn. in high yield - 28613B/15

SOED/ 09.04.76 SOEDA M B04 D16 #GB 1544-182
Isolation of a novel anticancer agent - 83487X/45

SOLE/ 11.05.76 SOLER J E B05 D21 E12 =US 4146-636
Antioxidant dihydroxy-benzene sulphonic acid transition metal salts 82881Y/47

SPAD- 20.04.77 LAB SPAD B05 D21 E14 =PT --67-909
Endodontic treatment paste used esp. for filling infected teeth 76290A/43

STAL 05.07.77 STALEY A E MFG CO D13 =FR 2396-513
Aerated confections requiring no crystallisable sugars - 78262A/43

STAL 05.07.77 STALEY A E MFG CO D13 =FR 2396-515
Protein concentrates prepn. from defatted solvent contg. protein 84118A/47

STAL 02.08.77 STALEY A E MFG CO D17 E13 #J5 4028-837
Non-compacting solid anhydrous dextrose - 86388Y/48

STAL 04.08.77 STALEY A E MFG CO D17 G05 =J5 4029-206
Large granule starch sepn. from native starch - 12381B/07

*STAU 13.12.76 STAUFFER CHEMICAL CO A97 D25 *US 4147-652
Aq. liq. cleaning concentrates for washing bottles, etc. - 29625B/15

STEM 24.07.75 STEINMULLER L & C GMBH D15 J01 =GB 1543-974
Continuous ion exchange treatment of liqs. - 88846X/48

*STIG/ 30.09.77 STIGEBRANDT A D15 *GB 2004-859
Mobile sludge treatment appts. - 28278B/15

STLW 01.09.77 STILLE WERNER AB D22 =SW 7709-831
Easy removal of tubular surgical splint from encased limb - 01976B/02

STRK 01.03.76 STORK AMSTERDAM BV D14 J04 =US 4147-098
Continuous processing esp. sterilising of powder form materials 65291Y/37

*STUC/ 30.08.76 STUCHLIK M D21 *CS 7605-625
Powder mixture for suspensions prepn. - B/15

*SUGA/ 03.08.77 SUGA K A97 C03 D13 *J5 4029-783
Fish bait prepn. - 28729B/15

SUHL/ 08.07.77 SUHLING P D14 =FR 2396-510
Appts. for making batches of sliced food prod. - 04520B/03

SULZ 18.04.77 GEBRUDER SULZER AG D15 J08 =DK 7800-159
Heat exchanger for slurries - 76709A/43

*SULZ 29.09.77 SULZER BROS LTD A88 D14 J01 *GB 2004-763
Press filter of moving belt type - 28267B/15

*SUMH 05.08.77 SUMITOMO SHIPBUILD KK A88 D15 J01 (A11) *J5 4028-278
Regenerating organic membrane support - 28399B/15

*SUMI/ 08.08.77 SUMI Y B04 D16 *J5 4028-804
Streptokinase compsns. for oral administration - 28571B/15

SUMO 25.08.75 SUMITOMO CHEMICAL KK A88 D15 J01 (A14 D13) =US 4147-745
Acrylonitrile based semipermeable membranes prepn. - 16791Y/10

SUMO 31.05.76 SUMITOMO CHEMICAL KK A96 B04 D16 =US 4146-432
Immobilised Streptomyces proteases - 89451Y/50

SUMO 10.03.77 SUMITOMO CHEMICAL KK B04 D16 =US 4147-592
Antithrombotic and antitumour-potentiator urokinase purificn. - 67330A/38

*SURG- 22.10.76 SURGICOT INC A92 D22 *US 4146-133
Sterile easily openable plastics bag - 29325B/15

SUSO 26.01.72 SUOMEN SOKERI OY A91 D17 =DS 2302-841
Monosacchardie sepn from higher saccharides - 45737U/33

*SWAN/ 03.06.75 SWANSON A S D13 *CA 1050-333
Handling process for prepd. foods - 27935B/15

*SYRD= 02.08.74 SYRDARIN ZAGOTKHLOP C03 D13 F01 *SU -608-518
Feedstuffs prodn. from cotton cleaning wastes - 29034B/15

TABU/ 19.05.77 TABUSHI I D15 E13 J01 K05 =J5 3144-592
Alkyl-substd. cyclic alkylene tetramine(s) - 74814A/42

TAKE 22.01.69 TAKEDA CHEMICAL IND KK D16 E17 =DS 2002-048
Microbiological production of citric acid - 50278R/28

TAKE 31.08.76 TAKEDA CHEMICAL IND KK B02 D22 E13 (D15) =US 4146-710
Di:hydrohalide hydrate(s) of cephalosporin derivs. - 18141A/10

TAKE 06.08.77 TAKEDA CHEMICAL IND KK B02 C02 D22 E13 =J5 4030-194
2-Carbamoyl-oximino-acetamido cephalosporin derivs. - 16259B/09

*TAKE 08.08.77 TAKEDA CHEMICAL IND KK B03 D13 E13 *J5 4030-200
Stevioside purifcn. - 28867B/15

TAKE/ 19.08.77 TAKEUCHI S D11 =BR 7805-336
Bread prodn. in kneading and baking oven - 16291B/09

*TAKS 05.08.77 TAKASAGO PERFUMERY KK D23 E15 *J5 4030-144
Iso:camphor cpds. prepn. for use as aromatic perfumes - 28829B/15

TAKS 08.08.77 TAKASAGO PERFUMERY KK D23 E15 =J5 4030-135
4-Hydroxy-4-methyl-cyclohex-2-en-1-one - 14601B/08

*TANA 09.08.77 TANABE PHARMACEUTICAL KK D16 E17 (D21) *J5 4028-894
Di:hydroxy-acetone prepd. from glycerol - 28611B/15

*TANA/ 08.08.77 TANAKA J B05 D23 E19 *J5 4030-111
Terpenyl-ketone(s) prepn. - 28813B/15

*TANA/ 10.08.77 TANAKA T A97 C03 D13 *J5 4029-778
False fish bait or feed - 28728B/15

TATL 26.04.77 TATE & LYLE LTD D18 (D13 D21) =PT --67-952
Smoking products based on tobacco contg. taumatin or monellin - 63444A/36

*TDCO 23.09.77 TELEDYNE INDUSTRIES D15 J01 *US 4147-631
Water filter control and distribution appts. - 29616B/15

*TECD 14.10.77 TECHNICON INSTRUMEN A89 D13 E13 J04 *BE -870-979
Analytically determining uric acid esp. in food samples - 27851B/15

TEEP 22.03.76 TEE PAK INC D13 =CS 7701-393
Tubular collagen food casings prepn. - 92321X/49

TEEP 28.09.77 TEE PAK INC A97 D12 =DT 2841-850
Internally coated cellulose sausage casings - 13989B/07

TEIJ 14.08.73 TEIJIN KK D15 J01 =J5 0039-682
Osmosis using hollow membrane filaments in casing - 28986B/15

*TEIJ 14.08.73 TEIJIN KK D15 J01 *J7 9005-796
Osmosis using hollow membrane filaments in casing - 28986B/15

TEIJ 19.07.76 TEIJIN KK A97 D15 F01 J01 (A13) =DS 2731-493
Fibre material for breaking of emulsions - 08632A/05

TERE- 30.08.77 TECHN RES AFFILIATE B04 D16 #BR 7705-785
Rheumatoid factor immuno-agglutination detection - 18133B/10

*TERL- 23.09.77 MACH FAB TERLET D14 J08 *NL 7809-531
scraping heat exchanger of blade and drive design - 28992B/15

*TERU/ 04.08.77 TERUNUMA Y A82 D15 *J5 4028-443
Activated drinking water prodn. - 28488B/15

TESI- 17.06.76 TESIKA LTD D15 J01 =US 4146-481
Filter of stacked plate type - 23696A/13

TEXC 11.04.75 TEXACO BELGIUM NV D25 E17 =US 4147-673
Water-sol., biodegradable detergent compsn - 79398X/43

*THER- 14.10.76 THERMAL ENGINEERING A85 D15 J03 (A18) *US 4147-607
Appts. for removing electrical energy from water - 29604B/15

*THIO 04.11.77 THIOKOL CHEMICAL CORP A88 D15 J09 *US 4147-114
Sewage treatment appts. comprising vibrated conveyor - 29519B/15

*THOM- 22.02.77 THOMPSON BAGEL MACH D11 *US 4147-809
Dividing dough into individual portions - 29682B/15

*TOKI 17.02.76 TOKYO KIKAIKA KOGYO KK D13 *US 4147-811
Coarse grained bean curd prepn. - 29684B/15

TOKU 23.12.76 TOKAYAMA SODA KK D13 J03 =US 4146-456
demineralisation of milk by electrodialysis in two stages - 48161A/27

*TOKU 28.09.77 TOKUYAMA SODA KK D23 E17 F06 G02 *DT 2842-265
Direct aliphatic carboxylic acid esterification with ethylene - 28171B/15

*TOPS- 27.01.78 TOP-SCOR PRODUCTS I D11 E17 *US 4146-548
Acyl lactylate salts used as bakery additives - 29425B/15

*TORA 03.08.77 TORAY INDS INC A88 D16 *J5 4028-890
Incubating living cells - 28608B/15

TOXN 25.03.74 TOYO BREWING KK A97 B04 D16 J04 =DS 2512-920
Semi permeable, cellulose microcapsules contg. powdered adsorbent - 68361W/41

*TOYM 05.08.77 TOYOBO KK D16 *J5 4028-893
Sarcosine oxidase prepn. - 28610B/15

*TOYM 08.08.77 TOYOBO KK D15 *J5 4028-452
Decolourising waste water contg. e.g. cationic dyestuff - 28494B/15

*TOYM 09.08.77 TOYOBO KK D15 E37 *J5 4029-897
Stabilising hydrosulphite reducing agent - 28784B/15

*TOYO/ 10.08.77 TOYODA O D15 (D13 D18) *J5 4030-251
Recovering protein from waste water used in leather treatment - 28894B/15

TOZI 12.09.77 TOHO ZINC KK D15 =DT 2839-386
Reducing COD of effluent water - 25184B/13

TRCH 22.10.76 TREIBACHER CHEM WERKE AG D25 E34 =US 4146-571
Sodium percarbonate crystals mfr. - 15954A/09

TRIP- 26.08.77 TRIPLUS SJUKVARDSPR D22 =DK 7803-752
Surgical drape with central hole - 18511B/10

TRIP- 26.08.77 TRIPTUS SJUKVARDS D22 =SW 7709-587
Surgical drape with central hole - 18511B/10

*TSUC/ 20.04.77 TSUCHIYA T C03 D13 *J5 3130-633
Fungicide and rancidity preventing agent - 28307B/15

*TUCH= 20.01.75 TULA CHEM IND RES D23 F09 *SU -608-829
Cotton wax recovery from spent caustic digestion liquor - 29178B/15

TURE/ 27.04.78 TUREAUD K E A96 D21 (A14) #PT --67-960
Plastic jaw impression spoon - 48082A/27

*UBEI 11.08.77 UBE INDUSTRIES KK B05 D23 E14 *J5 4030-123
Bivalent phenol alkyl eiher prodn. - 28817B/15

UGIN 26.01.72 PECHINEY UGINE KUHL D18 E21 =DS 2302-716
Soluble disazo dyes - 45733U/33

UGIN 08.07.77 UGINE KUHLMANN D15 =FR 2396-726
Denitrification of biological effluents - 08436B/05

*UMEA= 01.12.76 UKR MEAT DAIRY IND D13 *SU -608-515
Mfr. of long life soured cream products - 29031B/15

*UNCO- 08.07.77 UNION COOP FRUITIER A97 D13 *FR 2396-512
Treating gruyere type cheeses having a surface flora - 28191B/15

UNIL 28.03.68 UNILEVER NV D11 E13 =DS 1915-788
2,5-Diethyl-4-hydroxy-2,3-dihydrofuran-3-one - 62885Z/00

UNIL 04.03.75 UNILEVER LTD D13 (D23) =GB 1544-200
Co-trans-esterified olein fat fraction used in margarine prepn - 70473X/38

UNIL 06.10.76 UNILEVER NV D13 =PT --67-121
Ice cream compsn. contg. caroub and/or tara gum - 25249A/14

UNIL 11.10.76 UNILEVER NV A97 D25 E12 (A18 A25 E34) =PT --65-052
Liquid detergent compsn. - 25248A/14

UNIL 28.10.76 UNILEVER NV D21 =PT --67-202
Aerosol containers esp. for antiperspirant compsns. - 32027A/18

UNIL 01.11.76 UNILEVER NV D25 E17 (E36) =PT --67-225
Storage stabilised liq. enzymatic detergents - 33414A/19

UNIL 01.11.76 UNILEVER NV D25 E19 (E36) =PT --67-226
Storage stabilised liq. enzymatic detergents - 33415A/19

UNIL 18.05.77 UNILEVER NV D25 =BR 7803-120
Detergent powder sachet for washing fabrics - 82160A/46

UNIL 25.05.77 UNILEVER NV D24 E32 =BR 7803-322
Detergent compsn. contg. titanium or zirconium peroxy cpds. 86096A/48

UNIL 22.08.77 UNILEVER NV D25 E34 =DK 7803-670
Aq. liq. detergent compsn. prepn. for washing clothes etc. - 14186B/08

UNIL 22.08.77 UNILEVER NV D25 E34 =NO 7802-831
Aq. liq. detergent compsn. prepn. for washing clothes etc. - 14186B/08

UNIL 26.08.77 UNILEVER NV A96 D21 =DK 7803-774
Non-irritant, non-tacky antiperspiration compsn. - 20277B/11

UNIL 26.08.77 UNILEVER NV A96 D21 =SW 7809-014
Non-irritant, non-tacky antiperspiration compsn. - 20277B/11

UNIL 30.08.77 UNILEVER NV D13 =SW 7809-105
Iced confectionery esp. ice lollipops - 18000B/10

*UNIL 26.09.77 UNILEVER NV D24 *DT 2841-652
Striped soap cake extrusion - 28147B/15

*UNIL 06.10.77 UNILEVER NV D18 E11 *BE -871-072
Nourishing tanned leather - 27865B/15

*UNIL 07.10.77 LEVER BROTHERS CO B05 D21 E12 (E33) *US 4146-605
Oral anti-calculus compsns. with lower astringency - 29443B/15

*UNIL 07.11.77 LEVER BROTHERS CO B05 D21 E16 *US 4146-607
Synergistic anti-plaque compsns. - 29444B/15

*UNIL 07.11.77 LEVER BROTHERS CO B05 D21 E16 *US 4146-608
Synergistic anti-plaque compsns. - 29445B/15

USAT 27.09.77 US DEPT OF ENERGY D15 K07 =DT 2842-050
Removing plutonium from aq. soln. - 78241A/43

USAT 27.09.77 US DEPT ENERGY D15 K07 =GB 2004-857
Removing plutonium from aq. soln. - 78241A/43

*USDA 17.06.77 US SEC OF AGRICULTURE D17 (D16) *US 4146-705
Treatment of extracellular Arthrobacter stabilis polysaccharide(s) - 29486B/15
*USDA 26.04.78 US SEC OF AGRICULTURE B02 D13 E13 *US 4146-650
2-Hydroxy:methoxy-phenyl-1,3-benzodioxan and salts - 29455B/15
*USOL= 28.07.75 USOLE CHEM COMPLEX D15 E32 J03 (E36) *SU -608-765
Mercuric sulphide obtd. from mercury-contg. aq. waste - 29119B/15
*UTAH 28.06.77 UNIV OF UTAH D15 J01 *US 4147-621
Field flow fractionation appts. - 29611B/15
*UYLA= 16.02.77 LATV UNIV D16 *SU -608-830
High yield microbial biomass prodn. - 29179B/15

*VAJD/ 12.01.78 VAJDA G D13 *HU T016-174
Confectionery cream product, opt with reduced calorie content - B/15
*VEKE- 30.09.77 VER KESSELWERKE D15 *DT 2744-050
Packing for trickling water tower - 28032B/15
*VEMA- 01.10.77 VEMAG VERDENER MASC D12 *DT 2744-350
Sausage link looping machine - 28050B/15
*VOGT/ 26.09.77 VOGT H D13 *DT 2743-230
Potato crisps - 27995B/15

WACK 08.03.76 WACKER CHEMIE GMBH A60 D21 E36 G01 =US 4147-760
Disperse silica having increased thickening activity - 69080Y/39
WADL 25.08.77 WADLEY RES INST BLOOD BK B04 D16 =DT 2833-846
Fungal growth medium containing purified saponin - 23813B/12
WESI 28.06.71 WEST LABORATORIES INC C03 D22 =CA 1050-383
Glutaraldehyde sporicidal solns - 05460U/05
WIGG 02.08.76 WIGGINS TEAPE LTD A88 D18 F09 =HU H002-417
Fibrous element e.g. cigarette filter formed from fibre suspension - 86637Y/49
WILL/ 21.10.75 WILLISCH H D16 =US 4146-382
Compost heap for household refuse and industrial waste - 25210Y/15
WILL/ 30.07.76 WILLISCH H C04 D16 (D15) =US 4146-381
Composting comminuted refuse opt. mixed with sludge - 10574A/06
WRIL 11.04.75 WRIGLEY W JR CO A97 D13 =CA 1050-334
Non-adhering chewing gum - 42025X/23
*WYNE/ 29.11.73 WYNESS D K D15 *US 4146-471
Liq. clarification appts. with conical vessel - 29397B/15

YAMA/ 27.05.77 YAMAGA R D21 E33 (E32) =US 4146-606
Dental sealing composition - 88144A/49
*YAMA/ 05.08.77 YAMADA T C03 D16 *J5 4029-754
Soil conditioner prepn. from graminaceous weed Zizania latifolia - 28724B/15
YAMA/ 09.08.77 YAMAMURA Y A96 B04 D16 =J5 4028-813
Antitumour compsn. - 14567B/08

ZAID 29.03.74 ZAIDAN HOJIN BISEIB B04 D16 =CA 1050-461
Antibiotic Macracidmycin with carcinostatic activity - 31241X/17
ZAID 31.05.76 ZH BISEIBUTSU KAGAKU KEN B03 D16 =GB 1544-195
Anthracycline-glycoside antibiotics prodn. - 84731Y/48
ZAID 31.05.76 ZH BISEIBUTSU KAGAKU KEN B03 D16 =US 4147-778
Anthracycline-glycoside antibiotics prodn. - 84731Y/48
*ZAPO= 28.01.77 ZAPOROZHE IND INST D23 L02 *SU -608-785
Mixture for the mfr. of lightweight concrete filler - 29138B/15
ZIEG/ 03.06.76 ZIEGLER R D11 =US 4146-067
Dough extracting and metering device - 90463Y/51

50278-R DE
BE -744-416 R28
NL 7000-842 R31
DT 2002-048 R47
FR 2028-886 S02
ZA 7004-117 S16
US 3689-359 T38
GB 1297-243 T47
J7 4006-117 V09
US 3799-840 V14
CA -973-824 W38
DS 2002-048 B15

54027-R D
BE -744-835 R30
NL 7001-025 R31
DT 2003-350 R35
FR 2029-052 S02
ZA 7000-414 T02
CH -519-577 T22
GB 1299-206 T50
CA -927-301 U25
US 3838-006 V40
DS 2003-350 B15

23731-S BDE
FR 2040-473 S14
ZA 7007-198 S31
GB 1243-169 S32
CH -508-590 S32
DT 2053-188 T20
CA -910-348 T40
US 3786-039 V04
DS 2053-188 B15+

43213-S CD
BE -760-290 S25
DT 2059-277 S26
NL 7017-306 S26
ZA 7007-898 S34
FR 2075-015 T03
GB 1326-582 U33
CH -541-623 U47
DS 2059-277 B15

07991-T DH
BE -770-300 T05
NL 7110-036 T07
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ZA 7104-551 T14
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CA -959-778 W02
CH -556-909 W05
J7 8028-509 A36
SU -607-555 B14
CS 7105-295 B15

13520-T BCD
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BE -771-276 T09
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FR 2102-264 T27
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SU -404-186 V49
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CH -560-247 W17
OE 7204-218 W23
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SW 7500-788 W41
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CA 1050-462 B15

05460-U CD
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IL --39-755 W21
GB 1400-258 W29
CA 1017-670 Y40
CA 1050-383 B15

09882-U D
DT 2137-474 U08
DS 2137-474 B15

43091-U D
DT 2300-786 U31
NL 7300-321 U31
FR 2173-654 U51
DL -101-632 V08
CH -564-087 W34
US 3910-172 W42
GB 1421-661 X04
CA -998-956 X46
CS 7300-247 B15

45733-U DE
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BE -794-535 U33
NL 7215-369 U33
FR 2168-906 U47
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CH -558-409 W09
NL -145-889 W26
US 3891-617 W27
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45737-U AD
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NL 7301-178 U33
BE -794-505 U33
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ZA 7300-539 U48
J4 8082-048 V02
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GB 1394-503 W20
OE 7300-636 W31
CA -987-313 X18
CH -581-701 X52
CS 7300-535 A38
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67771-U ABDF
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J4 9041-284 V25
J4 9046-590 V47
J4 9098-386 W07
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GB 1432-228 X16
CA 1000-683 X51+
J7 7019-195 Y25
J7 7019-552 Y25
J7 7019-550 Y25
J7 7043-191 Y47
DS 2318-831 B15+

10187-V D
J4 8085-567 V06+
J7 9005-401 B15+

36558-V D
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ZA 7308-884 W06
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CA 1021-076 Y48
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ZA 7308-611 V43
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OE 7309-401 W19
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J7 9005-409 B15

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CH -583-522 Y09+
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CA 1050-555 B15

79238-V BCD
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DK 7402-307 W01
US 3856-937 W01
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ZA 7401-801 W18
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DL -114-342 W40
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GB 1441-703 X28
HU T012-329 X47
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CA 1017-274 Y39
CH -594-735 A09
OE 7601-328 A40
CS 7402-854 B15

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CA 1050-336 B15

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IL --45-908 Y51
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CA 1035-475 A32
DS 2441-238 B15

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BE -818-895 W10
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FR 2246-535 W28+
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GB 1489-867 Y43+
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CA 1050-381 B15+

19560-W DJ
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SW 7410-437 W19+
DK 7404-366 W23+
FR 2243-154 W24+
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OE 7308-328 W35
OE 7307-771 W35
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ZA 7405-643 W51
AR -202-039 X01+
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US 4126-574 A48+
GB 1483-610 B12+
CA 1050-384 B15+

41024-W D
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CA 1050-438 B15

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57020-W D
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ZA 7503-507 X24
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CA 1050-458 B15

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J7 8005-755 A12
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59128-W D
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SW 7502-039 W43+
DK 7500-733 W47+
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GB 1489-121 Y42+
OE 7501-407 A22+
US 4147-808 B15+

62610-W BCD
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BE -826-269 W38+
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SW 7502-368 W44+
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DK 7500-863 W50+
FR 2262-993 W52
ZA 7501-318 X13
DL -119-269 X24
PT --63-437 X25+
OE 7501-692 X32
FR 2294-713 X44+
HU T012-412 X47+
J5 2087-102 Y35+
GB 1495-858 Y51+
SU -550-123 A05
CH -602-919 A37+
CA 1038-786 A40+
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67308-W ABD
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PT --63-545 X25
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OE 7502-328 Y35
HU T015-162 A32
CA 1036-087 A34
SU -608-479 B15
CS 7502-113 B15

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DK 7501-906 X08
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CA 1050-552 B15

67720-W BD
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SW 7503-536 W52
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DK 7501-328 X02
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SF 7500-958 X04
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PT --63-516 X25
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J5 2083-992 Y35+
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OE 7502-284 A06
SU -528-038 A14
IL --46-837 A33
US 4113-856 A38
CA 1050-460 B15
US 4146-610 B15

68361-W ABDJ
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SW 7503-445 W46+
FR 2265-449 X03+
DT 2512-920 X38+
J5 1095-989 X41
J5 0125-979 Y51
J7 7046-555 Y51
GB 1499-174 A04+
US 4118-336 A41
US 4123-381 A45
DS 2512-920 B15+

72754-W ADE
DT 2514-675 W44
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NL 7504-263 W44
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CA 1050-379 B15

72755-W ADE
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GB 1454-657 X45
IL --47-088 A06
CA 1050-386 B15

78772-W BDE
BE -830-708 W48
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SW 7506-613 Y04+
ZA 7503-693 Y07+
BR 7504-023 Y07+
DK 7502-728 Y10+
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CA 1050-431 B15+

79117-W D
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SF 7502-118 X19
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SW 7508-501 X31
DK 7503-370 X18
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J5 2111-503 Y44
SU -563-921 A21
IL --47-854 B06
CH -609-377 B12
CS 7505-230 B15

00066-X AD
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DT 2526-378 X01+
NL 7507-134 X02+
J5 1012-804 X11
US B479-969 X12
FR 2274-680 X14+
US 4001-132 Y03
CA 1024-461 A06
GB 1500-177 A06+
CA 1050-380 B15

01277-X ADE
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DT 2524-388 X01
J5 1018-284 X13
FR 2274-681 X14
ZA 7502-961 X21
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GB 1467-614 Y11
CH -595-436 A12
CA 1050-382 B15

01986-X BCD
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SW 7507-017 X08
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DK 7502-809 X14
FR 2275-194 X15
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DL -121-712 X41
GB 1502-144 A08
IL --47-531 A47
CA 1050-430 B15

04303-X D
J4 9103-886 X03
J7 9005-389 B15

07460-X DE
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NL 7510-403 X12+
DT 2539-015 X12+
NO 7503-005 X18+
DK 7503-808 X23+
FR 2283-904 X25+
J5 1051-581 X25+
BR 7505-621 X34+
US 3974-036 X34+
DS 2539-015 Y26+
OE 7506-716 A06+
IL --47-902 A20+
GB 1511-868 A21+
HU T016-267 B15+

09601-X AD
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BE -831-137 X07
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SW 7508-093 X11
DK 7503-223 X17
FR 2278-274 X19
SF 7502-054 X19
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ZA 7504-360 X31
PT --64-064 X33
GB 1484-573 Y35
US 4147-172 B15

13096-X CDH
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FR 2281-981 X22
US 4003-790 Y05
GB 1514-485 A24
SU -603-348 B10
CA 1050-457 B15

14345-X DE
NL 7508-836 X08+
DT 2529-603 X09+
FR 2280-625 X21+
J5 1043-750 X22+
GB 1457-719 X50+
CH -589-018 Y29
US 4117-245 A40+
US 4146-740 B15+

20397-X ADJ
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US 4000-065 Y02
CA 1050-439 B15

21159-X D
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BE -832-852 X12
NL 7510-075 X12
SF 7502-406 X22
DK 7503-852 X22
FR 2283-148 X24
J5 1051-580 X25
US 3980-521 X39
OE 7506-660 A02
GB 1516-704 A27
CA 1050-454 B15

23801-X DEGM
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SW 7411-432 X18
FR 2284-568 X26+
GB 1463-099 Y05+
CA 1028-071 A13+
US 4119-536 A42+
DS 2443-942 B15+

24417-X DE
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NL 7510-948 X15
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J5 1035-484 X19
SW 7510-457 X20
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DK 7504-223 X25
SF 7502-593 X26
FR 2285-455 X27
US 3990-944 X47
GB 1488-318 Y41
DS 2541-960 B15

28467-X D
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DS 2446-157 B15+

31241-X BD
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US 3992-524 X48
J5 0126-891 Y44
J5 0126-909 Y44
CA 1050-461 B15

42025-X AD
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US 3984-574 X42
DT 2552-834 X43
NL 7600-482 X44
J5 1121-560 X49
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SF 7600-110 X52
FR 2306-639 Y06
SW 7604-236 Y22
OE 7601-224 A02
ZA 7507-302 Y01
CA 1050-334 B15

42313-X D
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US 4039-447 Y32+
GB 1533-876 A48+
DS 2551-030 B15+

44030-X DJ
BE -835-888 X24+
NL 7513-763 X24+
SW 7513-173 X28+
FR 2291-788 X39+
BR 7507-801 X41
DK 7505-283 X43+
US 4021-927 Y20+
DT 2552-881 Y23+
GB 1498-206 A03+
HU T016-189 B15

44043-X BCD
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US 3960-833 X24+
NL 7513-793 X25+
SW 7513-450 X29+
DT 2553-626 X34+
DK 7505-395 X35+
J5 1082-241 X36+
FR 2292-483 X41+
ZA 7507-456 Y01
J5 2031-052 Y16
GB 1531-016 A44+
CA 1050-536 B15+

44066-X DE
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J5 1076-442 X33
DT 2553-328 X34
FR 2292-689 X41
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GB 1504-759 A12
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US 4124-771 A46
US 4147-671 B15+

46019-X BCD
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SW 7513-378 X29+
J5 1076-438 X33+
DT 2456-307 X34
DK 7505-356 X35+
SF 7503-333 X35+
J5 1082-286 X36+
FR 2292-471 X41+
DT 2512-998 X42
PT --64-531 X44+
J5 1110-592 X46+
ZA 7507-482 X48
DT 2525-541 X52
DL -124-736 Y23+
OE 7509-072 Y31+
GB 1486-349 Y38+
CS 7508-091 A41
HU T016-258 B15
US 4147-693 B15+

55894-X BD
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DT 2630-405 Y26
J5 2070-016 Y30
FR 2355-913 A14
GB 1524-401 A37
DS 2630-405 A48
CA 1050-456 B15

59852-X DJ
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HU H002-113 X29
CS 7508-824 B15

59928-X ADL
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J5 1098-754 X42
FR 2297-887 X47
GB 1505-815 A13
US 4131-597 B02
DS 2501-683 B15

70473-X D
BE -839-108 X38
NL 7602-175 X39
DT 2608-990 X39
SW 7602-860 X43
J5 1112-556 X47

70473-X
SF 7600-527 X48
FR 2303-071 Y02
ZA 7601-277 Y46
US 4087-564 A25
GB 1544-200 B15

74329-X ABCD
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BE -839-486 X40+
NL 7602-642 X40+
DK 7601-080 X49+
J5 1128-494 X52+
FR 2303-557 Y03+
CH -606-426 A48
GB 1543-986 B15+

75678-X ABCD
BE -839-893 X41
DT 2613-943 X43
J5 1121-511 X49
FR 2305-990 Y05
GB 1543-962 B15

77973-X D
FR 2293-488 X42
DT 2457-044 X45
ZA 7507-515 Y01
DS 2457-044 B15

79361-X DJ
BE -840-493 X43
NL 7603-577 X43
DT 2614-881 X44
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SW 7604-037 X50
FR 2306-745 Y06
ZA 7601-907 Y17
DL -125-326 Y25
BR 7602-042 Y45+
GB 1527-731 A41
OE 7602-499 B01
CS 7602-307 B15

79398-X DE
BE -840-623 X43
NL 7603-616 X44
DT 2611-542 X45
BR 7602-152 X46
SW 7604-151 X48
J5 1121-008 X49
FR 2307-036 Y06
GB 1505-934 A14
US 4147-673 B15

79729-X BDJ
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BE -840-450 X43
NL 7603-740 X44
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J5 1123-884 X50
SW 7604-136 X50
DK 7601-456 Y01
DL -123-608 Y12
ZA 7601-886 Y17
DS 2615-349 A25
FR 2366-303 A26
CS 7602-335 B15

82653-X D
US 3986-344 X44
CA 1050-372 B15+

83025-X BD
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NL 7604-311 X46
J5 1130-525 X52
DT 2617-870 Y02
FR 2308-377 Y08
ZA 7602-438 A16
CA 1050-423 B15

83487-X BD
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J5 1121-599 X49
FR 2307-038 Y06
J7 7050-278 A04
GB 1544-182 B15+

85306-X D
DT 2617-174 X46
SW 7604-535 X49
FR 2308-933 Y08
US 4073-692 A09
GB 1543-969 B15

88724-X DF
US 3991-221 X47
BE -844-614 X50
DT 2633-596 Y06
NL 7607-389 Y08
SW 7607-433 Y10
NO 7602-601 Y11
FR 2319-303 Y19
ZA 7603-355 Y26
J5 2064-454 Y27
HU T016-175 B15

88846-X DJ
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NL 7603-131 Y07
BR 7603-719 Y09
SW 7603-800 Y10
J5 2015-480 Y11
SF 7602-076 Y16
FR 2318-675 Y18
ZA 7603-592 Y26
OE 7605-449 Y39
GB 1543-974 B15

89492-X DEM
J5 1116-060 X48
J7 9005-628 B15

90877-X DFJ
DT 2616-517 X49
OE 7503-694 X24
NL 7604-960 X49
SW 7604-783 Y01
FR 2311-134 Y10
ZA 7602-838 Y19
BR 7602-550 Y21
DL -125-795 Y30
CH -595-870 A12
GB 1528-261 A41
CS 7603-119 B09
US 4147-101 B15

92321-X D
US 3993-790 X49
BE -852-488 Y38
DT 2707-050 Y40
SW 7702-244 Y44
J5 2120-142 Y46
SF 7700-400 Y51
FR 2345-081 A03
GB 1533-533 A48
CS 7701-393 B15

92658-X D
DS 2538-684 X50
DL -124-579 Y23+
GB 1486-767 Y38+
US 4050-118 Y40+
DK 7600-741 Y46+
SW 7603-999 Y46+
NO 7601-190 Y47+
FR 2355-456 A14+
SU -586-822 A46+
CA 1050-627 B15+

93644-X DE
NL 7604-794 X50+
SW 7605-644 Y09+
DK 7602-181 Y10+
GB 1543-976 B15+

00237-Y D
DT 2604-674 Y01+
GB 1531-902 A46+
DS 2604-674 B15+

02236-Y DE
DT 2527-791 Y02
NL 7605-858 Y02
BE -843-202 Y03
J5 2001-044 Y07
FR 2315-906 Y15
OE 7604-401 Y22
CH -602-107 A33
US 4104-020 A47
GB 1544-124 B15

03916-Y DE
BE -843-417 Y03+
NL 7606-948 Y03+
DT 2628-716 Y04+
J5 2003-836 Y08+
FR 2315-256 Y14
FR 2330-673 Y32
OE 7604-675 B01
GB 1544-127 B15+

03968-Y BDEJ
BE -845-787 Y03
ZA 7605-067 Y35+
DT 2638-993 A05
NL 7609-925 A06
J5 3012-781 A11
BR 7605-832 A15
FR 2358-926 A16
US 4146-454 B15+

05578-Y BD
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NL 7607-342 Y04
DT 2530-070 Y06
SW 7607-625 Y07
J5 2010-419 Y10
FR 2316-873 Y16
ZA 7603-943 Y32
US 4064-268 A01
GB 1544-091 B15

05743-Y DJ
BE -846-163 Y04
DT 2641-150 Y16
FR 2325-040 Y25
US 4070-263 A06
DS 2641-150 A43
GB 1543-970 B15

06537-Y CD
J5 1142-590 Y04
IL --47-620 B08+
CA 1050-455 B15+

06547-Y DJ
J5 1142-859 Y04
J7 9005-626 B15

12715-Y CDEF
BE -845-228 Y08+
DT 2536-618 Y09
DT 2536-617 Y09
NL 7608-266 Y09+
NL 7608-265 Y09+
SW 7608-459 Y13+
J5 2025-034 Y14+
J5 2025-011 Y14+
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DK 7603-363 Y20+
FR 2321-301 Y21+
FR 2321-302 Y21+
SF 7602-128 Y21+
BR 7605-307 Y34+
ZA 7604-879 Y35
US 4051-058 Y40+
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DT 2616-049 Y44
OE 7606-032 A40+
OE 7606-029 A44+
CA 1050-876 B13+
CA 1050-877 B13+
DS 2536-617 B15

16791-Y ADJ
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NL 7609-107 Y11
J5 2026-380 Y15
DK 7603-814 Y20
FR 2322-638 Y23
J7 7038-988 Y43
GB 1526-843 A40
US 4147-745 B15

17269-Y BD
J5 2010-490 Y10
CA 1050-459 B15+

18316-Y ADFH
DT 2538-281 Y11
NL 7609-582 Y11
J5 2028-546 Y15
SW 7609-474 Y15
SF 7602-459 Y21
FR 2322-197 Y22
US 4104-226 A47
CA 1050-680 B15

25210-Y D
BE -846-713 Y15+
DT 2547-134 Y18
NL 7609-986 Y19+
SW 7611-643 Y22+
DK 7604-010 Y28+
FR 2328-680 Y30+
ZA 7605-643 Y38
DT 2610-521 Y39+
OE 7606-592 A26+
US 4146-382 B15+

25317-Y D
BE -849-111 Y15+
NL 7613-563 Y25+
SW 7613-147 Y27+
SW 7613-757 Y29
OE 7509-341 Y31
SF 7603-508 Y34
DK 7605-488 Y35+
FR 2334-312 Y39+
PT --65-940 Y49+
BR 7608-238 Y51+
CH -604-574 A41
CA 1040-047 A43+
CH -608-347 B09
GB 1544-116 B15+

25601-Y DJ
DT 2643-691 Y15
SW 7610-748 Y20
BR 7606-447 Y26
FR 2326-225 Y27
CA 1050-587 B15

27160-Y AD
BE -847-315 Y16+
DT 2644-621 Y17+
NL 7611-015 Y18+
J5 2051-043 Y22+
FR 2328-405 Y30+
SF 7602-822 Y30+
US 4042-714 Y34+
ZA 7605-505 Y38
GB 1508-940 A17+
OE 7607-531 B04+
DS 2644-621 B15+

32746-Y ADE
BE -847-942 Y19
NL 7612-201 Y20
US 4108-880 B11
GB 1543-824 B15

33107-Y DF
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US 4069-822 A06
US 4147-580 B15+

34513-Y BD
BE -848-366 Y20
NL 7612-595 Y22
DT 2651-655 Y22
J5 2061-291 Y26
FR 2331-344 Y33
US 4146-536 B15

37876-Y DH
US 4023-912 Y21+
J5 3024-041 A16+
CA 1050-338 B15

39969-Y D
DL -124-534 Y23
DT 2659-542 Y37
SW 7700-042 Y41
FR 2343-045 Y51
CS 7700-341 B15

40882-Y DHJ
J5 2053-788 Y23
GB 1543-836 B15+

43477-Y DE
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NL 7612-984 Y27
DT 2557-599 Y28
SW 7614-321 Y31
NO 7603-792 Y32
J5 2079-023 Y33
DK 7605-706 Y36
SF 7603-196 Y38
FR 2335-154 Y42
PT --65-891 Y43
ZA 7606-625 Y46
CH -602-016 A33
GB 1529-027 A42
CA 1046-831 B06
DS 2557-599 B06
CS 7607-839 B15

46971-Y AD
BE -850-017 Y27
NL 7614-585 Y29
DT 2559-318 Y29
SW 7614-697 Y32
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J5 2083-973 Y35
DK 7605-893 Y38
SF 7603-711 Y38
FR 2336-883 Y41
ZA 7607-712 Y50
DL -128-098 A08
US 4123-589 A45
DT 2560-007 A47+
DS 2559-318 B15

50655-Y ADE
DT 2658-073 Y29
BE -850-016 Y29
NL 7614-588 Y29
J5 2101-212 Y40
FR 2337-200 Y41
US 4147-649 B15

50709-Y D
DT 2700-213 Y29
NL 7600-063 Y29
NL -155-721 A11
FR 2396-799 B15+

52554-Y D
DT 2659-513 Y30
FR 2345-520 A03
US 4127-264 A49
CA 1050-576 B15

52578-Y DE
DT 2700-688 Y30+
NL 7700-367 Y31+
US 4045-489 Y36
FR 2338-240 Y44+
US 4062-894 Y51
US 4068-012 A04
US 4081-481 A20
US 4081-479 A20+
US 4097-416 A35
US 4119-576 A42
US 4102-928 A44
US 4103-036 A44
US 4122-122 A44
US 4122-120 A44
DT 2759-424 A50+
DT 2759-425 B01+
US 4107-093 B08
US 4147-727 B15

52614-Y ABCD
DT 2701-312 Y30+
J5 2089-188 Y36
J5 2090-695 Y36
FR 2338-287 Y44+
GB 1541-511 B10+
US 4146-706 B15+

59474-Y D
BE -853-898 Y34
NL 7604-310 Y45
DT 2717-526 Y46
DK 7701-791 A02
FR 2348-658 A06
DL -129-967 A18
US 4143-593 B12
CS 7702-690 B15

65269-Y BDJ
DT 2707-065 Y37
J5 2106-374 Y42
FR 2342-763 Y51
US 4145-818 B15

65291-Y DJ
DT 2708-168 Y37
NL 7602-123 Y38
FR 2342-670 Y51
PT --66-248 A12
US 4147-098 B15

69080-Y ADEG
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J5 2108-398 Y42
SW 7702-612 Y42
FR 2343-697 A01
US 4147-760 B15

69198-Y D
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SW 7703-069 Y44
FR 2344-293 A02
DL -129-998 A30
HU T015-401 A41
CS 7701-733 A43
US 4146-570 B15

70740-Y BCD
BE -853-155 Y40
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SW 7703-770 Y46
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DK 7701-444 Y51
SF 7700-998 Y51
FR 2346-368 A04
ZA 7702-009 A16
NL 7703-401 A42+
DL -130-250 A43+
GB 1544-068 B15+

72386-Y ADE
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GB 1535-415 A50
CA 1050-335 B15

72836-Y D
DT 2714-396 Y41
J5 2120-148 Y46
DS 2714-396 B15

74340-Y ADJ
DT 2624-392 Y42+
CH -592-024 Y48
J5 2134-896 Y51
DT 2660-068 A10
CH -601-585 A33
US 4146-372 B15

77499-Y BCD
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DK 7801-608 A50
SF 7801-233 B04
FR 2388-564 B05
J5 4011-228 B10
PT --67-868 B15

77876-Y ABCD
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J5 2126-678 Y48
US 4147-624 B15

79262-Y DE
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NL 7709-190 B10+
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DK 7703-601 B13+
SW 7709-143 B13+
NO 7702-830 B14+
BR 7705-778 B15+

82861-Y ADJ
ZA 7606-497 Y46
DT 2621-519 Y48
J5 2138-485 A01
SW 7612-066 A01
FR 2351-147 A09
DK 7604-924 A09
US 4147-622 B15

82881-Y BDE
BE -854-519 Y47
NL 7705-147 Y48
DT 2720-895 Y48
J5 2136-145 A01
FR 2350-838 A09
US 4146-636 B15

82995-Y BCDE
BE -854-843 Y47
NL 7705-602 Y49
DT 2722-162 Y49
SW 7705-886 A02
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FR 2360-601 A18
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PT --66-581 A23
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OE 7703-617 A48
GB 1542-938 B13
US 4147-780 B15

84731-Y BD
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FR 2353-564 A12
ZA 7703-228 A20
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GB 1544-195 B15

86388-Y DE
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BE -857-880 A08+
ZA 7704-156 A25+
NL 7707-908 B05+
DT 2733-614 B08+
DK 7703-162 B09+
J5 4028-837 B15+

86637-Y ADF
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BR 7705-594 A30
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ZA 7704-318 A46
HU H002-417 B15

88397-Y DE
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NL 7608-839 Y50
J5 2143-234 A03
FR 2352-543 A11
GB 1537-973 B02
US 4146-505 B15

88592-Y D
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J5 2149-895 A05
DS 2725-665 B15

89451-Y ABD
NL 7705-966 Y50+
DT 2724-081 A01+
J5 3003-584 A08
FR 2353-563 A12+
J5 3018-793 A14
GB 1536-822 A51+
US 4146-432 B15+

90463-Y D
DT 2723-557 Y51+
FR 2353-833 A12+
CH -604-531 A41
GB 1540-016 B06+
CH -608-694 B09
OE 7703-918 B09+
CH -609-212 B12
US 4146-067 B15+

90533-Y DJ
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SW 7706-537 A04+
SF 7701-806 A08+
J5 3030-489 A18
J5 3048-352 A24
US 4147-665 B15+

91772-Y D
US 4062-985 Y51+
DT 2743-338 B15+

62885-Z DE
BE -730-500 Q00
US 3887-589 W24
CH -517-444 T13
CA -898-590 T19
J7 2031-620 T33
ZA 6902-167 R50
NL -153-071 Y24
DS 1915-788 B15

00033-A DE
BE -855-965 A01+
DT 2728-499 A07+
NL 7706-811 A08+
SW 7707-035 A11+
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J5 3018-578 A14+
DK 7702-761 A15+
SF 7701-934 A16+
US 4082-717 A21+
ZA 7703-566 A25
PT --66-694 A29+
BR 7703-970 A29+
FR 2372-821 A36+
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GB 1538-373 B03+
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CENTRAL PATENTS INDEX

CLASSIFIED ALERTING BULLETIN

Section D:

FOOD
DETERGENTS

ABSTRACTS

INDEXES

- II - PATENTEE
- V - BASIC NUMBER
- VII - PATENT NUMBER

COUNTRY	PUB. DATE(S)	NUMBER RANGE
BELGIUM		
-Delayed	10 APR - 16 APR 79	871,120 - 871,264
-Non Delayed	30 MAR 79	872,645 - 872,830
BRAZIL	3 APR 79	7,703,940 - 7,808,235
CANADA	10 APR 79	1,052,051 - 1,052,500
SWITZERLAND	15 MAR - 30 MAR 79	609,515 - 610,173
DENMARK	26 MAR 79	7,702,451 - 7,803,942
W.GERMANY		
-DAS	12 APR 79	1,425,877 - 2,839,685
-OLS	12 APR 79	2,641,689 - 2,844,371
FRANCE*	9 FEB 79 (BOPI 16 MAR 79)	2,397,139 - 2,397,776
UNITED KINGDOM	19 APR 79	1,544,211 - 1,544,610 2,005,121 - 2,005,520
ITALY	30 JAN 79	1,028,001 - 1,028,500
JAPAN		
-Unexamined	—	49,089,492 - 52,056,659
	7 MAR - 12 MAR 79	54,030,501 - 54,033,900
-Examined	22 MAR - 28 MAR 79	79,005,801 - 79,006,480
NETHERLANDS	28 MAR - 2 APR 79	7,710,462 - 7,811,387
	4 APR - 8 APR 79	7,710,775 - 7,810,041
NORWAY	26 MAR 79	7,702,941 - 7,802,996
FINLAND	30 MAR 79	7,701,942 - 7,803,696
SOVIET UNION	—	609,192 - 610,599
SWEDEN	2 APR 79	7,709,924 - 7,811,994
UNITED STATES**		
-Reissues	29 AUG 78	Re29,742 - Re29,749
-Patents	29 AUG 78	4,109,320 - 4,110,844

*Printed patents actually published late March - early April, 1979

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Arrangement of Abstracts

See Appendix I for definition of 'Major' and 'Minor' Countries.

'MAJOR' COUNTRIES – An alerting abstract of every basic and examined equivalent document is provided except for equivalents from Canada, East Germany and Switzerland. The abstracts are arranged in CPI class order and within any one of the 135 classes are in country and patent number order.

'MINOR' COUNTRIES – Basic headings are included in sequence with the entries from the 'Major' countries.

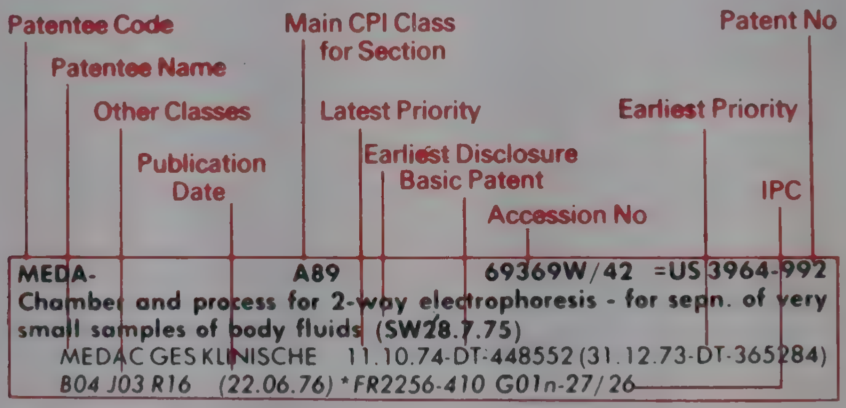
CPI Section Headings

See inside cover for further details.

A	Polymer Chemistry
A+	Polymer Applns.
AE	Polymer & General Chemistry
B	Pharmaceuticals
C	Agricultural Chemistry
D	Food, Disinfectants, Detergents
E	General Chemistry
E+	General Chemistry Applns.
F	Textiles, Paper, Cellulose
G	Printing, Coating, Photographic Chemistry
H	Petroleum
J	Chemical Engineering
K	Nucleonics, Explosives, Protection
L	Refractories, Ceramics
M	Metallurgy

Typical Abstract Heading

See CPI/WPI Instruction Manual No. 1A for explanation of the various flagged descriptors.


Patentee Code
Main CPI Class for Section
Patent No
Patentee Name
Other Classes
Latest Priority
Earliest Priority
Publication Date
Earliest Disclosure
Basic Patent
IPC
Accession No

MEDA- A89 69369W/42 =US 3964-992
Chamber and process for 2-way electrophoresis - for sepn. of very small samples of body fluids (SW28.7.75)
MEDAC GES KLINISCHE 11.10.74-DT-448552 (31.12.73-DT-365284)
*B04 J03 R16 (22.06.76) *FR2256-410 G01n-27/26*

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D1: FOOD; FERMENTATION

D11 : BAKING

STAM- ★ D11 29793B/16 ★BE -872-743
Bakery prod. partic crisp biscuit with high bran content - facilitates anti:constipation diet with prescribed daily bran intake
STAMAG STADLAUER AG 22.12.77-OE-009226
(30.03.79) A21d

A mixt. is prepd. contg. pts. wt. as follows:- rye or wheat bran - 100; water - between 200 and 500, but pref. $\geqslant$250; vegetable thickeners 2.5-15; plus conventional additives such as raising and acidifying agents as well as salt, flavourings, linseed, sesame, etc. The mixt. produces a paste which is formed, e.g. rolled or moulded, and baked.

The bran can be finely or coarsely ground The vegetable thickeners pref. consist of 5-10 pts. wt. carob seed The paste is pref. rolled out to a thin sheet before baking to provide a prod. which is $<$1 cm thick. Yeast is pref. added as raising agent as well as a little sugar. While the paste is in sheet form it is pref. formed as a biscuit and then baked to make a crisp, crunchy prod.

Used in mfr. of biscuits and similar edible prods. having a high content of bran, partic. suitable for inclusion in diets for the treatment of constipation, diverticulosis, etc. Facilitates the regular, prescribed intake of bran on a daily basis by providing a tasty, compact, bran-rich biscuit or similar prod. 13.12.78 as 872743 (10pp448)

JAPU/ ★ D11 B/16 ★BR 7704-798
Maize flour roasting equipment - extracts prod. from oven plate by scraper conveyor and cleans remainder by air jets
CIERO JAPUR C 20.07.77-BR-004798
(03.04.79) A21d-06

KEMP/ D11 34774V/19 =DS 2249-383
Dough portion conveyor system - using pivoted trays with stability guides along top horizontal run used for simultaneous tilting of multiple trays
KEMPER K 09.10.72-DT-249383 (00.00.72-DT-202633)
*+Q35 (12.04.79) *DT2249-383 +A21c-09/08*

A dough processing plant consisting of a dough dividing and kneading machine, joined by an endless chain trough conveyor to a rolling-out station, was described in the Parent Patent. A number of troughs with the dough lumps is tipped simultaneously by long horizontal channels which can be moved up and down. A guide roller at the end of a crank, attached to each trough, rolls inside this guide channel and causes the trough to be tipped when the crank is turned from 45° above to 45° below the horizontal

This is a more reliable way of tilting than just gravity, as described in the Parent Patent. 9.10.72 as 249383 Add to 2202633 (6pp39).

SEEW- D11 82342A/46 =DS 2718-383
Dough strip winding up device - with automatic release of thrust belt return pulley to initiate strip winding up (NL 30.10.78)
SEEWER AG 26.04.77-DT-718383
*(12.04.79) *DT2718-383 A21c-03/02*

A reel to wind up a rolled-out strand of dough has below the discharge end of the feed conveyor an endless belt which is guided over three pulleys in an L-arrangement. The top pulley is pivoted. The reel on which the strand is rolled up is enveloped by the concave part of the conveyor and is urged against it by another endless belt on the opposite side. As the dough strand is wound up, the reel can rise because its stub shafts rest in two slots. On rising, the reel actuates a trip which swings the top pulley clear.

This saves the person needed to give the dough strand a start on the reel and saves having to stop the machinery. 26.4.77 as 718383 (8pp39).

FUCH/ ★ D11 29909B/16 ★DT 2744-756
Fully automatic dough kneading and dividing machine - with piston extruder and eccentric kneading rotors in stators
FUCHS M 05.10.77-DT-744756
(12.04.79) A21c-05

Fully automatic dough dividing and kneading machine has at the bottom of a dough funnel a chamber in which a piston can reciprocate and extrude the dough through four dies. A parting knife cuts off the emerging dough strands and the pieces are taken by a belt conveyor to four separate but banked circular kneading machines, each consisting of a stator and an eccentric roller.

The design is fully automatic, yet compact and can be produced at low cost for small and medium sized establishments. The gentle kneading action makes it ideal for bread rolls. 5.10.77 as 744756 (19pp39)

GRUB/ ★ D11 29912B/16 ★DT 2744-807
Dough dividing machine - with light beam barrier actuating blade cutting dough between storage and filling funnels
GRUBELNIK H 05.10.77-DT-744807 (00.00.73-DT-338830)
(12.04.79) A21c-05

The parent patent dough dividing machine is modified by arranging a blade between the discharge opening of the storage funnel and the feed opening of the filling funnel for the dividing drum. A feeler responds to the dough movement and the blade is actuated as soon as the discharge rolls are inoperative.

This cuts the cohesion of the dough strand between the two funnels and enables the cut-off dough in the filling funnel to charge the dividing drum pockets more satisfactorily. Specifically the discharge opening of the dough storage funnel is surmounted by feed rollers. A light beam barrier stops the rolls when the dough overflows the top edge of the filling funnel for the dividing drum. The light beam barrier also actuates a blade which severs the dough in the filling funnel from that in the storage funnel. 5.10.77 as 744807 Add to 2338830 (8pp39)

COST/ ★ D11 29985B/16 ★DT 2841-199
Kneading machine for food e.g. bread dough - with rotating and turning stirrer and trough lifted and tilted by rope drive
COSTA R 07.03.78-IT-067472 (10.10.77-IT-069246)
(12.04.79) A21c-01/02 B01f-13

A kneading machine for bread dough or other food includes an annular trough which a stirring mechanism which can revolve and turn on an arm in the trough centre. A rope mechanism lifts the trough first vertically up from a casing on slideways until stops end the vertical motion and continue rope-pull tips the trough over.

This is an ideal machine for restricted space and for easy access to the trough. It saves the labour for discharging the kneaded material and is inexpensive enough for use by small tradesmen. 22.9.78 as 841199 (12pp39)

HOLM/ ★ D11 30111B/16 ★GB 1544-525
Composite baking mould formed of extruded metal sections - with slanted walls for ease of removal of baked prod.
HOLMQVIST M A 14.04.76-GB-015237 (13.12.73-SW-016830)
(19.04.79) A21b-03

The mould has a number of individual mould spaces and is formed from an elongate section, and bar, both of extruded light metal. The metal section has a roughly U-shaped cross-section.

The mould is formed of two spaced side walls cut from the bar, and a number of parallel spaced section elements cut from the elongated section at a slant to give a wider top than base. The side walls are welded or riveted to the ends of the section elements. Thus the section elements form the bases and sidewalls of the individual mould spac-

The baking tray is formed with individual mould spaces in which dough, e.g. bread, can be baked. The shaping of the mould spaces makes it easy to remove the baked loaves. 14.4.76 as 015237 Add to 1436476 (7pp295)

HAAS/ ★ D11 30148B/16 ★GB 2005-396
Cooler for baked wafer sheets - formed with archway-shaped frame carrying conveyor chains supporting wire bow compartments
HAAS F 06.10.77-OE-007126
Q75 (19.04.79) F25d-25/04

A wafer sheet cooler includes a frame in which two conveyor chains are mounted. The chains are advanced in timed sequence and carry compartments. The frame is shaped as an archway and the chains are guided parallel to the frame. Pref. the frame is assembled as a unitary construction system each unit formed of aluminium castings having a U-shaped cross-section. The web of each unit serves as a cover for the conveyor chains.

The cooler receives hot wafer sheets from a wafer baking oven and these are cooled and relieved of stress prior to passing on for further processing. The arch shape of the cooler enables an operator to pass quickly from one side of the appts. to the other. 4.10.78 as 039271 (6pp295)

MOFO= ★ D11 31193B/16 ★SU -610-003
Bread testing appts. - with electromagnet and differential transformer measuring overall and elastic deformation
MOSC FOOD IND TECHN 05.07.76-SU-382014
R16 (06.05.78) G01n-03/42

An instrument to determine the structural properties of foodstuffs, e.g. bread and other semifinished prods. of the baking industry, has been designed to measure the overall and the plastic deformation with greater accuracy.

It is equipped with an electromagnet which can be switched on by a push button. Its armature can compress a spring by a disc and is fixed at the other end to a dashpot. A pad at the end of the core of a differential transformer coil is applied to the bread surface.

The total deformation is measured by the depth to which the pad has been pressed in by the spring after it has been compressed and then released. This is read on a scale. The elastic deformation is calculated by deducting from the total the plastic deformation which is detected by the end produced by the core.
Ginzburg A.G. Puchkova L.I., Petrov I.K. et al. Bul. 21/5.6.78 5.7.76 as 382014 (3pp39)

DZHA= ★ D11 31210B/16 ★SU -610-502
Bread contg. increased quantity of sorghum flour - produced by preliminarily saccharifying sorghum flour with amylolytic enzyme
DZHAMBUL LIGHT FOOD 29.11.76-SU-433757
(10.05.78) A21d-02/36

Sorghum flour can be admixed in increased proportion (20-30 wt.% w.r.t. the total flour, compared with usual 10-15 wt.%) to bread prod. from other cereals by preliminarily saccharifying sorghum flour with an amylolytic enzyme, pref. amylorhizine P10Kh, before admixing the sorghum flour to the leavened dough. The sorghum flour is dispensed in a three or four-fold quantity of water and amylorhizine P10 Kh is added in an amt. of 0.00045-0.00075 wt½% w.r.t. the flour. By this method, the cost of bread is reduced, whilst its quality is improved.
Darkanbaev T.B., Zhumabekova Z.Zh. and Ostrovskaya L.K. Bul. 22/15.6.78 29.11.76 as 433757 (2pp70)

CASA- D11 68462X/36 =US 4109-568
Distributing and processing apparatus - for objects such as lumps of dough in automated bakery eqpt
CASA HERRERA INC 13.08.74-US-497006 (02.04.76-US-673188)
*Q35 (29.08.78) *US3976-188 +A23l-01*

Appts. for proofing lumps of dough comprises an endless conveyor coarrying two series of tiltable cups, each series staggered relative to the other, and a device for loading dough into the cups. The appts. also includes a device for tilting the cups, comprising a shaft against which the cups impinge, the shaft being part of the conveyor mechanism.

The conveyor and the associated cups are housed in an enclosure, inside which a proofing environment is maintained. The appts. effects proofing as part of a continuous operation. The parent patent (68462X/36) claimed appts. for loading dough into the cups. 2.4.76 as 673188 Div. ex. 3976188 (8pp1379)

KEMP/ D11 77738X/42 =US 4109-569
Bread dough prepn machine - with parallel dough working sections after dough raising device and common rolling section
KEMPER K 22.03.75-DT-512776
*(29.08.78) *DT2512-776 +A21c-03/02 A21c-05 A21c-13/02*

A dough make-up line comprises a device for dividing the dough and rounding into pieces, a proofer for fermenting the pieces and including a delivery device, and at least two moulding lines each including a conveyor and a moulder. The delivery device includes a selector to deliver to the desired moulding line, each of which produces a different article.

The moulded dough pieces are transferred onto baking palettes. The appts. allows for the selective production of several types of bread. 22.3.76 as 669098 (12pp1379)

MORG D11 06160Y/04 =US 4110-482
Continuous pastry rolling machine - with coiling roller, stop and serrated plate facing belt conveyor
MORINAGA & CO LTD 19.05.76-JA-058429 (19.07.75-JA-088955)
*(29.08.78) *DT2631-863 +A21c-03/06*

Sheets of cake material or dough are formed into rolls by heating until soft, and passing the sheets on a conveyor to a roll-up roller rotating at a slower speed than the speed of advance of the sheets. The rolling engagement of the material is interrupted and deflected away from the roller, the outer periphery of the material engaging a fractional surface, and allowing winding to be completed. The roller may be above or below the conveyor.

The appts. forms uniform rolled products in large quantities with a low failure rate and without damage to the material. 30.3.77 as 782731 Div. ex. 4043259 (+12.7.76 -US-704552) (9pp1379)

D12: MEAT; FISH PROCESSING

PVBA- ★ D12 29769B/16 ★BE -872-658
Preserving freshly slaughtered meat - by spraying with an acid soln. contg. liq. sugar
PVBA CHEMICALS 11.12.78-BE-872658
(30.03.79) A23b

Preservation of meat, esp. freshly slaughtered carcases and parts of these, is effected by spraying the meat with an acid soln. contg. 5-60 wt.% of a liq. sugar The soln. pref. has a pH of 0.9-5, esp. 1.6-2.1. The soln. may also contain a slat, esp. NaCl.

The acid sugar-contg. solns. are esp. useful for application to still warm carcases and give good preservation of the meat whilst preventing drying out of the meat. Typically, if the surface of the meat is lowered to 4.5 using the soln., beef can be preserved for 60 days, mutton for 75 days, horsemeat for 40 days and pork for 15 days. 11.12.78 as 872658 (9pp513)

GEBA- ★ D12 29804B/16 ★BE -872-809
Shrimp peeling machine - incorporating vibratory feeder and/or orientator and pneumatic removal, with photoelectric sensing and control system
GEBA GERATEBAU GMBH 27.12.77-DT-758233
(30.03.79) A22c

Shrimps are peeled by means of a machine comprising a feed device which delivers each shrimp in a particular position to a holder, a grip mechanism which straightens the shrimp, a cutter which slits the peel of the shrimp at the stomach, a head removal mechanism, a meat remover and a tail remover. The shrimp holders are pref. mounted on a rotating disc. so that the shrimps are fed into the machine and the peeled meat is obtd. in a continuous process.

The manual labour of peeling shrimps is eliminated.
14.12.78 as 872759 (F1) (12pp1370)

CHIN/ ★ D12 29813B/16 ★CA 1052-173
Extruding egg roll filling from adjustable die - with insert reducing cross/section of filling, then stabilising
CHINFEN D L 27.02.76-CA-246749
(10.04.79) A22c-07

Food product is extruded through a die which comprises upstream and downstream sections. The upstream section reduces the cross section of the food to a value 0-15% greater than that of the final extruded prod. whereas the downstream section gradually reduces the cross section to the final form and stabilises the prod.

Pref. the final cross section is square, and the die includes an adjustable insert which deflects the prod. flow from a horizontal to an inclined direction. After extrusion the prod. is received on a paper web and is severed into individual prod. units.

Appt. extrudes filling for egg rolls which are formed subsequently by the application of a thin pastry covering.
27.2.76 as 246749 (27pp295)

FARH D12 75688X/41 =DS 2512-995
Regenerated cellulose tubular casing for pasty prods - casing lined with copolymer of vinylidene chloride, (meth)acrylic acids and esters
HOECHST AG 24.03.75-DT-512995
*A92 +Q67 (A11 A14) (12.04.79) *BE-839-927 +F16l-11/04*

Tubular films, esp. for use as packing materials, comprise copolymers of $CH_2=CCl_2$, (70-92 wt.%); and acrylic and/or methacrylic acid and/or their lower alkyl esters, (30-8 wt.%), which have η(rel) (1 wt.% in THF) of $\geqslant$ 1.8, and η(rel)(2 wt.% in THF) of $\geqslant$3.0.

Prepn. of these materials comprises deposition of copolymer from its aq. dispersions on the inner wall of regenerated cellulose tubes; the tubes are dried with hot air to leave the copolymer film, whichis then treated with hot water to obtain a transparent tubular film. The prods. are esp. useful as synthetic sausage skins.
24.3.75 as 512995 (9pp047).

NMHB ★ D12 29840B/16 ★DS 2803-478
Fish skinning machine - with catch plate slidable above skinning blade top face
NORDISCH MASCH R BAADER 27.01.78-DT-803478
(12.04.79) A22c-25/17

A skinning machine for fish or fish fillets consists of a thrust roll which presses the fish against the surface of the skinning roll towards a skinning blade. The top face of the skinning blade is covered by a spring-loaded sliding catch plate which is moved away from the cutting edge when a fish arrives, tail first, and allows the blade to sever the skin.

The machine is suitable for fish of all sizes and enables the blade to sever any sinews between skin and meat. 27.1.78 as 803478 (5pp39).

AMOR- ★ D12 30031B/16 ★DT 2843-230
Edible shellfish treatment with sodium sulphite and/or metabisulphite - to prevent unpleasant taste, smell or colour formation in canning (NL 9.4.79)
AMER ORIGINAL CORP 05.10.77-US-839410
(12.04.79) A23b-04/02 A23l-01/33

colour after preserving, esp. Artica islandica, Mercenaria mercenaria and Venus mercenaria, are admixed with $\geqslant$ 0.02 wt.%, w.r.t. shell fish flesh, of Na_2SO_3 and/or $NaHSO_3$ before boiling down in conserving container.

Sulphite-treatment improves taste, smell and colour.
4.10.78 as 843230 (14pp200)

CSME- ★ D12 30112B/16 ★GB 1544-527
Depilating animal carcasses or live animals - using rotating drum with extending flexible peripheral fingers
CONSOL MEAT HOLDING 24.04.75-AU-001357
(19.04.79) A22b-05/08

A rotary drum, having flexible members extending from its peripheral surface, is rotated at a predetermined speed and is advanced relative to the skin, from a bare area against the edge of the growth of the fibres from the skin. The flexible members are thus drawn from the bare area against the growth of fibres.

Pref. an air current is maintained to entrain the removed fibres. These are sepd. from the air and sold as a byprod.

The method may be used to remove wool, hair or bristles from the skin of either animal carcasses or live animals. The processing of animal carcasses, partic. sheep, may be carried out with little risk of contamination being conveyed from the wool to the flesh of the animal.
26.4.76 as 016909 (9pp295)

MARI- ★ D12 30117B/16 ★GB 2005-128
Transportation and storage of fresh fish - suspended in solution of water, salt and ice
MARINA SEAFOODS CON 16.09.77-DK-004106
(19.04.79) A23d-04/06

Fresh fish are stored and transported on land while suspended in containers filled with liq. The liq. comprises a mixt. of salt, ice and water mixed in such proportions that the fish is kept suspended in the soln.

The temp. is maintained at 0 to -4°C and pref. at 0 to -2°C. On arrival at their destination the containers pref. are emptied into a closed pit also contg. a similar suspending soln.

Fish caught at sea are speedily transferred to the storage containers in which they are transported with minimum damage. 18.9.78 as 037127 (8pp295)

KOBA/ ★ D12 30704B/16 ★J5 4032-659
Fried meat having excellent taste, flavour and freshness - obtd. by treating with nitrogen which is removed on frying
KOBAYASHI K 16.08.77-JA-097495
(10.03.79) A23l-01/31

The prepn. of fried meat comprises (1) freezing meat lump for several hrs. at 1-5°C in a refrigerator to ooze out the juice, (2) adding sodium glutamate, white pepper, lard, etc. to the meat, (3) sprinkling a little sodium cibarbonate on it, (4) putting the meat lump in stirrer and stirring with seasonings and spices to and cutting into meat chops in nitrogen gas stream which is previously passed through an active carbon layer contg. large amt. of water, (5) coating the meat chops with flour, (6) standing at 1-5°C in a refrigerator for 20-30 mins. (7) washing out flour from meat chops with water, (8) coating with crumbs and (9) frying at 160-180°C.

On frying nitrogen is volatised or neutralised with sodium bicarbonate, through which excellent taste and flavour can be drawn from meat and the dried meat can keep its freshness for ca. 10 days. The fried meat has good colour
16.8.77 as 097495 (2pp5)

NIUS ★ D12 30705B/16 ★J5 4032-665
Seasoned fish slices prepn. - from low grade fish using slow freezing stage to promote formation of muscle-like tissue
NIPPON SUISAN KAISHA 11.08.77-JA-096413
(10.03.79) A23l-01/32

Process comprises adding seasoning and if necessary spice, perfume, colourant, binder, oil and fat, etc. to fish kneading the mixt. freezing slowly, heating with such as velocity that its central part can be heated to 50-80°C within 15 mins. and slicing after cooling.

Food like seasoned high grade fish slice can be prepd.

process for preparing minced fish. The formation of the muscle-like tissue can be promoted and fibrous or stratified tissue is formed by freezing the fish meat paste slowly. 11.8.77 as 096413 (4pp5)

MOME= ★ D12 31015B/16 ★SU -609-526
Meat mincer with sloping screw feeder - has horizontal chamber with conical section linked to cutting mechanism
MOSC MEAT DAIRY IND 21.12.76-SU-432765
(04.05.78) A22c-17

Device for mincing meat, comprises sloping screw feeder with loading hopper and cutting mechanism, fastened to its shaft, and with stationary receiving and despatching gratings, plus a knife blade. Operational reliability is increased by connecting a horizontal chamber with conical section to the screw feeder.

The smaller base of the conical section adjoins the cutting mechanism and the larger base is located at the point where the geometrical axes of the feeder and the shaft of the cutting mechanism intersect. The outer shell has guides for the meat passing through, and surrounds the shaft of the cutting mechanism. The latter is connected to a vacuum system through a pipe connected opposite the loading hopper.

Ivashov V.I., Yurkov S.G., Martynov G.A. et al. Bul. 21/5.6.78 21.12.76 as 432765 (3pp29)

POLA= ★ D12 31211B/16 ★SU -610-503
Fish-orienter with horizontally oscillating working surface - has guides in a suspension means, to reduce inertial fluctuations during operation
POLAR MARINE FISHIN 21.01.77-SU-446022
(11.05.78) A22c-25/12

Device for orienting fish, in fish-processing plants in marine conditions comprises a working surface which moves backwards and forwards in the horizontal plane, plus a drive mechanism. Operational reliability is increased, due to prevention of inertial oscillations of the working surface as it rocks, by adding a suspension with guides, to which an electric motor with a flywheel is firmly fastened. The working surface is spring-loaded and hinged to the suspension guides.

Fedoseenko L.A., Kantemirov N.V., Sigaev A.K., Bul. 22/15.6.78 21.1.77 as 446022 (4pp29)

DALM= ★ D12 31212B/16 ★SU -610-504
Packing crab-meat into jars - by forming top and bottom layers as spirals from legs meat and filling in with meat from other parts of the crab
DALMOROPRODUKT 02.02.77-SU-442601
(11.05.78) A22c-29/02

Method of packing crab meat in its own juices into jars, during the mfr. of conserves from fish and sea-food prods involves filling the jars in layers. The labour required in the process is reduced by forming the top and bottom layers as spirals of meat, taken from the legs, and filling in the middle layer from noodles or pieces of meat taken from other parts of the crab body In the centre of each spiral meat from the claws or thebrachial joints is used as the filling.

The claws are broken and the limbs boiled in sea water at 90-92 °C for 3½-4 mins and then the limb is taken apart piece by piece. The claws and brachial joints are septd. and the meat is extracted from the feed by directing water at a pressure of 1½-2 kg/cm² from the claw end. This is also boiled and the meat extracted. The various kinds of meat are sorted out, and the residual water extracted by squeezing over a period of 60 mins.

Zalugovskii I. Ya., Lyubyakin G.P. Shabalin I.L., Bul. 22/15.6.78 2.2.77 as 442601 (2pp29)

MICA- D12 32822Y/19 =US 4109-347
Meat cleaving machine to split animal carcase - uses blade guide pin pivoted to follow curve of spinal column
MICARNA AG 08.01.76-CH-000140
*(29.08.78) *BE-850-061 A22b-05/20*

Appts. for splitting carcases including a power-actuated Cutter supported on a hand-operable carrier, and a guide pin insertable into the central opening of the spinal column to guide the cutter so that the carcase is exactly halved.

The cutter is guided between two parallel vanes projecting from the carrier. The guide pin, which may be in two halves each attached to a vane, is movable over a restricted arc to prevent binding of the pin in curved portions of the spinal column. The appts. can be used on a variety of carcases. 30.12.76 as 755543 (5pp1379)

UNIC D12 73153A/41 =US 4110-47
Dewatering collagen mouldings esp. tubular food casings - b treating with an aq. sodium alginate soln. opt. contg. plasticiser esp. glycerol, before drying (BE 2.10.78)
UNION CARBIDE CORP 31.03.77-US-783426
*A11 (A97) (29.08.78) *DT2813-843 A22c-13*

Prepn. of shaped collagen structure is improved by treating a shaped collagen structure prior to the final drying with a dewatering soln. comprising $\geqslant 0.01$ wt.% Na alginate. Structure is esp. a tubular food casing.

Dewatering effect is used to reduce the moisture content of the collagen structure entering the drying appts. with consequent redn. in costs. 31.3.77 as 783426 (6pp9

D13: OTHER FOODSTUFFS

URRU/ ★ D13 B/16 ★BR 7705-994
Dairy milk cooler - has rectangular compartment with gas-cooled undulation walls hinging together in zigzag pattern
URRUTIA V B 09.09.77-BR-005994
(03.04.79) A23c-03/04

LANE- D13 41929R/24 =DS 1657-218
Rotary blade food slicing machine withsharpening stones in
LAN-ELEC LTD (LAN -) 28.02.67-GB-009549
*P62 (12.04.79) *US3515-191 +B26d-04/54*

A cold meat slicing machine with a rotating circular blade is protected by a safety guard which encloses the top part of the blade and houses a grinding and honing device. The safety guard is guided by pins and is held by a grub screw in the operating position. On loosening the grub screw a spring moves the guard up and it can be shifted on slideways and depressed into another position for the grinding and honing operation. The blade is protected against con-

This eliminates any risk of injury to the operator. 27.2.68 as 657218 (6pp39).

KONN D13 27151Y/16 =DS 2646-6
Prodn. of cocktail snacks - by fermenting and cooking a paste cont starch, sugar and yeast
GIST-BROCADES NV 16.09.76-GB-038446 (15.10.75-GB-04232
*(12.04.79) *BE-847-280 A21d-13 A23l-01/16*

Snacks of fat content below 25 (20) wt.% are prepd. A dough is made from a mixt. of a) 20-80 wt.% comminute potato which has been dried in a drying cylinder or spra dried or a prod. obtd. by cooking potato and then removing water to obtain a crumbly product and b) 80-20 wt.% potato starch. Up to 45 wt.% of a) or b) may be replace by protein. Component a) can be replaced by maize, buckwheat, tapioca and rice flow, soya flour or their mixts.

The dough also contains 0.5-5 wt.% saccharose or of water. The dough is allowed to rise after shaping into suitable pieces and then fried or baked. 15.10.76 as 646672 (4pp068).

CECA- D13 85086Y/48 = DS 2721-199
Gelling mixt. for food e.g. yogurt - contg. depolymerised galactomannan and agar and/or xanthan
CECA SA 09.07.76-FR-021063 (12.05.76-FR-014240)
*A97 (A11) (12.04.79) *DT2721-199 A23c-09/10 A23l-01/04*

Gelation agent comprises a mixt. of galactomannan, which has been depolymerised so that its 1% soln. in water at 25°C has a viscosity of 10-1000 (300-1000) cP and an agar and/or a xanthan. Carrageen, furcellarane or pectin may also be present.

The gelation agent is useful in water or in milk as a food gelation agent. Casein is not pptd. when it is used with milk. 11.5.77 as 721199 (8pp068).

FERT- ★ D13 29962B/16 ★ DT 2822-279
Non-protein nitrogenous animal feeds - contg. urea phosphate and defluorinated rock phosphate
FERTILIZERS & CHEMI 05.10.77-IL-053055
C03 (12.04.79) A23k-01/22

Nitrogenous animal feeds contain a mixt. of urea phosphate (I) and defluorinated rock phosphate (II) in a wt. ratio of 0.1-10:1, opt. together with other components, minerals or vitamins.

The feeds can be used as additives forpelleted concentrates, as cattle licks or as siliage additives. Components (I) and (II) do not react with each other; the soluble P content remains high for long periods; the Ca:P ratio can be adjusted to the optimum value; (I) produces lower flood ammonia levels than urea. 22.5.78 as 822279 (15pp367)

KURE ★ D13 29978B/16 ★ DT 2840-791
Ethylene adsorbent of active carbon - treated with metal cpds. to increase capacity
KUREHA KAGAKU KOGYO 22.09.77-JA-114057
E17 J01 (12.04.79) B01d-53/02

Absorbent for ethylene made by treating active carbon with Cu, Fe, Co and/or Ni, or their salts, in presence of HNO_3 and heating the mixt. at 150-900°C under inert gas, to give a product contg. 0.01-20 (0.1-10) wt.% of metal.

Used for the removal of ethylene (which has an anaesthetic action) from the atmos. and control of the fruit-ripening process which evolves ethylene, to prolong storage. Absorption capacity of the carbon is greatly increased, esp. when used in higher concns. of ethylene. Higher hydrocarbons are also adsorbed. 20.9.78 as 840791 (20pp195)

FRIT- ★ D13 30034B/16 ★ DT 2843-322
Prepn. of aroma material esp. cocoa substitute or extender - by heating whey solids and water under pressure; cooling and spray-drying
FRITZSCHE DODGE 04.10.77-US-839208
(12.04.79) A23c-21 A23l-01/22

Aromat extender or aromatising material is prepd. by (i) heating a mixt. contg. a larger proportion, e.g. 80-90 wt.% of whey solids and a smaller proportion e.g. 20-10 wt.% water for at least a few min. inder a sufficiently high pressure to keep the water in the heated mixt. in the liq. phase; (ii) cooling the mixt. obtd., e.g. to < 100°C, and pref. (iii) drying to < 10 wt.% moisture content.

The treated whey solids are used as food or drink components, esp. in 1-25 wt.% concn., partic. in cocoa, coffee or malt compsns. The prods. have chocolate astringency, bitterness and colour, and may be used as cocoa substituents or modifier. The whey solids may also be used in tobacco industry, in prepn. or processing of 'casing' sauce for Burley tobacco. 4.10.78 as 843322 (14pp200)

ALFA ★ D13 30065B/16 ★ FR 2397-148
Clean demoulding of cream cheese from metal mould - facilitated by electrolytic gas bubble layer formed between cheese and mould
ALFA-LAVAL 11.07.77-FR-021249
P13 (16.03.79) A01j-25/13

ulding takes place, an

connected as the cathode in the same electrolysis circuit.

A set of moulds is pref. fixed in a predetermined pattern on a carrier plate and the predetermined pattern on a carrier plate and the plates progress on an intermittently advancing conveyor to pause, each in turn, beneath an electrode holder which is vertically displaceable above the conveyor. The electrode holder is lowered to dip an anode into the cheese in each mould and simultaneously connect the metal mould with a plate cathode. 11.7.77 as 021249 (6pp448)

LUCO- D13 36310Y/21 = GB 1544-304
Mixing of granular materials with treatment liquids - by spraying airborne particules, then sepg. from gas stream using counter-current flow
LUCO-TECHNIC GMBH 23.01.76-DT-602454
*C03 J04 + P42 (J02) (19.04.79) *BE-850-555 B01f-03 B05b-07/14*

Pulverous or granular material is treated by introducing the material to the upper part of a vessel in a vertical flow, entraining the material in vertical downward gas stream, spraying the material with a liq., conveying the sprayed material over a predetermined length downward path, and applying a counter-current gas stream.

Pref. a further counter-current gas stream is applied in a stirred fluidised bed of the sprayed material. The gas is pref. air at a temp. of 12 to 20°C. The material is pref. pre-treated using cooling air.

For mill powder, starch and vitamin products. 24.1.77 as 002722 (9pp1376)

KANE D13 ✓ 08643A/05 = GB 1544-376
Coffee beverage in sealed press. container - from unground, roasted coffee beans, water, opt. sweetener and milk materials
KANEBO KK 09.02.77-JA-013882 (24.07.76-JA-088513)
*(19.04.79) *DT2731-920 A23f-01/08*

A coffee drink is produced, contained in a vessel, by charging a pressure vessel with non-milled roasted coffee beans water and opt. a sweetening material and/or a milk.

Wt. ratio of coffee beans to water (plus opt. sweetener and milk) is 3-15 wt.% of beans to 85-97 wt.% remainder. The vessel is sealed, then heated at 80-130°C for 10-90 mins to effect extraction and to keep completely the extracted components without releasing the sealing or the vessel. The beans are subjected to a treatment for removing carbon dioxide before heating in the sealed vessel.

Coffee drink has favourable aroma and excellent maintenance of aroma. 25.7.77 as 031192 (+9.2.77(4X)-JA-013878-81)(11pp931)

RHON D13 55429A/31 = GB 1544-402
Purificn. of aq. anthocyanin solns. - by adsorption with metal oxide(s) coated with styrene polymer film and elution (BE 24.7.78)
RHONE-POULENC INDUSTRIES 24.01.77-FR-001890
*A97 E23 (A12 D16) (19.04.79) *DT2802-789 C09b-61*

An aq. anthocyanin soln. is purified by bringing the soln. into contact with a metal oxide or silica whose surface is coated with a styrene polymer film, which acts as an adsorbent, sepg. the adsorbent and treating it with an eluant.

Pref. oxide is a titanium oxide, an alumina or a silica of grain size 50 um and 5 mm. Styrene polymer is a homopolymer or copolymer of styrene, a methylstyrene, an ethylstyrene and/or a vinyl toluene, pref. as a copolymer contg. ≤ 30 wt.% a copolymerisable vinyl or diene monomer.

Anthocyanin powders and solns. can be used as red or blue industrial colouring agents depending on pH. Esp. used in foodstuffs industry for dairy, confectionery, pastry-making, pork butchery and beverage produce. 23.1.78 as 002631 (5pp931)

KYOW D13 ✓ 24514Y/14 = GB 1544-499
Preservative used in bread and cake prodn. - comprises a liq. mixt. of glycerol mono fatty acid ester, fat and polyhydric alcohols, contg. an enzyme
KYOWA HAKKO KOGYO C 21.08.75-JA-101814
*E17 (D16 E16) (19.04.79) *J52025-046 A21d-02/14 + A23d-05*

Additive compsn. which prevents baked goods from becoming stale comprises 28-64 wt.% edible fat or oil, 30-45 wt.

5-, 3,6- or 1,4-sorbitan mono- or tri-oleate, is also present.

The compsn. forms a paste which disperses well in a dough mixt. It may additionally contain 0.5-5 wt.% α-amylase or 0.5-1.0% of a neutral or acid protease. The oil is esp. soybean oil. 19.8.76 as 034623 (16pp945)

ASAG ★ D13 30191B/16 ★J5 4030-558
Purifying and deodorising cooling medium for foodstuffs refrigeration - by heating and concentrating under reduced pressure to remove coagulated protein material
ASAHI GLASS KK 12.08.77-JA-096140
(07.03.79) C09k-05

The used cooling medium contg. protein material which had been used for direct refrigeration of fresh foodstuffs is heated at 50-120°C with a heating medium having a temp. of $\leqslant$ 180°C. The cooling medium is conc. at 55-100°C and under a reduced pressure and thereby, the coagulated protein is sepd. from the cooling medium. The cooling medium is an aq. soln. contg. propylene-glycol and the raw fresh foodstuffs comprises fishes and shellfishes.

The malodorous protein in the aq. soln. contg. propylene-glycol is coagulated at 50°C and concn. of the aq. soln. is performed under a reduced pressure of $\leqslant$ 45 250 mm Hg. The coagulated protein is filtered and sepd. out at $>$120°C. 12.8.77 as 096140 (4pp15)

ASAE ★ D13 30343B/16 ★J5 4031-407
Fat compsn. for e.g. margarine and shortening - contains glyceride compsn. comprising co randomised fat contg. palm fat, laurin fat and other oils, palm fat, laurin fat etc.
ASAHI ELECTROCHEM IND KK 15.08.77-JA-097663
(08.03.79) A23d-03 A23d-05

A fat cpd. has a glyceride compsn. comprising 20-80 wt.% co-randomised fat consisting of 10-95 wt.% palm fat, 5-90 wt.% laurin fat, and 0-70 wt.% of 1 or 2 other animal or vegetable oils, 5-65 wt.% palm fat, 5-50 wt.% laurin fat, and 0-45 wt.% of 1 or 2 other animal or vegetable oils, in which the proportion is in the range of $P_3 + P_2U/PSU + P_2S + PS_2 \leqslant 2.80$ and lauroglyceride$/P_2L + PL_2 \leqslant 7.50$.

In the formulae, P, L, S, and U are the constituent fatty acids of the fat; P being palmitic acid, L being lauric acid, S being all satd. fatty acids but P and L, and U being all the unsatd. fatty acids, and P_3, P_2U, PSU, P_2S, PS_2, P_2L, PL_2, and lauroglyceride are the triglycerides composed of the P, L, S and U fatty acids; P_3 being tripalmitoglyceride, P_2U being dipalmitoylmonounsatd. triglyderide contg. all position isomers, PSU being monopalmito, mon-osatd, and monounsatd. triglycerides contg. all position isomers, P_2S being dipalmitoyl, monosatd. triglycerides contg. all position isomers, PS_2 being monopalmitoyl, disatd. triglycerides contg. all position isomers, P_2L being dipalmitoylmonolaurotriglycerides contg. all position isomers, PL_2 being monopalmitoyl, dilauroglycerides contg. all position isomers, and lauroglyceride being a total sum of P_2L and PL_2 and other lauroglycerides.

The fat cpd. is applicable to a wide field of fat-processed foods, e.g. margarine, shortening, etc. 15.8.77 as 097663 (13pp117)

ASAE ★ D13 30516B/16 ★J5 4032-187
Defoaming agent for use in brewing, waste water treatment etc. - contains sorbitan fatty acid ester, propylene glycol, glycerine fatty acid and vegetable oil
ASAHI ELECTROCHEM IND KK 17.08.77-JA-098522
E17 (D15 D16) (09.03.79) A23l-01 B01d-19/04

Defoaming agent (I) contains (i) sorbitan fatty acid ester (II), propylene glycol (III) and glycerin fatty acid ester (IV), and (ii) vegetable oil (V), as essential components.

Pref. compsn. for (I) is (V); 30-60 wt.%, (II); 40-60 wt.%, (IV); 5-20 wt.%, (III); 0.03-5 wt.%. As (V), rapeseed oil, soy bean oil, rice bran oil, peanut oil, cotton oil, olive oil and others are used. The fatty acid component in (II) and (IV) are lauric acid, palmitic acid, oleic acid and stearic acid.

(I) can be used in foods. (I) is transparent and has durable defoaming activity. (I) is used in industries of food-prodn., fermentation and brewing, treatment of waste water etc. 17.8.77 as 098522 (4pp42)

MOMI ★ D13 30698B/16 ★J5 4032-643
Easily-boiled unpolished rice prepn. - by drying while fluidised and rapidly cooling to form cracks
MORINAGA & CO LTD 10.08.77-JA-094950
(10.03.79) A23l-01/10

Method comprises drying unpolished rice by fluidising at 105-130°C for 10-30 mins. and rapidly cooling to $<$30°C to form cracks. The prod. can be easily boiled as polished rice using an automatic rice cooker.

As cracks are formed between aleurone layer and pericarp, water is easily impregnated in whole albumen. Pref. drying is practiced to a moisture content of 6-11% with hot air. 10.8.77 as 094950 (3pp5)

KYOW ★ D13 30699B/16 ★J5 4032-644
Deodorising proteins esp. soybeans - by treating with aldehyde oxidase and opt. alcohol dehydrogenase in presence of electron acceptor
KYOWA FERMENTATION KK 19.08.77-JA-099143
(D16) (10.03.79) A23l-01/20

Method comprises treating the protein, in the presence of an electron acceptor, either with aldehyde oxidase or with alcohol dehydrogenase and aldehyde oxidase. The electron acceptor may be oxygen, potassium ferricyanide, methylene blue or 2,6-dichlorophenol-indophenol. The enzymic reaction is at 20-40°C at pH 6-10 using 0.001-1 unit enzyme per gram of protein. The enzymic reaction using alcoho dehydrogenase requires a hydrogen acceptor and β-DNA$^+$ or a yeast body contg. β-DNA$^+$ can be used as the hydrogen acceptor. 19.8.77 as 099143 (5pp5)

KYOW ★ D13 30700B/16 ★J5 4032-645
Deodorising proteins esp. soybeans - by treating with aldehyde dehydrogenase and opt. alcohol dehydrogenase in presence of hydrogen acceptor
KYOWA FERMENTATION KK 19.08.77-JA-099142
(D16) (10.03.79) A23l-01/20

Method comprises treating protein, in the presence of a hydrogen acceptor, either with aldehyde dehydrogenase or with alcohol dehydrogenase and aldehyde dehydrogenase. Using aldehyde dehydrogenase, the odorous aldehydes can be converted to odourless acids, and by using alcohol dehydrogenase together not only aldehydes but also alcohols can be converted to odourless acids and not only free aldehydes but also the aldehydes bonded to protein can be converted to free acids.

The enzymic reaction using alcohol dehydrogenase and aldehyde dehydrogenase requires a hydrogen acceptor, e.g β-DNA$^+$ or a yeast body contg. β-DNA$^+$. The enzymic reaction is at 20-40°C at pH 6-10 (8.5-9.5) using 0.001-1 unit enzyme per gram of protein. 19.8.77 as 099142 (7pp5

KURO/ ★ D13 30701B/16 ★J5 4032-647
Calcium-enriched fermented soybean prepn. - by adding sterilised calcium material to steamed soybean, inoculating Bacillus natto and fermenting
KUROZAKI S 12.08.77-JA-097203
E33 (10.03.79) A23l-01/20

Method comprises adding sterilised calcium material, such as calcium phosphate or calcium carbonate, to steamed soy bean so that the pH ofthe mixt. is 6.5-8.4, inoculating Bacillus natto into the mixt. and practicing fermentation. Acidification is prevented Multiplication of B natto is promoted by the calcium material. Pref. 0.5kg powdery $CaCO_3$ is added to 5kg soybean. 12.8.77 as 097203 (2pp5)

NAKA- ★ D13 30702B/16 ★J5 4032-65
Food dressing based on plums - prepd. by homogenising a mixt. o pickled plums and water or aq. seasoning soln. and removing a bubbles from the mixt.
NAKANO SUMISE KK 10.08.77-JA-094967
(10.03.79) A23l-01/21

Process comprises (1) removing kernels from pickled plum, lees of plum juice, etc. (2) adding water or aqs. seasoning soln. contg. $\geqslant$1 seasoning from mirin, sake, vinegar, syoyu, sugar, sodium glutamate, etc. to the plu material obtd. in (1). (3) homogenising the mixt. using colloid mill, homogeniser, etc. (4) combining water or the aq. seasoning soln. as above in the homogenised plum and (5) removing air bubbles fromthe mixt. by stirring it under reduced pressure.

Used to dress vegetables, fish, etc. The pectin in the plums is uniformly dispersed in the mixt. Sepn. of plum from the seasoning soln. is prevented without using e gelatinous material. The plum paste is free of air bubbles and can keep desirable taste and flavour of plum for long time without oxidative deterioration. 10. 8. 77 as 094967 (3pp5)

SATO/ ★ D13 30703B/16 ★J5 4032-655

Dessert comprising diced gelled agar - served with sweet syrup having e.g. chocolate or pineapple flavour

SATO T 10.08.77-JA-095755

(10.03.79) A23l-01/04

The dessert consists of diced gelled agar onto which sweet syrup having taste and flavour of chocolate, coffee, pineapple, orange, etc. is poured. Gelled agar and the syrup are prevented separately and stably for long time. In the prior art the syrup was directly combined with the gelled agar. Thus procedure tended to mask the flavour of the syrup. 10. 8. 77 as 095755 (2pp5)

AJIN ★ D13 30706B/16 ★J5 4032-670

Rice extract prepd. from defatted rice bran - used as quality-improving-agent for foods

AJINOMOTO KK 12.08.77-JA-097305

(10.03.79) A23b-07 A23l-01/22 A23l-02/26

Process comprises (1) suspending defatted rice bran in water in amt. >2 times the wt. of defatted rice bran, (2) adjusted pH of the suspension to 1-6 with (in)organic acid (3) extracting it at 10-60°C for >5 mins. and (4) if necessary, removing phytin from and decolourising the extract

Rice extract which can be used as enriching material or quality-improving agent for foods, can be prepd. economically. The extracting residue contains protein, starch, fibre, etc. and can be used as feed as it is or after drying. The extract contains sugar, protein, phytin, vitamin B gp. calcium, iron, phosphorus, etc. It can be decolourised with active carbon, bone char, ion exchange resin, etc. 12. 8. 77 as 097305 (6pp5)

TAKA/ ★ D13 30707B/16 ★J5 4032-671

Edible salt enriched with calcium salt of organic acid - such as calcium lactate, citrate, malate or tartrate, esp. for enriching pure salt prepd. by ion exchange process

TAKASAKI N 12.08.77-JA-095998

E34 (E12) (10.03.79) A23l-01/23

The calcium-enriched edible salt is prepd. by combining calcium salt of organic acid of food use such as calcium lactate, citrate, maleate, tartarate, etc. in edible salt.

Practically, the enriched edible salt is prepd. by combining 4 pts. of calcium salt of edible organic acid (e. g. the mixt. of calcium lactate, citrate and maleate in the wt. proportion of 2:1:1), 1 pt. of citric acid and 1 pt. of maleic acid in 94 pts. of refined salt. 12. 8. 77 as 095998 (3pp5)

DNIN ★ D13 30860B/16 ★J5 4033-535

Red colour element extn. from microorganism of Monascus species - using mixed solvent of ethanol and water as extn. solvent

DAINIPPON INK CHEM KK (DNII) 22.08.77-JA-099544

E24 (D16) (12.03.79) C09b-61

Red colour element with max. absorption in the vicinity of 500 nm is extracted from a microorganism belonging to the Monascus species using a mixed solvent comprising ethyl alcohol and water in a wt. ratio of 75:25-95:5 as the extn. solvent.

The microorganism is cultured by soaking polished rice, crushed rice, wheat, bread, etc. in water, steaming them, planting a microorganism belonging to the Monascus species in the steamed rice, wheat, bread, etc. and culturing the microorganism at 25-40 (pref. 30-35)°C for 7-20 days. The amt. of the mixed solvent used is 1-10 times the wt. of the red malt. After the insol. matters have been removed from the extn. liq. by filtration, centrifugation, etc., the extn. liq. is conc. under ordinary

obtd.

The red colour element is extracted selectively and efficiently without using harmful organic solvents such as -hexane, dimethyl ether, etc. 22. 8. 77 as 099544 (3pp136)

HITA ★ D13 30957B/16 ★J5 4033-877

Filtering soln. contg. protein and/or amino acid - after first adjusting pH of soln. to alkaline side of isoelectric point of protein or amino acid in soln.

HITACHI KK 22.08.77-JA-099572

J01 (12.03.79) B01d-13

In filtering an aq. soln. contg. protein and/or amino acid using semipermeable membrane, the improvement comprises adjusting the pH of the aqs. soln. to the alkaline side of the isoelectric point of the protein or the amino acid contained in the aqs. soln.

The aq. soln. is e.g. milk or fruit juice and the amino acid is aspartic acid, glutamic acid, cystine, threonin, alanine, or lysine.

In an example, insulin with an isoelectric point of pH 5.35 was dissolved in distilled water to obtain an aqs. soln. contg. 0.1% insulin. The aqs. soln. was adjusted with caustic soda to pH 6. The adjusted soln. was introduced into reverse permeating appts. equipped with an acetyl cellulose semipermeable membrane and a pressure of 40 kg/cm^2 to obtain a conc. soln. of insulin.

By adjusting the pH of the aqs. soln. to alkaline, corrosion of metals in the filtering appts. is prevented. 22. 8. 77 as 099572 (5pp51)

TOYJ ★ D13 30972B/16 ★J5 4033-894

Purification of phosphoric acid contg. penta:valent vanadium - by extraction with aliphatic alcohol, and back extraction with aq. phosphoric acid contg. divalent iron

TOYO SODA KK 00.00.78-JA-078055 (10.05.73-JA-051194)

B05 C04 E36 (12.03.79) C01b-25/18

Crude phosphoric acid contg pentavlent vanadium cpds. is counter-current wise contacted with a aliphatic alcohol, e.g. isobutanol, isoamyl alcohol, etc. to extract phosphoric acid, and then the extract is back extracted with an aq. phosphoric acid soln. while adding a divalent iron cpd., e.g. sulphate, chloride, phosphate, etc. in a proportion of 1-5 equivs. of pentavalent vanadium cpd. present.

High purity phosphoric acid, contg. no vanadium is obtd suitable for the foods, medicine, pure chemistry industries, etc. 10. 5. 73 as 78055/78, Div. ex. 51194/73.

SUMB D13 52873X/28 =J7 9005-830

Protein type moulding composition - comprises dried cells of microorganism and hydrophilic polymer

SUMITOMO BAKELITE KK 22.11.74-JA-133583

*A97 (22.03.79) *J51059-953 C08l-89 +C08l-101*

Protein type moulding composition comprises dried cell body of microorganism, hydrophilic polymer (e.g. polyvinyl alcohol, polyethylene oxide, casein, gelatin, starch, etc.) and plasticiser for the polymer (e.g. water, glycerin sorbitol, ethylene glycol, diethanolamine, dimethyl formamide, etc.). Microorganism includes brewers yeast, pet-roleum yeast, tolura yeast, pulp yeast, etc.

By the use of hydrophilic polymer, the moulded article shows good mechanical properties. 22.11.74 as 133583 C081-89/00; 101/00 (22.3.79) SUMITOMO BAKELITE KK (3pp) (J5 1059953)

DAIR= ★ D13 31016B/16 ★SU-609-527

Continuous food grade caseinate soln. prodn. - includes passing starting soln. through straight line series of conical nozzles providing pulsed speed variation

DAIRY IND RES INST (SIDA=) 04.01.76-SU-324252 (04.01.76-SU-309982)

(04.05.78) A23j-01/20

Caseinate soln. is obtd. more rapidly in a continuous process by mixing casein with solvent and dissolving while flowing with repeated pulsed change in velocity and acceleration and heating by introducing a straight line steam flow.

The appts. pref. comprises a vessel with casein and solvent inlets. The vessel is sealed and has a central

The prod. discharge is formed as a diffusor.

Sokolov A.A., Borodin V.A., Arbatskaya N.I. et al. Bul. 21/5.6.78 4.1.76 as 324252 (3pp1358)

SHOG/ ★ D13 31213B/16 ★SU -610-505

Smoked cheese prodn. - using simultaneous primary smoking and maturation and specified final maturation to improve flavour

SHOGENOV A I 27.12.60-SU-415081 (27.12.60-SU-690917)

(10.05.78) A23c-19/02

Cheese is made by normalising milk, pasteurising, adding $CaCl_2$, bacterial inoculum and rennet, cutting the curd setting the grain, brining, smoking and maturing.

To reduce process time and improve product quality, smoking and maturation are carried out simultaneously over 4-8 days at 20-24 °C while final maturation is carried out for 4-8 days at 12-18 °C.

Total process time is not more than 25 days, and in optimum conditions 20-15 days. The prod. is of soft consistency with a sharp slightly nutty flavour.

Shogenov A.I., Karatsukov S.A., Bul. 22/15.6.78 27.12.60 as 690917 (3pp1358)

SHOL/ ★ D13 31215B/16 ★SU -610-507

Ice cream packaging metering unit - with longitudinal channels in exterior of rotatable metering cylinder to increase output

SHOLIS YU-S YU 17.07.75-SU-158164

(10.05.78) A23g-09/08

A metering unit includes a rotatable cylinder with a piston in a housing. To improve output, longitudinal channels are formed in the external surface of the cylinder. Such arrangement improves the output of automatic packaging machines by about 20%.

Sholis Yu.-S. Yu. Rutkauskas A.M., Bul. 22/15.6.78 17.7.75 as 158164 (2pp1358)

MUKH/ ★ D13 31216B/16 ★SU -610-508

Aq. caseinate concentrate prodn. - includes heating between homogenisation stages after colloid milling of fragmented material

MUKHIN A A 21.06.76-SU-376327

(06.05.78) A23j-01/20

The caseinate concentrate soln. is prepd. more rapidly and with improved quality by comminuting starting material in a colloid mill, homogenising the ground material with solvent at 100-150 kgf/cm^2, heating the mixt., then homogenising again at 50-100 kgf/cm^2.

Mukhin A.A., Yashin V.K., Kuzmin Yu.N. et al. Bul. 22/15.6.78 21.6.76 as 376327 (3pp1358)

DYAK/ ★ D13 31217B/16 ★SU -610-509

Carbamide-based feed for ruminants - is prepd. by extruding mixt. of carbamide, starch contg. substance and zeolite as adsorbent for ammonia and moisture

DYAKOV I P 01.04.76-SU-343617

C03 (11.05.78) A23k-01

Carbamide-based feed for ruminants is prepd. by extrusion of a mixt. contg. carbamide (as a source of nitrogen) starch-contg. substance (as a source of energy for the assimulation of nitrogen by ruminants) and a substance which adsorbing moisture and ammonia. The process is improved by using 3-10 wt.% (w.r.t. the total mixt) of a zeolite as an adsorbent (particle size 80-100u; moisture content 5-8%) and carrying out the extrusion at 100-120 °C under a press. of 15-20 kg/cm^2. By this method, the ammonia loss during the extrusion is decreased. The high press. (higher than in the conventional process) promotes penetration of the particles of molten carbamide into the solubilised starch, whereby the quality of the prod. is improved.

Dyakov I.P., Orlov A.I., Lyubimov S.P. et al. Bul. 22/15.6.78 1.4.76 as 343617 (4pp70)

POTA= ★ D13 31218B/16 ★SU -610-510

Non-caking, dried potato granules prepn. - by washing, comminuting, sulphiting, squeezing, granulating and drying

POTATOE FOODS RES 28.12.76-SU-437068

(10.05.78) A23l-01/21

Potato granules are prepd. by washing and cleansing potatoes, pressing, comminuting and drying. The quality of the prod. is improved by subjecting the potatoes before the pressing, to sulphitation and then pressing to a residual moisture content of 52-55 °C. Subsequently the mixt. is granulated and the granules are granulated by rolling. The comminution is carried out before the sulphitation. The latter is performed with a soln. of $Na_2S_2O_4$ in the juice squeezed out from the potatoes during the pressing of the previous batch. The aim of the sulphitation is to prevent the ferminative oxidn. of the potato surface. During the rolling the granules are subjected to steaming to solubilise their surface. The technology is simplified compared with the known process.

Suboch F.I., Davydenko I.A., Shabeta M.P. et al. Bul. 22/ 15.6.78 28.12.76 as 437068 (2pp70)

WOLV- ★ D13 31280B/16 ★US 4109-394

Particle treatment system for drying foodstuffs - has gas flow system for fluidising particles on conveyor moving through treatment zone

WOLVERINE CORP 05.01.77-US-756896

J08 Q76 (29.08.78) F26b-17/04

Particle treatment system comprises a conveyor for transporting particulate material through a treatment zone an a gas flow system for fluidising particles on the conveyor as they move through the treatment zone. Alongside the treatment zone a gaseous stream is projected downwardly against and inwardly along the transport surface of the conveyor to provide a boundary sheath gas flow along the edge of the treatment zone.

Used in drying and roasting food prods., e.g. coffee beans and cereals, and dehydrating vegetables. The boundary sheath gas flow prevents particles from passing laterally out of the treatment zone and contributes to the fluidisation of particles at the side boundary of the treatment zone. 5.1.77 as 756896 (8pp67)

CALI- D13 36741Y/21 =US 4109-57

Mechanised halving and stoning of peaches etc. - for high yield o cleanly cut fruit with little tearing

CALIF PROCESSING MA (SILV/) 14.08.75-AR-260021

*+P28 (29.08.78) *FR2320-704 A23n-04/12 +A47j-25*

Appts. to halve and destone fruits of the peach type includes a device to partially cut the fruit and grip the stone, and fluid operated devices for resiliently engaging and gripping both halves and rotating them in opposite directions. The halves are thus freed from the stone, which i still held by the device.

The operations are effected in sequence by fluid-actuated control devices. The working fluid may be gas or liq. The appts. is characterised by better condition of fruit halves, lower fruit loss, longer uninterrupted operation and lower maintenance costs. 11.12.75 as 639706 (9pp1379)

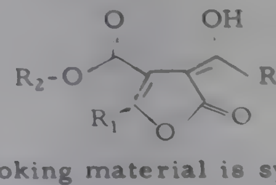
FRIT- D13 13242Y/08 =US 4109-6

Alkyl dihydro hydroxy alkylidene oxo alkyl furan carboxylates used in aromatising compsns. for sweets, fruit, tobacc pharmaceutical syrups and wine (NL080277)

FRITZSCHE DODGE OLC 22.06.76-US-698742 (04.08.75-U 601482)

*B07 E13 P15 (D18) (29.08.78) *DT2634-509 A24b-03 +A24d-01/18*

A smoking compsn. comprises a smoking material and > 0.0001 wt.% of an alkyl 2,3-dihydro-3-(1'-hydroxyall idene) 2-oxo-5-alkyl-furan-4-carboxylate of formula (I), where R_1 is < 6C alkyl and R_2 is < 7C alkyl, cyclopent or cyclohexyl.



(I)

Pref. (I) is present in amts. of 0.0025-5 wt.% w.r.t. compsn. and is e ethyl 2,3-dihydro 3(1'-hydroxyethylidene) 2-oxo methyl-furan-4-carboxy

Smoking material is synthetic and/or natural smoking tacco.

Prod. enhances the flavour components of compsn. i tobacco compsns. The taste of the smoke is softened a saliva flow increased to lessen dryness of mouth in smo ing. 22.6.76 as 698742 (3pp931)

AQAC ★ D13 31386B/16 ★US 4110-175
De-acidification of whey contg. lactic acid - by using a specific electrodialysis cell, a basic soln., and brine
AQUA CHEM INC 15.11.76-US-742360 (30.06.76-US-701111)
J03 (29.08.78) A23c-09/14 A23c-21 B01d-13/02

Permeation sepn. process is effected in a cell in which membranes are anion-permeable, and membranes are cation-permeable. Anode is in one end cell, and cathode is in the opposite end cell. Between end cells are repetitive cell gps. A whey soln. contg. lactate anions and H^+- is passed into cells, a basic soln. contg. metallic cations and OH are passed into cells, and a carrier soln. is passed into cells. An electric field is applied across the cells, when lactate passes to, and OH^- passes for combination with H^+ to form H_2O so that the ionic concn. of cells is decreased. A whey soln. of reduced acid concn. is withdrawn from a less concn. basic soln. with withdrawn from, which contains no actate. The carrier soln. contg. lactate ions is withdrawn from cells.

Economic process effectively deacidifies whey(and also orange juice, etc.) without using excess chemicals, and without localised over-neutralisation and consequent denaturation and flavour modification. Prepd. whey with the lactate removed is suitable for use as a milk substitute in ice cream, etc. 15.11.76 as 742360 (5pp478)

PROC D13 59128W/36 =US 4110-255
Beverage carbonator - using agglomerated molecular sieve charged with adsorbed carbon dioxide
PROCTER & GAMBLE CO 17.07.74-US-489292 (25.02.74-US-445200)
*+Q34 (29.08.78) *DT2507-442 B01j-29/06*

A rigid composite body is prepd. comprising crystalline zeolite molecular sieves in amt. $\geqslant$ 40 wt. % w. r. t. body. Body has surface area to mass ratio of 4-200 cm^2/g, having $\geqslant$ 6 g of crystalline zeolite molecular sieves distributed uniformly throughout body.

Body has absorbed amt. of CO_2 sufficient to carbonate an aq. beverage upon immersion. Body has parallel elongated channel(s) extending from one surface of body to the interior having longitudinal axis of channel parallel to the axis of the vertical dimension.

Rigid composite bodies are secured in a sealable, nestable, stackable, container providing a means for dispensing bodies in combination with a dry instant beverage mix for the prepn. of carbonated beverages upon the addition of water. 8.11.76 as 739663 Div. ex. 4007134 (+7.7.74-US-489292) (13pp931)

JOHN- ★ D13 31503B/16 ★US 4110-476
Liq. yoghurt contg. large amts. of live organisms - prepd. by mixing fat and milk solids with non denatured whey protein concentrate and inoculating with lactic acid - producing culture
JOHNSON-RHODES CUL 10.01.77-US-758045
(29.08.78) A23c-09/12 A23c-21 A23g-05

Prepn. of live yoghurt contg. live organisms comprises (a) combining fat and milk derived solids sources with undenatured whey protein concentrate to form a mixt. in ratio casein: whey protein of $<$ 2:1; (b) maintaining the mixt. at a temp. to accomplish pasteurisation and form a protein complex; (c) cooling the mixt. to an optimum fermentation temp. (d) innoculating the mixt. with a yoghurt culture producing lactic acid; and (e) fermenting the mixt. to develop a titratable acidity and cooling to stop fermentation when the desired acidity is obtd.

The whey protein is whey protein concentrate with all of the casein coagulant enzyme inactivated. The whey protein concentrate contains 22-52 wt. % protein, 0.1-6 wt. % fat, 32-73 wt. % lactose or reduced milk sugars and 3-11 wt. % ash. 10.1.77 as 758045 (-pp918)

NARU- ★ D13 31504B/16 ★US 4110-477
Storage stable, non ammoniacal Natto - prepd. by culture of Bacillus natto and lactic acid bacteria on soybeans contg. mushrooms
NARUSE FERMENTATION 13.05.77-US-796706
(D16) (29.08.78) A23l-01/20

Natto (I) contg. lactic acid bacteria are prepd. by cultur-

homogenised aq. mushroom suspension.

(I) (a rich nutritive food) prepd. by the above method has not the ammoniacal odour and 'off' flavour that conventional (I) has, and is stable to storage for longer periods of time. 13.5.77 as 796706 (5pp478)

CANA ★ D13 31505B/16 ★US 4110-478
Dried potato granules prodn. - with freezing step before predrying and granulation
CANADIAN PAT & DEV LTD 13.12.76-US-750164 (03.06.74-US-476053)
(29.08.78) A23b-07/14

Dehydrated potatoes are prepd. by (a) preparing the potatoes for cooking; (b) cooking; (c) immediately mashing the potatoes at $\geqslant$160°F; (d) cooling and freezing mesh; (e) thawing the material; (f) immediately predrying the thawed material to a moisture content 35-46% to give a product consisting of single cells and small aggregates; (g) granulating the material; and (h) drying to a moisture content $<$ 7%.

The method is a 'straight through' process with very little recycling or dischard. Damage to the physical or nutritional props. of the potatoes is minimal. 13.12.76 as 750164 C.i.p. 4007286 (6pp955)

ALBR/ ★ D13 31506B/16 ★US 4110-481
Multiple vessel pressurised food cooking - with transfer of hot pressurised liq. into upstream vessel
ALBRIGHT C J 09.08.76-US-712747 (01.12.69-US-881230)
(29.08.78) A23l-01

Food is cooked in a hot, non-aq. liq. in a pressurized cooking vessel. The appts. typically comprises three similar cooking vessels interconnected via a compound valve. While food is being cooked in one vessel another is being loaded with uncooked food. On completion of cooking in the first vessel the hot liq. is transferred via. the valve to the freshly loaded vessel.

The cycle of the transfer of cooking liq. continues through each vessel with addional cooking liq. and heat being supplied. Pressurised air is used to pressurise each vessel during cooking and to transfer cooking liq. between successive vessels.

The appts. provides continuous cooking of food in a non-aq. liquid while under pressure. The forced transfer of cooking liq. after completion of cooking enables the vessel to be opened as soon as cooking is complete. 9.8.76 as 712747 C.i.p. 3793940 (+5.11.73-US-412624) (19 pp295)

USSA ★ D13 31507B/16 ★US 4110-483
Stabilisation of oil or fat contg. foods - by synergistic combination of butylated hydroxy anisole and a spice or herb
US SEC OF THE ARMY 01.08.77-US-820473
E14 (29.08.78) A23l-03/34

Oil or fat contg. foods are protected against oxidation by a combination of BHA and a herb or spice material (I), which is page, mace, rosemary, Comptonia peregrina, or Tilia hrezentia, or an alcohol extract of one of these, or a residue recovered from such an extract.

The combination is synergistic, and allows reduced amts. of NHA to be used. Foods are not flavoured by (I). 1.8.77 as 820473 (5pp955)

SCMZ ★ D13 31508B/16 ★US 4110-484
Continuous flow prepn. of acid set imitation cheese - by medium to high intensity axial and radial flow mixing of liq. and dry blends
SCM CORP 10.09.76-US-721972
(29.08.78) A23c-19/02

The continuous manufacture of acid-set imitation cheese prods. is described. A dry blend of dry edible ingredients including $\geqslant$1 metal caseinate (I), NaCl, and $CaCl_2$, is continuously introduced into an elongated, confined mixing zone of small cross-section; a liq. blend of liq. edible ingredients including oil, H_2O, emulsifying agent (II), acidulant, and flavouring is continuously introduced into the dry blend; the blends are continuously mixed at $\nless$ 100°F (medium high intensity mixing) until a homogeneous blend is obtained; an imitation cheese prod. is continuously with drawn from the mixing zone.

D 13: OTHER FOODSTUFFS -p. 10

mixing is effected at net horsepower input 2-5/40 lb edible ingredients. Amts. of dry and liq. blends used are to give a high viscosity, incompressible mixt.

Use of both axial and radial flow in the mixing process allows a variety of acid-set imitation cheeses (esp. mozzarella) to be prepd. on a continuous basis. 10. 9. 76 as 721972 (9pp478)

PROC ★ D13 31509B/16 ★US 4110-485
High sheen roast and ground coffee flakes - prepd. by passage through roll mill with differential speeds and temps.
PROCTER & GAMBLE CO 06.05.76-US-683583 (04.12.74-US-529652)
(29.08.78) A23f-01

Roast and ground coffee compsn. consists of 10-80% by.wt. of compsn. of roast and ground coffee flakes (I), and 20-90% of non-flaked roast and ground coffee (II).

(I) have flake thickness 0.008-0.025 inches and a reflectance value ≮ 35 reflectance units (representing reflectance by coffee flakes of light from 0.88 He/Ne gas laser beam of λ6328Å, calibrated against reflectance values of 2 and 89 units, respectively, for the Federal Bureau of Standards Paint Chips 15042 and 11670).

Compsn. has desirable organoleptic props., improved extractability (even with decaffeinated prods)., and an esp. distinctive and pleasing physical appearance. Thus high sheen flakes are conveniently and economically produced, and have high structural integrity with little or no flavour degradation. 6. 5. 76 as 683583 (8pp478)

See Also

D15 DT 2745083
D16 DT 2745541
D23 J5 4032511
D15 DT 2745084
D16 GB 1544569
D16 DS 2708112
D16 SU 609763

D14: FOODSTUFF MACHINERY

THIE/ ★ D14 30076B/16 ★FR 2397-227
Compacting machine for vegetable prod. esp. fibrous fodder - has rotary table with cam operated tabletting cylinders and rams
THIERION G 13.07.77-FR-021620
(16.03.79) A23k-03/02 B01j-02

The machine has a horizontal, rotary table with an annular channel into which dry, raw material is fed by a supply hopper or hoppers Radial collection pistons move across the annular channel to collect raw material and push it into radially aligned agglomerating cylinders which are advanced to couple to the collection cylinders A ram is then advanced inside the agglomerating cylinder to compress the raw material.

Cam surfaces arranged sequentially around the axis of rotation of the table are pref used to obtain synchronised forward and reverse displacement of pistons, cylinders and rams. Each feed hopper pref. includes a screw conveyor to push raw material down into the annular channel.

Compressing dry material into tablets, partic. compacting fibrous fodder into cylindrical tablets. 13. 7. 77 as 021620 (11pp448)

REFR= ★ D14 31178B/16 ★SU -609-939
Deep freezing food products - using moulds formed by two discs provided with packing rings and connected by rods
REFRIG IND RES INST 22.12.76-SU-432808
Q75 (18.05.78) F25d-13/06

The deep freezer contains a thermally insulated cylindrical body with coolant circulation jacket, moulds with holders and a drive with a push rod. To intensify the freezing process and to reduce the prod. weight loss, each mould is formed by two discs provided with packing rings and connected to each other through rods. The holder is made as a number of successively hinged flat elements provided with stops to form cavities for product positioning.

Apaev G.S., Musaev A.A., Bul. 21/5.6.78 22.12.76 as 432808 (2pp110)

ELEC- ★ D14 31296B/16 ★US 4109-566
Container for heating foodstuff - using spaced electrodes inserted into pockets formed by perforated inner wall
ELECTRO-FOOD AB 15.04.75-US-568365 (29.09.71-SW-012342)
*(29.08.78) A23l-01/**

A container for heating a foodstuff comprises an electrically insulating outer wall forming a sealed enclosure for the foodstuff. An insulating perforated inner sleeve is placed in the enclosure coaxial with the outer wall to define an annular pocket. Two spaced apart electrodes connectible to an electrical supply are inserted into the pocket. Prior to insertion of the electrodes the upper end of the annular pocket is closed by a removable member which is pref. a flexible tape.

The foodstuff is heated in a sealed cartion, a plastic bag or plastic box. 15.4.75 as 658365 C.i.p. 3,877,360 (+27.9.72-US-292787) (7pp295)

See Also

D16 J5 4030574

D15: WATER TREATMENT

UNIC ★ D15 29750B/16 ★BE -871-214
Combined aerobic and anaerobic sludge digestion - with first high temp. aerobic stage
UNION CARBIDE CORP 26.07.78-US-928099 (13.10.77-US-841902)
C04 (12.04.79) C02c

Sludges are digested by mixing in a first zone with a gas contg. ≥20 vol.% O_2 at a rate sufficient to aerobically digest the sludge while keeping a total suspended solids (TSS) content ≥20g/l. The internal temp. is 35-75°C and aerobic digestion is continued for 4-48 hrs. to reduce the content of volatile, biodegradable suspended solids (VBSS)

The partially stabilised sludge is then passed to an enclosed zone at 25-65°C where anaerobic fermentation takes place to reduce the VBSS content to <40% of the value in the feed to the first zone. The stabilised sludge and co-produced CH_4 gas are recovered.

A more efficient digestion is achieved compared with either aerobic or anaerobic fermentation alone; total treatment time is reduced; temp. control is improved; the size of the anerobic fermenter is reduced and more CH_4 is generated than is needed to provide process heat. 12.10.78 as 871214 Add. to 863735 (71pp1251)

GODA/ ★ D15 29773B/16 ★BE -872-66
Emergency installation for drinking water prodn. from rivers etc. - is manually operated to suit power deprived disaster
GODAR S 11.12.78-BE-872668
Q42 (30.03.79) C02b E03b

A manually operated, transportable and free-standing installation for obtaining drinking water from natural sources by chemical treatment, precipitation, decantation and filtration. Raw water is treated with chemical reagents in a suspended, flexible container provided with a hand-for precipitate, and a discharge valve for clarified water situated nearly half-way up the side of the container. A hand pump is provided to pass clarified water through one or more filters to a storage tank.

Used for producing drinking water by treating water obtd. from natural sources partic. for emergency supplies of drinking water when disasters such as earthquakes deprive the population of electricity and other motive power supplies. Installation is inexpensive, lightweight and easily transportable. 11.12.78 as 872668 (11pp448)

DOWA ★ D15 29781B/16 ★BE -872-703

Removal of arsenic from solns. of sulphuric acid - contg. ferrous ions, comprises oxidising part of the soln., then remixing, to ppte. ferric hydroxide contg. arsenic

DOWA MINING CO 14.12.77-JA-150175

J01 M25 (30.03.79) B01d C22b

Method of elimination of As from a soln. of H_2SO_4 or a sulphate contg. also ferrous ions, consists of treating part of the soln. to O_2 under pressure to oxidise the ferrous ions to ferric; mixing the treated part of the soln. with the remainder and stirring; controlling the pH of the mixed soln. obtd. to produce pptes. with which the As is coppted. or adsorbed, and sepg. and removing the pptes. from the soln.

Used in the hydrometallurgical methods for extraction of non-ferrous metals from their ores, or in removing As from waste liquid, to prevent pollution. Toxic arsenic is removed efficiently from the soln. safely as insolubles or absorbed in insoluble cpds. using less Fe than in prior art whether it is in the pentavalent or the trivalent form. 13.12.78 as 872703 (16pp396)

BAEC- ★ D15 29788B/16 ★BE -872-719

Sepg. pig slurry into clean water and compost - using coagulant and flocculant to ppte. solids and centrifuge separator

BAECK ENGG NV 13.12.78-BE-872719

P11 (30.03.79) A01c C05f

Dung slurry from pigs, with a water content of 85-98% is treated by adding to the slurry a coagulant, pref. based on iron trichloride and aluminium sulphate, and a flocculant, pref. a cationic polyelectrolyte. The slurry is stirred and decanted so that it separates into a solid ppte. and water with a BOD $<$4,000 mg/l. The amt. of coagulant is pref. 0.1-4 g/l of slurry and the amt. of flocculant is 10-250 mg/l. The decanting is pref. mechanically assisted by means of a centrifuge. The water may then be passed to a biological treatment basin where the BOD is reduced to $<$100 mg/l. The solids may be processed to an organic compost for agricultural or horitultural use.

The process enables pig slurry to be reduced to a useful solid prod., compost and clean water. 13.12.78 as 872719 Add. to 862862 (F1) (12pp1370)

GEIG/ ★ D15 B/16 ★BR 7706-010

Continuous flux electrolytic appts. - has vessel with external connecting tubes to other equipment and parallel metal plates

GEIGER E E E 09.09.77-BR-006010

(03.04.79) C02b-01/82

KEMA D15 35589S/21 =DS 1958-169

Mercury extraction from water by hydra- - zine treatment

KEMANORD AB (FOSF) 19.11.69-DT-958169

*J01 M25 (12.04.79) *DT1958-169 C02c-05/02*

Mercury is removed from waste water, contg. low amts. of mercury obtd. from alkali metal chloride factories using mercury cells. The water is treated with hydrazine in an amt. sufficient for the redn. of ionic mercury and mercury present as complex cpds. The pH is adjusted to $>$7 and the mercury present in the resulting emulsion is removed, pref. by filtration through an active filter or with the aid of a flocculation agent. 19.11.69 as 958169 (3pp068).

AIRL D15 09271V/06 =DS 2337-733

Monopersulphuric acid generator - for continuous detoxication of polluted waters

AIR LIQUIDE L' 28.07.72-FR-027359

*E36 J R26 (12.04.79) *BE-802-871 C02c-05/04*

oxidisable by peroxysulphuric acid (I) is treated with (I) and a base in amts. determined by the redox potential.

Acid (I) is prepd. from conc. sulphuric acid or oleum and 35-100% hydrogen peroxide in a reactor at -10 to +80°C. The acid (I) passes by an overflow pipe into the waste water, which is contained in a larger reactor fitted with a regulator, redox electrodes and is linked with pumps for delivering base and waste water. 25.7.73 as 337733 (4pp068).

EICH- D15 74112X/40 =DS 2453-512

Metering valve for fluids and gases into fluid - esp dissolved chemicals into water for use or drinking

EICHLER A KG 12.11.74-DT-453512

*R26 (12.04.79) *DT2453-512 G05d-11/03*

A device for metering liquids or gases into a fluid moving in a main, e.g. dissolved chemicals into water, includes a spring loaded diaphragm with an aperture in the main to producea pressure differential. A bypass is arranged in the centre of the aperture and can be controlled by a needle which is linked to the diaphragm and enters into the cross-section of the bypass. The main fluid pressurises the admixture which is contained in a flexible bag and is thereby added to the main fluid in the bypass.

This ensures a constant dosage even for very small admixture rates. 12.11.74 as 453512 (5pp39).

HACH/ ★ D15 29874B/16 ★DT 2744-026

Waste disposal system - by mixing municipal refuse with sewage sludge for a composting process

HACHENEY W 30.09.77-DT-744026

(12.04.79) C02c-03

A system for the disposal of liquid, solid and toxic waste, e.g. refuse and sewage sludge, requires no dewatering plant. Refuse and sludge are mixed in such proportions that the moisture content reaches 50-55%. This mixture is turned into compost by dynamic and/or static rotting.

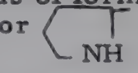
The result is a very economical method of waste disposal. The expensive dewatering and digesting installations for sludge are saved and the ecological efficiency is raised. 30.9.77 as 744026 (8pp39)

HENK ★ D15 29922B/16 ★DT 2745-083

1-Hydroxy-alkane-1,1-di:phosphonic acid derivs. - useful as chelating agents e.g. in water treatment, for providing trace elements and treating metabolic disorders

HENKEL KG AUF AKTIEN 07.10.77-DT-745083

B05 C04 E11 (B03 C01 D13 D21) (12.04.79) A61k-07/16 A61k-29 A61k-31/67 C02b-05/06 C05g-03/04 C07f-09/38

Diphosphoric acids of formula X-$C(PO_3H_2)_2OH$ (I) where X is $(CH_3)_2C(NH_2)$- or  and their water-soluble salts are new.

(I) are prepd. by reacting XCOOH with PCl_3 and H_3PO_3, followed by acid hydrolysis of the reaction prod.

(I) are chelating agents useful for preventing Ca pptn. in water: as corrosion inhibitors; for cleaning metal or glass to overcome unwanted effects of Cu ions (e.g. to stabilise per cpds., fats and soaps); to bind metal ions in dye baths; to introduce trace elements into plants; and as additives for cyanide electroplating baths. They are also used fo control of Ca and phosphate metabolic disorders (e.g. given orally at 1-50 mg/kg/day or for animals as feed additives, opt. in conjunction with calcitonin) and in oral hygiene to prevent development of calculus. (I) can also be used to make ^{99m}-Tc diagnostic agents having high selectivity for the skeleton and Ca-contg. tumours. 7.10.77 as 745083 (14pp1251)

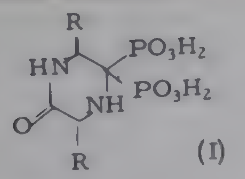
HENK ★ D15 29923B/16 ★DT 2745-084

5-Keto-piperazine-2,2-di:phosphonic acid derivs. - useful as chelating agents e.g. in water treatment, for providing trace elements and treating metabolic disorders

HENKEL KG AUF AKTIEN 07.10.77-DT-745084

B03 C04 E11 R26 (C01 D13 D21) (12.04.79) A61k-07/16 A61k-29 A61k-31/67 C07f-09/65 C11d-03/36 G05a-03/04

Diphosphonic acids of formula (I) where R is H or CH_3, and and their water-sol. salts are new.



(I)

(I) are prepd. by reacting $NH_2CHR.COOH$ with H_3PO_3 and PCl_3, followed by acid hydrolysis of the reaction mixt.

(I) are chelating agents useful for preventing Ca pptn. in water, as corrosion inhibitors, for cleaning metal or glass to overcome unwanted effects of Cu ions (e.g. to stabilise per cpds., fats and soaps); to bind metal ions in dye baths; to introduce trace elements into plants; and as additives for cyanide electroplating baths. They are also used for control of Ca and phosphate metabolic disorders (e.g. orally at 1-50 mg/kg/day or for animals, as feed additives, opt. together with calcitonin) and in oral hygiene to prevent development of calculus. (I) can also be used to make ^{99m}-Tc diagnostic agents for the skeleton and Ca-contg. tumours. 7.10.77 as 745084 (14pp1251)

KRUN ★ D15 29947B/16 ★DT 2745-544
Treating radioactive effluent by evaporation - with addition of non-active isotopes of same impurities to wash liquid
KRAFTWERK UNION AG 10.10.77-DT-745544
K07 (12.04.79) G21f-09/06

A carrier substance containing activity-free isotopes of the contaminating elements and easily soluble in the wash liquid is added to the wash liquid, esp. in a proportion of 1-10 per m^3 of wash liquid.

Exchange between the radionuclides contained in the droplets of concentrate entrained in the evaporator and the added carrier elements leads to an improved separation effect for a given size of plant. 10.10.77 as 745544 (6pp236)

LECZ/ ★ D15 29957B/16 ★DT 2745-700
Helium filled system for ambient heat recovery - using expansion-compression system to freeze out pure water from sea water
LECZKOWSKI K 11.10.77-DT-745700 (00.00.76-DT-654097)
J08 Q55 (12.04.79) F03g-07

Helium is used as the working fluid in the process described in DT 2654097. This is recycled without liquefaction. As shown on the temp.-entropy diagram, a clockwise cycle involves dropping to a low isenthalpic line. The cold for this process is supplied from a second anti-clockwise cycle.

Other gases such as H_2, Ne, O_2, N_2, CO, A, NO, hydro-carbons, CO_2, etc. can be used. For isothermal changes in the gas cycle, liq. working media can be used to stabilise the temp. Thus compressors etc. can be enclosed in vessels contg. such liquids, arranged to act as heat pipes.

Can be used to recover fresh water from sea water by refrigeration. It has the advantage that does not liquefy until close to 0°K and therefore can be completely cycled in the gaseous state. 11.10.77 as 745700 Add to 2654097 (16pp1053)

SAAR/ ★ D15 29959B/16 ★DT 2747-582
Evaporation of liquids in multi-effect system - having two or more effects at different pressures with vapour transfer between effects
SAARI R 12.09.77-SW-010213
J01 (12.04.79) B01d-03

Evapn. system for liquids uses $\geqslant 2$ effects operating at different temp. levels. Vapour from one is then used to heat liquid in the next. The liquid is evaporated in $\geqslant 1$ of the effects and is condensed in $\geqslant 2$ evapn. stages. The liquid being evaporated in one effect is recycled through the condensn. stage of the next effect which is operating at a higher pressure. In this way the liquor from the previous effect acts as the condenser coolant in the next.

Used esp. for evaporating sea water or effluent streams. Uses smaller equipment and is less susceptible to fouling than conventional multi-effect and vertical tube evaporators. 24.10.77 as 747582 (14pp1053)

SNEE- ★ D15 30014B/16 ★DT 2842-651
Sewage aeration system - with air supply recess in channel bottom with flush fitting porous lid (NL 10.4.79)
LANDUSTRIE SNEEK 07.10.77-NL-011017

An aeration device for use in the biological purificn. of sewage consists of a duct along the bottom of the sewage channel through which finely dispersed air is blown into the liquid. The duct is pref. a recess of rectangular cross-section across the bottom of the sewage channel which is covered by a flush-fitting lid with fine perforations The lid is pref. composed of slabs of a porous material.

The arrangement leaves the bottom of the channel free from all obstructions on which dirt can accumulate and require frequent attention. 29.9.78 as 842651 (6pp39)

FRES/ ★ D15 30075B/16 ★FR 2397-225
Crusher-mixer for dissolving granular products - comprises hopper, crushing rolls, cavitation chamber and pumps, and is transportable for connection to existing installation
FRESAFOND J P G 12.07.77-FR-022161
J02 P41 (D16) (16.03.79) B01f-13/10 B02c-04/02

Crusher-mixer for dissolving powdered or granular prods which can be connected to an existing installation but which is independent of it, consists of a hopper fitted with crushing rollers and their driving mechanism and a cavitation chamber placed under the hopper. A suction pump and a delivery pump and their drives are mounted on a bracket on the side of the cavitation chamber.

The pumps are both connected to the vessel of the existing installation. The suction pump is connected on its delivery side to a nozzle opening into the cavitation chamber. The delivery pump is connected on its suction side to a strainer in the cavitation chamber.

Problems associated with the presence of lumps, with dissolving large quantities and with blockages are solved. The appts. breaks up lumps whatever their state or size, dissolves the materials rapidly and effectively and allows recycling until perfect dissolution to a desired concn. has been realised. It can be used for preparing surface treatment baths, treating waste waters, adding sugar to musts or any work necessitating a jet or emptying by suction. 12.7.77 as 022161 (10pp1192)

CHAP- ★ D15 30084B/16 ★FR 2397-36
Continuous filtration plant for waste water prior to purificn. - use mesh band filter between supply channel and filtrate discharge
CHAPLAIN M & CIE SA 11.07.77-FR-021310
(16.03.79) C02c-01/22

The plant comprises a supply channel for incoming liq. to be filtered and a quite separate discharge channel for filtrate. A filter screen is located so that liq. is passed through the screen as it is transferred from the supply channel to the discharge channel.

The liq. is pref. gravity fed on to and through the filter screen which delivers retained solid impurities into an area separate from the filtrate discharge channel. An overflowing header tank pref. delivers liq. on to the filte screen. The filter screen is pref. in the form of mesh band, e.g. in stainless steel, which advances continuous to present freshly cleaned screening area to incoming liq

Used for industrial rough filtration to remove suspended solids from a liq., partic. from industrial effluent an waste water prior to purificn. treatment The installatio is of simple, inexpensive construction and offers reliabl trouble-free operation. The screen is self cleaning so that a high throughput can be maintained indefinitely. 11.7.77 as 021310 (8pp448)

CNSF D15 35926Y/20 =GB 1544-2
Liquid carbon dioxide carbonation appts. - with carbonating colu in heat exchange relationship with channel where stabilizati otion occurs
CONSOLIDATED FOODS CORP 22.12.75-US-643096
*(19.04.79) *US4022-119 C02d-01/02 +B01f-03/04*

A liq. in an upright column is simultaneously cooled and carbonated by injecting liq. CO_2 in the liq., and causing cooled, carbonated liq. to overflow from the column int channel around the channel such that heat transfer throu the column wall further cools the liq.

Pref. liq. to be carbonated is introduced (by sprayin near the top of the liq. in the column to dissolve floating ice crystals. The CO_2 is injected in the liq. outside the column.

24.11.76 as 048953 (6pp1376)

ONTA D15 38708A/22 =GB 1544-341
Aq. effluent purification - by anaerobic denitrifying of nitrate and/or nitrite nitrogen, aerobic nitrification and phosphorus cpd. pptn.
ONTARIO RES FOUND 08.11.76-CA-265112
*(19.04.79) *DT2749-971 C02c-01/06*

Waste water contg., as contaminants, dissolved biodegradable carbonaceous and nitrogenous material in non-nitrate and non-nitrite form, is treated by passing the water along flow paths through first and second separate but fluidly-interconnected reaction zones contg. mixed microbial activated sludge. Mixed liq. is recycled from second to first zone at a flow rate greater than the flow rate of waste water to first zone, to provide single sludge in the two zones. Liq. is mixed in each of the reaction zones to maintain the liq. in suspension.

Anoxic conditions are established and maintained in the first and second zones to convert nitrates and nitrites to nitrogen gas, consuming carbonaceous material. Gas formed is vented. Effluent from second zone is passed on as mixed liq. to sludge separator zone. Sludge is partially sepd. and treated liq. removed.

Esp. used in treatment of domestic and industrial sewage. 1.11.77 as 045459 (20pp931)

FISO D15 82938Y/47 =GB 1544-430
Treating aqueous effluent contg. dissolved or dispersed dye - by adding magnesium oxide then separating
FISONS LTD 20.05.76-GB-020829
*F06 (D18) (19.04.79) *BE-854-688 +C02b-01/14*

Aq. effluents contg. a water-dispersible or -soluble dye are treated by mixing with MgO and then sepg. solids from the effluent.

Pref. the effluent contains vegetable oils, waxes or pastes. Pref. it arises from a textile dyeing process. Pref. 0.1-2.0 wt.% (w.r.t. effluent) of MgO is used. Pref. the pH is adjusted to 6-8 before mixing with MgO. 5.5.77 (4pp974)

STAM D15 09302Y/06 =GB 1544-494
Electro flotation os suspended material from effluent - using perforated electrodes which provide increased through put
STAMICARBON BV 06.08.75-NL-009342
*H05 J03 +P41 (19.04.79) *BE-844-655 +B01d-43*

Emulsified and dispersed substances are sepd. from waste water by an electroflotation process. The water is passed through a cell contg. spaced upper and lower horizontal electrodes. Voltage is applied to the electrodes so that bubbles are formed at the lower electrode and rise towards and through upper electrode forming a floated foam contg. the substances. The dia. of the apertures in the lower electrode is ⩽ 5 mm and large enough to allow the unhindered upward movement of the gas bubbles. Waste water shows through the electrodes.

The waste water is esp. from a naphtha cracking plant or a biological waste water purificn. system. Dia. of the apertures in the lower electrode is pref. 0.5-3 mm. 3.8.76 as 032321 (4pp945)

KROF/ D15 36050Y/20 =GB 1544-552
Waste water clarification by dissolved air flotation - with water moved through appts. with min. turbulence
KROFTA M 24.03.76-US-670067
*+P41 (19.04.79) *US4022-696 B03d-01*

Water from paper making industries is purified using appts which includes a cylindrical, flat bottomed tank with vertical inlet pipe at the centre of the tank; a vertical cylindrical sludge compartment about the inlet pipe and having an outlet pipe; a clarified water outlet outside the sludge compartment in the tank; a sludge trough with an outlet at the bottom of the tank; and a carriage rotatably movable around the inside of the tank carrying a distribution arm which has orifices and is connected to the inlet, and a sludge removal scoop.

A bottom scraper pref. sweeps sediment into the trough Min. turbulence occurs so that appts. simple and compact.

RITP D15 97885X/52 =GB 1544-557
Sewage settling tank with floating siphon system - has baffles forming clear water zone above tube settlers
SYBRON CORP 15.03.76-US-667023
*(19.04.79) *US3997-444 B01d-21/10*

Sewage settling tank has an inlet at one end and clarified water outlets at the other; two banks of tube settlers arranged in a horizontal plane above the tank bottom; baffles around and above the top of each bank to define clear water zones, each outlet connecting with a respective zone, and the outlet defining the liq. level which is above the banks but below the tops of the baffles; an opening in each baffle below the liq. surface which can be sealed to liq. flow direct from the inlet to the clear water zone; floating carriages which pass through the openings; and a sludge removal syphon carried by two carriages.

The syphon has horizontal branches at its base to remove sludge. 31.1.77 as 003884 (6pp1376)

CHEM- D15 68573Y/38 =GB 1544-586
Boiler scale inhibition using soluble polymers - which are sulphonated styrene acrylate copolymers or polymer mixts.
CHEMED CORP 17.11.76-US-742521
*A97 +Q72 (A13 A14) (19.04.79) *US4048-066 C02b-05/06*

Deposition of scale, sludge, etc. on surfaces in contact with water is inhibited by adding a poly(styrenesulphonic acid) in the form of (A) a copolymeric additive consisting of a water-soluble copolymer of styrenesulphonic acid, or its salt, or (B) a two-component additive consisting of (i) polystyrenesulphonic acid or its water-soluble salt and (ii) acrylic or maleic polymer whose chain structure is of formula $-CHR_2-CR_1(COOH)-$ (where R_1 is H or Me; and R_2 is H or -COOH), or its water soluble salt. The amt. of additive used is 0.01-500 ppm, by wt. of water.

The process is esp. used in steam-generating boilers. The two components have a synergistic effect. 2.9.77 as 036793 (5pp976)

PIEP- ★ D15 30116B/16 ★GB 1544-606
Treatment of used emulsions - by a reaction vessel under which a mobile filter vessel can be positioned
PIEPHO ABWASSERTECH 03.05.76-DT-U13905
J01 (19.04.79) B01d-21 B01d-23

A device for the treatment of used emulsions of industrial effluents has a reaction vessel having two opposed walls extending downwardly to form spaced legs. Each leg has an inwardly extending guide channel. A filter vessel is formed as a trolley that can run along the guide channels and be located by them relative to the reaction vessel.

A sump in the filter vessel is for filtrate and an insert of inverted truncated-pyramid-shape is pivoted to the filter vessel and can support a filter band above the sump. A discharge pipe is for discharging liq. from the reaction vessel to the insert when the trolley is located by the guide channels.

The device is used in small industrial works where small quantities of emulsion waste or effluent are produced at irregular intervals. 11.3.77 as 010420 (7pp1345)

HITA ★ D15 30195B/16 ★J5 4030-575
Filter sheet for purifying pond water - comprises pulp sheet impregnated with filtering adjuvant, adsorbent and colloidal reinforcing additive
HITACHI KK 12.08.77-JA-096128
J01 (07.03.79) B01d-39/06

Filter sheet comprises a pulp sheet impregnated with filtering adjuvant, adsorbent agent and colloidal reinforcing additive, and heated to improve its mechanical strength. Heating is effected at ∼ 150°C and the colloidal reinforcing additive is silica gel and/or alumin sol., added as 20-40 wt.% on wt. filter sheet.

Sheet is used for purifying pond water in which algae have grown. 12.8.77 as 096128 (5pp15)

MATS/ ★ D15 30200B/16 ★J5 4030-658
Treating waste water with ozone - while agitating and irradiating with UV or IR
MATSUI M 09.08.77-JA-094652
(07.03.79) C02c-05/04

-tters, dye-stuff, odorous cpds., ammonia, N-contg. cpds., cyanide cpds. and bacteria etc. are effectively decomposed by oxidn. and removed in high removability by introducing an O_3-contg. gas into the waste water under agitation and irradiation using UV of wavelength 150-300 nm and/or IR of wavelength 900-1200 nm.

In an example, a sec.-treated brown-coloured waste water having BOD 25 ppm, COD 40 ppm and suspended solids (SS) content 50 ppm was filtered, after which an O_3-contg. air (5 gms. O_3 in 300 l air) was contacted with 500 l of waste water for 20-30 mins. under irradiation with IR of 1000-1200 nm and the UV of 150-250nm to give a colourless and odourless treated water having COD of 7 ppm and s.s. content of 2 ppm. 9.8.77 as 094652 (3pp)

MITR ★ D15 30201B/16 ★J5 4030-659

Treating oily waste water contg. suspended solids - by passing through polypropylene fibre filter and contacting with composite of organic polymer and inorganic granules

MITSUBISHI RAYON KK 10.08.77-JA-095771

J01 M25 (07.03.79) B01d-15 C02c-05/02

A fine suspended solids-contg. oily waste water is purified effectively and completely by passing it through a shaped filter made of hydrophobic polypropylene fibre assembly to remove almost completely oil-contg. suspended solids and to remove by adsorption dispersed oil droplets having comparative large size, and contacting it with the shaped adsorption prod. comprising fine composite of organic polymer and inorganic fine granules contg. $\geqslant 1$ (hydr)oxide of metals selected from Mg, Zn, Pb, Fe, Co, Ni and/or Cu of the fine composite and hydrophobic fibre to completely remove by adsorption oil droplets having the granular size of $\leqslant 10\,\mu$ and further stabilised emulsified oil droplets. 10.8.77 as 095771 (5pp34)

EBAI ★ D15 30202B/16 ★J5 4030-661

Treating ammonia- and phosphoric acid-contg. liquor - by contacting with basic metal cpd., opt. adding a calcium source and contacting with phosphoric acid-contg. material

EBARA INFILCO KK 10.08.77-JA-095915

(07.03.79) C02b-01/14 C02c-05/02

Ammonia and phosphoric acid are effectively removed from a waste water while suppressing the formation of scales as low as possible and maintaining the ammonia removing rate under high degree.

Process comprises contacting it with a metal hydroxide, oxide or carbonate, e.g. $Al(OH)_3$, Al_2O_3, $Mg(OH)_2$, MgO.CaO, $MgCO_3$, $CaCO_3$, $Mg(OH)_2.Ca(OH)_2$, $MgCO_3.Mg(OH)_2$, serpentine, calcined dolomite, limestone, calcined clinker, magnesia dinker etc. to remove alkali metal carbonate and simultaneously to convert ammonium salt into ammonia which is then removed by gas-liq. contact; opt. adding a Ca source, e.g. $CaCl_2$ etc.; and contacting it with granular H_3PO_4-contg. matter, e.g. phosphorus ore, coral sand, bone charcoal etc. opt. under fluidised state to remove dissolved H_3PO_4 component.

By removing the alkali metal carbonate, the deposition of $CaCO_3$ on the surfaces of the H_3PO_4-contg. granules is effectively suppressed, thereby the phosphorus removal is effectively carried-out. 10.8.77 as 095915 (4pp34)

ISHI- ★ D15 30203B/16 ★J5 4030-679

Removing noxious gases in fluidised layer incinerating furnace - by adding e.g. calcium hydroxide and charging sludge to incinerating furnace

ISHIGAKI KIKO KK 11.08.77-JA-097211

J09 Q73 (07.03.79) F23g-05

In incineration of a sludge, e.g. sewage sludge, industrial sludge and night soil sludge etc., contg. sulphur componenets in a fluidised layer incineration furnace, the improvement comprises previously adding $Ca(OH)_2$, dolomite hydrate or magnesia hydrate, etc. to the sludge to be incinerated in amts. of greater than the equiv. of combustible sulphur components contained in the sludge, and charging the sludge mixt. into the incinerating furnace so as to be combusted, so that the desulphurisation is carried-out in very high efficiency (90-95%).

By increasing the amt. of $Ca(OH)_2$, dolomite hydrate or magnesia hydrate to be added, harmful acidic gas generated in the combustion, e.g. HCl is neutralised simultaneously. The secondary in furnace reaction is carried-out under high temp. and fluidised state, so the reaction is carried out very rapidly even in solid phase-gas reaction, e.g. $Ca(OH)_2$-SO_2 reaction. 11.8.77 as 097211 (2pp34)

ISHI- ★ D15 30204B/16 ★J5 4030-680

Suppressing generation of noxious components in sludge incineration - by drying, admitting to fluidised medium under reducing atmos. and rapidly burning

ISHIGAKI KIKO KK 11.08.77-JA-097212

J09 Q73 (07.03.79) C02c-03 F23g-05

In incineration of a sludge contg. harmful matters, e.g. Cr^{6+} etc., e.g. sewage slude, industrial sludge etc. by admitting it into an inert medium fluidised under high temp. the improvement comprises initially drying the sludge until its water content becomes $\leqslant 40\%$, admitting the sludge into a fluidised-medium maintained under a reducing atmos. having the air ratio of 1.0-0.5 and under the gasifying temp. so as to be gasified, and combusting rapidly the gas under the air ratio of 1.05-1.25, so that the generation of harmful matters, e.g. Cr^{6+}, etc. and harmful gas, e.g. nitrogen oxides and sulphur oxides, etc. are effectively suppressed without necessitating any special installations.

The sludge is combusted under the air ratio and the temp. as low as possible due to the fact that the generation of Cr^{6+} and NOx is caused by a sufficient amt. of oxygen and high combustion temp. in the incineration. 11.8.77 as 097212 (2pp34)

AGEN ★ D15 30221B/16 ★J5 4030-892

Colorimetric determn. of phosphoric acid and arsenic acid ions - e.g. in river water, using reagent contg. molybdic acid in presence of reducing agent

AGENCY OF IND SCI TECH 12.08.77-JA-097220

E36 J04 R16 (E32) (07.03.79) G01n-31/22

Method of analysing phosphoric acid and arsenic acid ions comprises contacting a compsn. contg. molybdic acid in water-insol. state with a sample liq. contg. reducing agent or with a sample liq. and a reducing agent soln., and determining colourimetrically phosphoric acid and arsenic ions by colouration of the compsn. An agent for analysing phosphoric acid and aresenic acid ions consists of a compsn. contg. molybdic acid in water-insol. state, or the compsn. and an inert solid diluent.

Phosphoric acid and arsenic acid ions of ppb order can be determined by simple operation without requiring special tools or appts. and skillful technique. The concn. of phosphoric acid and arsenic acid ions in river water, sea water, etc. can be simply determined.

Molybdic acid in water-insol. state is water-insol. molybdate or molybdic acid adsorbed on anion-exchange resin. Solid diluent is e.g. silica gel, TiO_2 powder, etc. When phosphoric acid and arsenic acid ions are present in water, deep blue colour is formed by molybdic acid and the concn. of the blue colour is compared by eye or determined by absorptiometric method, etc. Reducing agent soln. is e.g. ascorbic acid aq. soln. 12.8.77 as 097220 (3pp50)

NIDR- ★ D15 30311B/16 ★J5 4031-083

Treatment of waste ozone scavenger - where amt. of hydrogen peroxide required is reduced by ensuring reaction between ozone and reagent in scavenger is completed

NIPPON DRY CHEM KK 30.07.77-JA-090997

E36 J01 (07.03.79) C02c-05/02

Treatment of waste ozone-scavenger (I) after removal of ozone (II) from a gas (III), is effected by (1) blowing (III) contg. (II) into the waste (I) under vigorous agitation, resulting in compketion of the reaction between (II) and reagent (IV) in (I) and (2) carrying out the reaction between (IV) and hydrogen peroxide (V)m by addn. of (V) to (I).

Usually a large amt. of unreacted (IV) remains in (I), such that a large excess of (I) must be used for complete removal of (II) from (I), when (I) is discarded, secondary pollution problems occur. If the unreacted (IV) is treated with (V), a large amt. of expensive (V) must be consumed In the method described the amt. of (V) can be reduced. 30.7.77 as 090997 (4pp42)

NIDS ★ D15 30312B/16 ★J5 4031-084

Regeneration of zeolite after absorption of ammoniacal nitrogen - by passing aq. ozone-contg. soln. through zeolite bed

NIPPON DENSHI ZAIRY 02.08.77-JA-092814

E33 J01 (07.03.79) B01d-15/06 C02c-05/02

Regeneration of zeolite (I) packed in a bed, after adsorption of ammoniacal nitrogen (II), comprises passing an aq. soln. (III) contg. ozone through (I)-bed, to decompose (II) into N_2 and water.

Pref. a small amt. of salts of Na, Ca and Mg is present in (III), because these metal ions can activate (I) by ion-exchange simultaneously with regeneration of (I).

When active carbon or activated clay is used for removal of (II) in waste water, it must be heated to decompose adsorbed (II) and this is costly. In the present method, (I) can be regenerated effectively and inexpensively. 2.8.77 as 092814 (4pp42)

EBAI ★ D15 30322B/16 ★J5 4031-098

Regenerating activated alumina granules contg. adsorbed silicic acid - by contacting with acidic or basic soln. and heat treating

EBARA INFILCO KK 12.08.77-JA-095990

E33 J01 (07.03.79) C01f-07/02

Regeneration of activated alumina (I) granules contg. adsorbed silicic acid (II) comprises elution of (II) by contact of (I) with acidic or basic soln. (III) and heat-treatment of (I) after sepn. from (III).

After contact of (I) with (III) and sepn. of (III), (I) is pref. treated by the following method: (1) when (I) is contacted with acidic (III), (I) is contacted with alkali reagent and basic water-sol. aluminium salt, such as sodium and potassium aluminate and (2) when (I) is contacted with basic (III), (I) is contacted with acid or acidic water-sol. aluminium salt, such as aluminium sulphate and chloride. After (1) or (2), (I) is washed with water.

Regenerated (I) is used for removing from water prior to use as feed-water in boilers. (I) can remove (II) with high efficiency. 12.8.77 as 095990 (3pp42)

DENK- ★ D15 30436B/16 ★J5 4031-792

Pretreating sample for COD determination - by removing free chlorine using column contg. activated metal

DENKI KAGAKU KEIKI 16.08.77-JA-097500

J04 R16 (08.03.79) G01n-01 G01n-31

Pretreatment of sample for the determination of chemical oxygen demand (COD) comprises passing acidified sample contg. free chlorine through a column filled with activated aluminium metal or alkaline earth metal and acidic desalted water.

Free chlorine in sample can be completely removed by simple method without causing change of COD component and COD value can be precisely determined. Also the amt. of consumption of column filler is advantageously small. The method is easily applicable to automatic determining appts. 16.8.77 as 097500 (5pp50)

MITQ ★ D15 30447B/16 ★J5 4031-956

Purificn. of waste water from human waste treatment - by pH adjustment with acid, froth sepn. and ozonisation

MITSUBISHI ELECTRIC CORP 12.08.77-JA-097272

(09.03.79) C02c-05/04

Water from the biological treatment or chemical oxidation treatment of human wastes is purified by subjecting to froth sepn. by aeration after adjusting to pH 3 to 5 using sulphuric acid or hydrochloric acid, and introducing into an ozonisation tank where the treated water is countercurrently contacted with an ozone contg. gas.

Method eliminates operational troubles due to frothing in the ozonisation treatment and thus reduces the amt. of ozone required. 12.8.77 as 097272 (4pp117)

MITC ★ D15 30448B/16 ★J5 4031-957

Treating hydroxy-acetone contg. waste water - by contacting with alkali and then with granular activated carbon

MITSUI PETROCHEM IND KK 16.08.77-JA-097466

A41 E17 (09.03.79) C02c-05/02

Method comprises contacting the waste water with an alkaline inorganic cpd., e.g., NaOH or KOH, to adjust the pH

Method not only effectively reduces the COD components present in hydroxyacetone-contg. waste water even in cold areas etc. but also is effective even where organics content in waste water change greatly. Thus, this method is applicable to treatment of waste water from the cumene process phenol-mfg. factory. 16.8.77 as 097466 (3pp117)

ASAG ★ D15 30449B/16 ★J5 4031-958

Reducing COD of waste water - by contacting with chlorine and supported metal peroxide to provide controlled amt. of hypochlorite

ASAHI GLASS KK 16.08.77-JA-097512

(09.03.79) C02c-05/04

Waste water contg. COD components, e.g. carboxylic acids, alcohols, phenols or saccharides, is treated by contacting with available chlorine and ≥1 of the peroxides of metals supported on activated alumina and/or silica gel in a proportion of 0.5-10 wt.%, e.g. Ni, CO, Cu, Mn, Zn, Ce, Pb, Mg, Al, Ba, Sr and Ti, at a pH of 6.5-8.5.

The method, requiring an amt. of hypochlorite which is equal to or in only slight excess of the COD components present in waste water, effectively treats high concns. of COD components at comparatively low cost. Method is applicable to the treatmnet of organic synthesis waste water, dyeing waste water, living refuse, gas-washing liquor, etc.

Pref. surface area and void space of the activated alumina and silica gel used are 100 to 500 m^2/g and 0.2 to 1.5 cc/g and 100-1000 m^2/g and 0.2 to 4.5 cc/g, respectively. 16.8.77 as 097512 (8pp117)

MITU ★ D15 30450B/16 ★J5 4031-960

Dewatering of organic sludge - by mixing with cationic high polymer coagulant and wooden fibrous material before dewatering

MITSUBISHI CHEM IND KK 16.08.77-JA-098045

A97 J01 (09.03.79) C02c-03

The organic sludge, i.e., excess sludge from the treatment of organics-contg. waste water using activated sludge, is mixed with a cationic high polymer coagulant in an amt. of 0.1-10 wt.% (w.r.t. solid content of sludge) and also with a wooden fibrous substance, e.g. saw dust or chaff, in an amt. of 5-200 wt.%, and then subjected to dewatering.

Method is capable not only of greatly dewatering organic sludge as to enable it to be easily handled and also to be incinerated with less fuel, but also of greatly reducing the emission of offensive odours from the sludge.

The cationic high polymer coagulants used include polymers of alkylaminomethacrylic esters, dialkyldiallylammonium halides, vinylpyridine, etc., and copolymers of acrylamides with these. 16.8.77 as 098045 (3pp117)

DAIN ★ D15 30451B/16 ★J5 4031-961

Surfactant-contg. treating agent for waste water - contains a condensn. polymer obtd. from sulphonated) 4,4'-di:hydroxy:di:phenyl sulphone and formaldehyde

DAINIPPON PHARM KK 16.08.77-JA-098382

A97 (A26) (09.03.79) B01d-21/ C02c-05/02*

Surfactant-contg. waste water is treated with a treating agent contg. 25-40 wt.% of a condensn. polymer, having an average mol.wt. of 5000-30000 and a 3.0-4.8 : 1 C atom : S atom ratio, obtd. from the condensn. reaction of 4,4'-dihydroxydiphenylsulphone, sulphonated 4,4'-dihydroxydiphenylsulphone, and formaldehyde, and then treated with a coagulant, e.g. $Al_2(SO_4)_3$, $FeCl_3$, $Fe_2(SO_4)_3$, Al polychloride, $CaCO_3$, polyacrylamide, etc., where the insol. substances so coagulated are sepd. for removal by means of filtration etc.

The method easily coagulates and sediments surfactant, partic. nonionic surfactants, present in waste water, together with residual unreacted treating agent to advantage. 16.8.77 as 098382 (9pp117)

AGEN ★ D15 30452B/16 ★J5 4031-965

Preventing deactivation of activated sludge - during waste water treatment by adding Nocardia bacteria

AGENCY OF IND SCI TECH 15.08.77-JA-097672

(09.03.79) C02c-01/06

Bacterium, cultivations, sepd. bacterium, or other treated bacterium, capable of coagulating activated sludge, which belong to the family of Nocardia bacteria are added to ted sludge from deflocculation and bulking. The bacteria is applicable to all types of sludges concerning urban sewage, industrial effluents, hydrocarbons, human wastes, and other environmental contaminants. The Nocardia bacteria used include, besides Nacardia, erythropoles KR-256-2, FERM-P No. 3923, etc. 15.8.77 as 097672 (4pp117)

SHOW ★ D15 30453B/16 ★J5 4031-966

Activated sludge treatment method - effective in treating high BOD waste at higher volume load of BOD while minimising space

SHOW A DENKO KK 17.08.77-JA-097834

(09.03.79) C02c-01/06

Treatment of waste water rich in BOD components is claimed where (1) waste water is subjected to an aeration treatment under conditions of 9000-15000 ppm sludge concn. and 8-15 kg BOD/m^3/day vol. load to reduce BOD to $\leqslant$ 200 ppm; and (2) the treated waste water from the first stage is subjected to an aeration treatment at supplying rate such that the concn. of sludge and the vol. load of BOD is 1.5-2.5 kg BOD/m^3/day.

Method, featuring the effective treatment of high BOD waste water at the higher vol. load of BOD, is capable not only of minimising space taken for treating BOD but also of facilitating the formation of easily seperable sludge. 17.8.77 as 097834 (4pp117)

NIAB- ★ D15 30454B/16 ★J5 4031-969

Recovering dye from dyeing waste water - by aerating water, filtering to separate insolubilised dye contg. conc. liquor, and treating liquor with caustic hydrosulphite to reduce dye

NIPPON ABCO KK 16.08.77-JA-097532

F06 (09.03.79) C02c-05 D06b-23/20

A method for recovering dye, partic. vat dye, present in dyeing waste water, in which waste water contg. vat dye is oxidised by air to insolublise the vat dye, the oxidised waste water is supplied to a super filter membrane under 1-5 kg/cm^2 gauge pressure to separate it into insolublised vat dye-contg. conc. liquor and permeated liquor, the conc. liquor is treated with a caustic soda-alkaline hydrosulphite to reduce the dye present into leuco dye which is in turn recycled to the dyeing bath, and the permeated liquor is recycled to the dyed prod. washing process.

The process has high efficiency. The super filter membrane used is combined with an ultrafiltration appts. The method is applicable to all types of vat dye-contg. waste water. 16.8.77 as 097532 (5pp117)

MITQ ★ D15 30501B/16 ★J5 4032-170

Sludge treatment device - for difficulty filterable sludge

MITSUBISHI ELECTRIC CORP 17.08.77-JA-098908

Q75 (09.03.79) B01d-43 B01j-01 C02c-03 F25d-31

A device is claimed for treating sludge difficult to filter. It comprises an inner pipe for passing the sludge and an outer pipe having a freezer chamber at the inlet end and heater chamber at the opposite outlet. The inner pipe is inserted into the outer pipe leaving a space between them. The object is to reduce the operation cost and improve the working efficiency.

The vol. of a coolant reservoir tank interposed between the freezer chamber and its freezer is made slightly larger than that of the chamber. A heat accumulating medium reservoir is disposed near the coolant tank so to be capable of heat exchange with it. The heat accumulating medium may be the same material as the coolant. 17.8.77 as 098908 (3pp26)

DAIK ★ D15 30503B/16 ★J5 4032-172

Collecting water from the air - by using a condenser through which e.g. a liquefied gas flows

DAIKIN KOGYO KK 17.08.77-JA-097814

J01 (09.03.79) B01d-05

A cooling unit is connected to a condenser having a condensing face. The air around the condenser is cooled, while the condenser is cooled by the cooling unit, until the water contained in the air is condensed, and it is recovered.

A circulating coil pipe is suitably disposed around a condenser/collector consisting of steel pipes or plates to cool it by a liquefied gas flowing in the pipe, thus forming dew drops over the collector.

Prod. may be used for drinking purposes or in industry. Arrangement is low cost. 17.8.77 as 097814 (4pp26)

EBAI ★ D15 30509B/16 ★J5 4032-179

Operation control of water prodn. device - in which operation pressure of ultrafiltration and microporous membrane depends on water level variation in tank

EBARA INFILCO KK 15.08.77-JA-097585

(09.03.79) B01d-13

Water contg. salts passes through an ultrafiltrating membrane or microporous membrane device under an elevated pressure, and a filtrate water is reserved in a tank and fed into a reverse osmosis device and/or electrodialyser for desalting the water. The operation pressure of the ultrafiltrating membrane device or microporous membrane device, depending on the water level variation in the reservoir tank. If it exceeds an allowable pressure, then the membrane of this device is washed.

A large amt. of water is economically produced. 15.8.77 as 097585 (5pp26)

FJIE ★ D15 30521B/16 ★J5 4032-192

Ozoniser for desulphurising exhaust gas, waste water treatment etc. - where inner wall of high voltage electrode is coated with insulator e.g. resin to increase cooling efficiency

FUJI ELECTRIC MFG KK 17.08.77-JA-098457

A85 E36 J03 (09.03.79) C01b-13/11

The device comprises a ground electrode and a high voltage electrode having a cylindrical outer cover made of a dielectric material. The inside of the latter electrode is water-cooled. The former electrode is inserted into the latter with leaving a discharge gap between them, into which a gas contg. oxygen or pure oxygen is fed to produce ozone.

The novelty is that the inner wall of the high voltage electrode is coated with an insulator such as resin. Both electrodes are connected to separate cooling systems through joints.

The cooling efficiency of the device is increased withou increase in size. 17.8.77 as 098457 (3pp26)

ASAD ★ D15 30524B/16 ★J5 4032-19

Chlorine-contg. basic aluminium sulphate prodn. - from chlorine contg. aluminium salt soln. and water insoluble aluminiu hydroxide

ASADA KAGAKU KOGYO 15.08.77-JA-097956

E33 (09.03.79) C01f-07/74

Method comprises the reaction between (i) water-insol. aluminium hydroxide (II) of the formula, $Al_2(OH)$ 5.99 - 5.5 (Cl) 0.5 - 0.01, which is obtd. by the reaction between aluminium chloride (III) and alkali metal aluminate (IV), an (ii) aq. soln. of aluminium salt (V) contg. aluminium sulphate, at $<$80°C under atmospheric pressure in the condi ion that the basicity of the Al sulphate (I) produced becomes $\leqslant$50%. (V) should contain 0.1-30 wt.% of chlorine pe Al_2O_3.

(I) is used as coagulant and esp. effective for coagulation of iron-contg. water. (I) can be stored during 6-12 m nths without formation of ppte. 15.8.77 as 097956 (4pp42

AGEN ★ D15 30716B/16 ★J5 4032-69

Aggregating agent NOC-1 for microbes - is prepd. by culturin Nocardia bacteria

AGENCY OF IND SCI TECH 15.08.77-JA-097673

(D16) (10.03.79) B01d-21/ C02c-05/02 C12d-13*

The method comprises culturing bacteria belonging to Nocardia and recovering the aggregating agent NOC-1 from the cultured prod. The agent can be used to preve bulking by the activated sludge process in waste water treatment and for removing floating microbes from fermentation.

Pref. bacteria is Nocardia erythropores KR-256-2 (FERM-P 3923). The culture can be practiced either by liq. or solid culture. The liq. culture is at 20-40°C an pH 4-8, using submerged culture for 10 days. After ad of organic solvent to the clear top soln., the formed ppt is recovered by centrifuging and is refined by dissolving it in water, removing insolubles, adding acetone and recovering the ppte. The obtd. prod. NOC-1 is a white, water-soluble powder and shows excellent aggregating a tivity on microbes. For solid culture, the bacterial body is suspended in physiologically saline water and after stirring the suspension, the top clear is recovered. From the top clear objective aggregating agent NOC-1 can be obtd 15. 8. 77 as 097673 (3pp5)

TELN- ★ D15 30815B/16 ★J5 4033-284

Regenerating humic acid-type heavy metal ion exchange materials - involves replacement of salts using crushed alkaline earth metal carbonate(s)

TELNITE KK 19.08.77-JA-099154
A91 J01 M25 (10.03.79) B01j-01/09 C09k-03

Regeneration of alkaline earth metal-type heavy metal ion exchange materials, so as to convert an H-type humic acid based heavy metal ion exchange material having been eluted of heavy metals with acid into the alkaline earth metal type ones, comprises finely crushing carbonates of alkaline earth metal and placing in a packing vessel, adding acetic acid and water to produce an aq. soln. of acetates of alkaline earth metals, supplying the acetate soln. to an adsorption tower to convert the H-type humic acid based heavy metal ion exchange material partly into the alkaline earth metal type one, returning the effluent to the packing vessel, and reproducing the soln. of acetate of alkaline earth metals in the vessel for supply into the adsorption tower, and repeating the above procedures.

The alkaline earth metal carbonates are e. g. crushed to a size of 2-30 mm, and the soln. of acetic acid is e. g. of concn. 0. 01-1. 5N. The process effects regeneration of humic acid type heavy metal ion exchange materials by replacement of salts. 19. 8. 77 as 099154 (5pp43)

TELN- ★ D15 30816B/16 ★J5 4033-285

Regeneration of heavy metal ion exchange material - of the humic acid type

TELNITE KK 19.08.77-JA-099155
A91 J01 M25 (10.03.79) B01j-01/09 C09k-03

Regeneration of alkaline earth metal type heavy metal ion exchange material comprises, in converting H-type fumic acid based heavy metal ion exchange material having been eluted of heavy metals with acid into alkaline earth metal type, crushing finely carbonate of alkaline earth metals to place in a packing vessel together with water, blowing CO_2 into it to produce bicarbonates of alkaline earth metals, supplying the soln. of bicarbonate of alkaline earth metals to adsorption tower to convert in the tower the H-type humic acid based heavy metal ion exchange material partly into the alkaline earth metal type, returning the effluent to the packing vessel to produce again the bicarbonate of alkaline earth metal and supplying the soln. of the bicarbonate to the adsorption tower, followed by repeating successively the above procedures.

The carbonate of alkaline earth metals are crushed to particle size of 2-30 mm and CO_2 is blown at a ratio of 10-40 kg per 1 m^3 of the ion exchange material based on humic acid (T-type). The process regenerates the humic acid type heavy metal ion exchange material by replacement of salts in economical ways. 19. 8. 77 as 099155 (4pp43)

MITU ★ D15 30817B/16 ★J5 4033-286

Polystyrene type anion exchange resin regeneration - by treating with aq. nitrate and/or nitrite soln.

MITSUBISHI CHEM IND KK 18.08.77-JA-098844
A91 J01 (A13) (10.03.79) B01j-01/09 C02c-05/08

Regeneration of anion exchange resins based on polystyrene of giant network form comprises treating a styrene-based, giant network-formed, strongly basic anion exchange resins polluted with colouring organic substances with aq. soln. contg. nitrates and/or nitrites.

The anion exchange resins are e. g. those with micropore dia. of >70A, micropore volume of >0.1ml/g and specific surface area of >0.1 m^2/g, having quart. ammonium groups. The nitrates or nitrites are e. g. sodium nitrate, potassium nitrate, calcium nitrite, etc. being prepd. to 0. 1-8N aq. soln. The process effectively regenerates styrene based anion exchange resins polluted with lignin, humic acid, caramel, aldehydes, ketones,

er processes for water treatment. 18. 8. 77 as 098844 (5pp43)

MITR ★ D15 30820B/16 ★J5 4033-289

Adsorbent material for noxious substances etc. - is composed of inorganic fine particles, organic polymers and fibres having fine fibrils on the surface

MITSUBISHI RAYON KK 18.08.77-JA-098955
A97 J01 (10.03.79) B01d-15 C02c-05/02

Adsorbent material is composed of inorganic fine particles and organic polymers, and fibrous material having fine fibrils on the surface.

The inorganic fine particles are e. g. oxides, hydroxides or salts of Mb, Zn, Ba, Fe, Co, Ni, etc. and activated carbon, and the like, which is e. g. extruded, spun, etc. with polymers e. g. styrene, acrylic acids, acrylonitrile, etc. to produce composite materials. The fibrous materials are e. g. split fibres, etc.

The material is suitable for use in treatment of waste water for removal of noxious substances, and partic. with its reduced resistance to flowing water, can be utilised for a long period, with an improved adsorption capacity retained. 18. 8. 77 as 098955 (3pp43)

TAKE ★ D15 30823B/16 ★J5 4033-293

Activated carbon prodn. - by activating carbonaceous material, contg. potassium and/or sodium cpd. and calcium cpd., using oxidising gas

TAKEDA CHEMICAL IND KK 18.08.77-JA-099124
E36 J01 (10.03.79) C01b-31/10

The process comprises activating carbonaceous material with oxidising gas to produce activated carbon; potassium and/or sodium cpd. and/or calcium cpd. are added to the carbonaceous material in an amt. (as metals) of 0. 2-3 wt. % giving a Ca/(Na+K) wt. ratio $\geqslant 0.5$. The oxidising gas is e. g. steam, CO_2, O_2, etc., and activation is at 850-1300°C.

The process produces activated carbon with varying micropore dias. using the same raw materials, which are useful for tert. treatment of municipal sewages. 18. 8. 77 as 099124 (4pp43)

MITK ★ D15 30836B/16 ★J5 4033-364

Waste water treatment by coagulating solids - involves addn. of polyacrylamide soln. and formalin reaction prod. with e.g. lower alkylamine

MITSUI TOATSU CHEM INC 19.08.77-JA-098740
A95 (12.03.79) B01d-21/ C02c-05/02*

Coagulation sedimentation of fine suspended solids contained in industrial and domestic waste water is improved by dissolving a polyacrylamide having an extreme viscosity > 10 in aq. 1N-$NaNO_3$ soln. at 30°C, e. g. a homopolymer of acrylamide, acrylonitrile-acylamide copolymer, acrylamide-acrylate copolymer, acrylamide-dimethylaminoethylmethacrylate copolymer, etc. and $\geqslant 1$ cpd. selected from the reaction prods. between formalin and a lower alkylamine, methylaminomethanol, n-propylaminomethanol, dimethylaminomethanol, etc., a reaction prod. between the lower alkylamine and a lower alkyleneoxide, e. g. ethyleneoxide and propyleneoxide, etc., and an initial condensn. prod. between the lower alkylamine and epichlorohydrin, in water just before the waste water treatment, and subsequently adding the soln. mixt. to the waste water to be treated.

The process further exhibits excellent dewatering of surplus sludge resulting in the activated sludge treatment. 19. 8. 77 as 098740 (5pp34)

KUBI ★ D15 30837B/16 ★J5 4033-365

Biological (de)nitrification of waste water - by adjusting pH and determining oxygen and nitrogen oxide(s) content prior to addn. of organic carbon source

KUBOTA KK 19.08.77-JA-099770
(12.03.79) C02c-01/02

In biological nutrification and denitrification of sec. treated waste water, e. g municipal or domestic sewage the improvement comprises (i) detecting the pH value of the sec. treated water in a nitrification vessel, (ii) supplying an alkali to adjust its pH to ~ 8, (iii) detecting the dissolvoxides content of the water to predetermine the amt of an organic carbon source necessary for the denitrification, and (iii) supplying the predetermined amt. of the organic carbon source to the water to carry out the denitrification.

Nitrification and denitrification rates are increased to high efficiency, and the amt. of the organic carbon source used is reduced. Further the BOD content of the treated water is hardly increased due to the fact that the amt. of the organic carbon source is not used in excess. 19. 8. 77 as 099770 (3pp34)

DAIL ★ D15 30956B/16 ★J5 4033-876

Liq. separator contg. planar semipermeable membranes - in which membrane is stretched over spacer and supported by plate against liq. feed pressure

DAICEL KK 10.01.77-JA-001729

J01 (12.03.79) B01d-13 B01d-31

Device separates a liq. into components through a planar semi-permeable membrane in the ultrafiltration of reverse osmotic sepn. method. The surface of each membrane can be cleaned using sponge balls.

Each membrane is stretched over one or each side face of a spacer having an opening so as to face the effective area of the membrane at the opening, and supported by a support plate against the liq. feed pressure. The assembly is held between end plates and they are clamped tightly into a unit by a clamper. 10. 1. 77 as 001729 (4pp)

MITU ★ D15 30964B/16 ★J5 4033-884

Regenerating basic anion exchange styrene resins - by treating with aq. inorganic acid, treating with organic solvent and water washing

MITSUBISHI CHEM IND KK 23.08.77-JA-100887

A91 J01 (12.03.79) B01j-01/09 C02c-05/08

Basic anion exchange resins which are contaminated with organic materials, e.g. lignin, humic acid, tannic acid, etc. are regenerated by (i) treating with a 0.5-8N aq. soln. of an inorganic acid, e.g. hydrochloric acid, sulphuric acid, nitric acid, etc. in an amt. 0.5-10 v/v times as much as the anion exchange resin; (ii) treating with an organic solvent or a mixt. of water and an organic solvent e.g. methyl alcohol, ethyl alcohol, acetone, MEK, ethyl acetate, dioxane, DMSO, DMF etc. at room temp. to 60°C; and (iii) water washing.

Method is capable of adsorbing and removing colouring organic material which refuse the activated carbon treatment method. 23. 8. 77 as 100887 (5pp117)

SUMQ ★ D15 30966B/16 ★J5 4033-887

Sepg. oil from water - using polar, plastics-coated chaff

SUMITOMO METAL IND KK 20.08.77-JA-100019

A88 H03 J01 (12.03.79) B01d-15 C02b-09/02 C02c-05/02

Polar plastics-coated chaff (obtd. by dipping it in a soln. of a plastic, e.g. PVC, polyethylene, polypropylene, polystyrene, etc. in an organic solvent, or spraying the plastics organic solvent soln. over the chaff surface), is spread over oil floating on water to agglomerate the oil into 50-60 mm size lumps.

The use of the plastics-coated chaff for removal of oil on water enables one to remove oil very easily and in a very short time as well as at much lower cost. 20. 8. 77 as 100019 (3pp117)

HITA ★ D15 30970B/16 ★J5 4033-892

Ozoniser for prodn. of ozone to treat drain and industrial waters - has electrode pairs positioned in tank and connected to high voltage source through bush-type insulators with embedded fuses

HITACHI KK 22.08.77-JA-099555

E36 J03 (12.03.79) C01b-13/11

Device comprises a high voltage planar electrode covered with a dielectric member, a low pressure electrode facing the high voltage electrode, and an a-c high voltage source for application of a high voltage between the electrodes to ozonise a gas flowing through a discharge gap formed between the electrodes.

Several assemblies of electrodes are disposed in a tank and connected to the high voltage source through bush-type insulators inserted into holes in the wall of the tank. Protection fuses are disposed in the tank. Each fuse is embedded in each insulator together with the electrode. 22. 8. 77 as 099555 (3pp26)

HITF D15 37159X/20 = J7 9006-029

Sea water desalination - using multisatage distillation appts. for improved heat utilization

HITACHI SHIPBLD ENGG KK 01.10.74-JA-113093

*J01 (23.03.79) *J51039-574 B01d-01/26*

To prevent the generation of scales on the inner faces of lower heating tubes and to use heat utilisation in the distillation by circulating a part of a concd. hot soln. after it is reheated, for distilling a sea water into a fresh water. In the multistage distilling of sea water, a part of a concd. hot soln. is removed from an evaporating part of the fifth stage and reheated in the reheating tube of a reheater, and the reheated hot soln. is introduced from the fifth stage into the inlet part of the third stage of any evaporating stages. 1.10.74 as 113093 B01d-1/26 (23.3.79) HITACHI SHIPBLD ENGG KK (4pp) (J5 1039574)

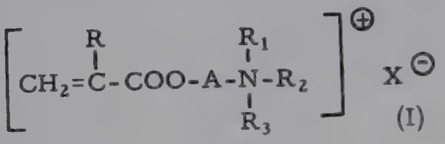
TOAG D15 53254Y/30 = J7 9006-078

High molecular weight cationic polymer - used e.g. as dye assistant, fibre modifying agent, flocculant or paper sizing agent

TOA GOSEI CHEM IND LTD 11.12.75-JA-146855

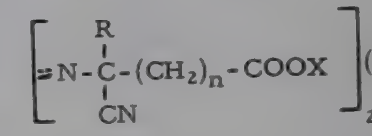
*A14 F06 (A82 A87 A91 F09) (24.03.79) *J52071-586 C08f-02/10 C08f-04/40 C08f-20/34*

Prepn. of high mol. wt. cationic polymer, wherein acrylate or methacrylate of formula (I) is polymerised in the presence of water-soluble azo cpd. of formula (II) and a redox series of polymerisation initiator at pH 6-8.



$$\left[CH_2=\overset{R}{\overset{|}{C}}-COO-A-\underset{R_3}{\underset{|}{\overset{R_1}{\overset{|}{N}}}}-R_2\right]^{\oplus} X^{\ominus}$$

(I)



$$\left[=N-\underset{CN}{\underset{|}{\overset{R}{\overset{|}{C}}}}-(CH_2)_n-COOX\right]_2$$

(II)

In (I), R=H or methyl; R_1=H or 1-4C alkyl; R_2 and R_3=1-4C alkyl; A=2-4C straight or branched chain aliphatic gp.; and $X^{\ominus}$ = negative gp. (possible to produce a salt with ammonium nitrogen).

In (II) R=H or 1-4C alkyl; n=1-4; X=H, alkali metal, alkali earth metal, ammonium or 1-10C organic amine salt.

The polymer is used as a dye assist agent, fibre-modifying agent, filtering property-improving agent, paper sizing agent, cationic flocculating agent, etc. (I) is e.g. acryloyloxyethyl dimethylamine hydrochloride, methacryloyloxyethyl dimethylamine sulphate, acryloyloxyethyl trimethylammonium chloride, etc. (II) is e.g., 3,3'-azobis-3-cyanopropionic acid, 4,4'-azobis-4-cyanovaleric acid 5,5'-azobis-5-cyanocaproic acid, and their alkali metal salts etc. The polymerisation is pref. carried out at 15-30°C. 11.12.75 as 146855 C08f-20/34; 2/10; 4/40 (24.3.79) TOA GOSEI CHEM. KK (7pp) (J5 2071586)

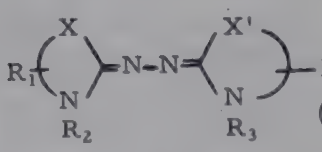
WAKP D15 87408X/47 = J7 9006-232

Azine derivs - as reagents for determining residual chlorine in drinking and pool waters

WAKO PURE CHEM IND KK 20.11.73-JA-130565

*E36 J04 R16 (E13) (26.03.79) *J50081-595 +G01n-31/22*

An arom. heterocyclic azine (I) (where R_1=SO_3H; R_2, R_3= alkyl; X and X_1=gps. forming heterocyclic cpds) is a reagent for determining residual Cl in water. The reagent is used for simple determination of residual Cl in drinking water and pool water.



(I)

Thus, 2,2'-azinobis(3-ethylbenzothiazolone-6-sulphonic acid) 6g and tartaric acid 60g were dissolved in distilled water. A test water (12ml) was added to a test tube contg. 0.5ml of an aq. soln. of (II). The absorbance was measured at 415 mμ in <1 min. to determine residual Cl. The total Cl was determined by iodometric titration. For a test water, the determined total residual Cl 0.17, free Cl 0.01 and combined Cl 0.16ppm. 20.11.73. as 130565 G01n-31/32 (26.3.79) WAKO PURE CHEM. IND. KK (5pp) (J5 0081595)

YLEI- ★ D15 B/16 ★SF 7702-288
Venting basins and biofilter in cleaning installations - and method for making their operation effective
OY YLEINEN INSINOOR 27.07.77-SF-002288
(30.03.79) C02c

CHAR/ ★ D15 31082B/16 ★SU -609-728
Purificn. of acidic iron-contg. aq. effluents from pigment mfr. - by treatment with excess ammonia soln. followed by heating and aeration
CHARIKOV V M 12.01.77-SU-442073
(05.05.78) C02c-05/02

Acidic Fe-contg. effluents from pigment prodn. processes are treated with NH_4OH in a 30-50% stoichiometric excess to produce a Fe-contg. ppte. and $(NH_4)_2SO_4$. Then the mixt. is aerated at 30-40 °C. The method improves the degree of Fe removal.

Charikova V.M, Zudov V.G., Smirnov E.M., Bul. 21/5.6.78 12.1.77 as 442073 (2pp314)

WASU ★ D15 31187B/16 ★SU -609-971
Ultrasonic sensor for active slime level in effluent - uses resonant signal shaper, pulse generator, amplifier and relay unit
WATER SUPPLY HYDROGEOL 17.05.76-SU-362324
R13 (18.05.78) G01f-23/28

Ultrasonic sensor for monitoring the level of active slime in effluent waters comprises pulse generator coupled to resonant signal shaper and piezoelement connected to amplifier and to relays.

In order to increase resolution and interference rejection and to reduce sensitivity threshold, the system is provided with resonant signal shaper whose multiple coeff. of the peak low frequency component to the frequency of the ultrasonic signal is of the order of 0.001. The pulse generator is coupled to pulse shaper whose output is joined to the ultrasonic transsensor.

Shturmin A.B., Smirnov D.N., Filipovich P.N. et al. Bul. 21/5.6.78 17.5.76 as 362324 (2pp847)

ZHDA= ★ D15 31225B/16 ★SU -610-534
Compression evaporator for sea-water distillation - has jet compressor connected to inlet pipe of separator and placed inside the latter
ZHDANOV METAL INST 09.04.74-SU-013620
J01 (12.05.78) B01d-01/28

Compression evaporating installation, for water-prodn. and a seawater-distn. by the thermo-compression method, consists of a body, heating chamber, sepn. device above the heating chamber with inlet and outlet pipes, and a jet compressor, the receiving chamber of which is connected to the outlet pipe of the separator. Construction is simplified by disposing the compressor inside the separator and connecting it by a diffuser to the heating chamber.

Solovev A.A., Trunov A.Ya., Gubenko V.V. et al. Bul. 22/15.6.78 9.4.74 as 013620 (2pp29)

BOLY/ ★ D15 31230B/16 ★SU -610-539
Raking device for pulp or soln. concentrator - uses sagging chain for removing agglomerated sediment from revolving rakes and chain jolting shakers
BOLYACHKIN P I 13.12.76-SU-438709
J01 (12.05.78) B01d-21/04 C02c-01/26

Redn. of build-up of agglomerated sediments on the blades of raking mechanism in the concentrator of pulps and solns used in metallurgical, chemical, etc. inds., is ensured by addn. of the device for continuous removal of the sediment agglomerating on the raking mechanism.

The device consists of sagging chain whose one end is fixed to stationary overflow cylinder, and the other to the casing of the concentrator. The rotating arms of the raking mechanism contain shakers for jolting the chain.

Bolyachkin P.I., Prokopov I.V., Podnesbesnyi G.P., et al. Bul. 22/15.6.78 13.12.76 as 438709 (2pp135)

KNIU= ★ D15 31231B/16 ★SU -610-540
Deep loosening of charge in water filtering units - using carriage with scarifying turnable comb having tines of double length for return movement
KNIU COAL RES DES 19.05.76-SU-363482

Reduced consumption of wash water for regeneration of the filtering charge in open filters of water treatment plants and increased duration of the filtration cycle are ensured by periodical deep loosening of the surface of the filtering charge.

For this purpose, the tines of the turnable comb are perpendicular to each other in pairs in which one of the tines is twice as long as the other.

Zharov S.V., Tekinidi K.D., Evsteshin P.I., et al. Bul. 22/15.6.78 19.5.76 as 363482 (3pp135)

LEEN= ★ D15 31232B/16 ★SU -610-541
Self-cleaning filtering unit for water purification - contains porous plastic filtering discs clamped between impermeable plates forming inverted truncated cone-shaped block
LENGD ENG CONS RES 24.12.76-SU-434522
A88 J01 (12.05.78) B01d-29/04

The filtering natural or effluent water and self-cleaning of the porous plastic filtering discs clamped between impermeable plates is improved by preventing adherence of agglomerated sediment to the edges of filtering material.

The filtering unit consisting of plastic discs sepd. by impermeable plates is made into the shape of an inverted truncated cone with 43-48° of conicity.

Smirnov O.V., Bul. 22/15.6.78 24.12.76 as 434522 (2pp135)

KIGO= ★ D15 31234B/16 ★SU -610-543
Suspensions dewatering filter press - has two endless belts of filter cloth passing over vacuum chambers, with regulator and resilient material side pieces
KIEV GORISPOLKOM (UARB=) 01.09.76-SU-397968
J01 (12.05.78) B01d-33/14

Filter press for dewatering suspension, e.g. effluent residues, comprises filter cloth strips, in the form of two endless conveyor belts, bent around drums, vacuum chamber with rollers drains and a loading hopper. The dewatering process is made more effective, due to the pressure on the suspension being controlled and discharge of the suspension at the edges of the belts being eliminated, by installing a regulator in the vacuum chambers, with sides made from resilient material fastened along the edges of the filter strips from the outside.

Shadyr V.D., Skripchenko T.Ya. Samokish V.Ya. et al. Bul. 22/15.6.78 1.9.76 as 397968 (4pp29)

NONB= ★ D15 31251B/16 ★SU -610-564
Hydrocyclone battery for clarification of aq. suspensions - has auxiliary group of parallel hydrocyclones and collectors for both fractions with toroid condensed fraction collector
NON-BLACK SOIL AGRI 22.07.76-SU-390978
J01 P41 (11.05.78) B04c-05/24

The battery comprises a pre-sepn. hydrocyclone with tangential inlet, sand and drain outlets and gp. of parallel hydrocyclones in the drain line, the feed inlets of which are connected tangentially to the drain outlet of the pre-sepn. cyclone and are at the same level, evenly disposed about its circumference. To improve efficiency, it has an auxiliary gp. of parallel hydrocyclones in the drain line, diminishing in size, and collectors of clarified and condensed fractions.

The clarified fraction collector is in the form of a vessel set co-axially above the pre-sepn. cyclone to which the drain outlets of the auxiliary gp. of cyclones are connected, and with a tangential outlet. The condensed fraction collector is toroid.

Tupyakov N.E., Pestsov G.V., Moroz V.S. et al. Bul. 22/15.6.78 22.7.76 as 390978 (3pp18)

BILL- ★ D15 B/16 ★SW 7709-924
Treatment of discoloured waste water contg. chlorine - derived from chlorine-based bleaching process
BILLERUD UDDEHOLM A 05.09.77-SW-009924
F09 (02.04.79) D21c-11

Cleaning process for dark coloured waste water contg. chlorine derived from a chlorine based bleaching unit involves the waste being treated on a bed contg. a particulate weak basic anion exchanger and/or an absorption resin. This takes up the coloured, broken down product of lignin from tain degree. After this, the resin bed is eluated with the aid of an alkaline soln.

At least a fraction of the eluate liberated from the resin bed has a pH of ⩾2, and the main part of the total dry substance content in the waste separates out and is passed to a recuperation plant for reprocessing. 5. 9. 77 as 009924 (-pp1161)

SVTR- D15 40330Y/23 =US 4110-044

Measurements of suspended solids in flowing liq. - using light source with square of received signal as measured parameter

SVENSKA TRAFORSKNIN 01.12.75-SW-013524
*F09 J04 R16 (29.08.78) *DT2654-155 G01n-21/26 +G01n-33/46*

The percentage of suspended substances in a flowing medium is indicated by illuminating the medium with light perpendicular to the flow and measuring the light radiated from the medium.

The radiated light is detected in a predetermined direction by a light detector producing a signal, the effective value of that portion of the signal which is within a predetermined frequency range being squared to give the required percentage. The result is accurate and independent of particle size variation. Measurement of suspended fibres in waste water in the forestry industry is referred to. 23. 11. 76 as 744362 (10pp1379)

KIRS/ ★ D15 31382B/16 ★US 4110-170

Domestic water distillation - with condenser and thermostat admitting water to boiler in response to distilled water temp.

KIRSCHMAN F C 28.04.76-US-681051
(29.08.78) B01d-03/42

A domestic water still comprises a boiler with a tubed condenser mounted directly above it. Feed water is fed to a reservoir which surrounds the condenser tube to preheat the water prior to transfer to the boiler via a wier. A valve senses the temp. of distilled water discharged from the condenser tube and controls the addn. of further water to the condenser reservoir.

Pref. the temp. sensitive valve adjusts the flow of feed water to maintain a distilled water temp. of 190-210°F. The boiler includes a drain which removes non-volatile components from the feed water.

The appts. distills water for domestic use. 28. 4. 76 as 681051 (7pp295)

UNVO ★ D15 31384B/16 ★US 4110-172

Pond for collecting solar energy - comprises insulated reservoir with water and air inlets and outlets below blackened plate

UOP INC 28.03.77-US-782147 (31.01.77-US-764255)
(29.08.78) B01d-01/14

Solar energy collecting panel comprises a reservoir for water with a bottom and vertical sidewalls. The sidewalls are provided with air and water inlets and outlets, the air conduits being above the water conduits.

A horizontal plate with a black coating extends over the reservoir above the conduits. The plate is supported by spaced-apart vertical standards resting on the reservoir bottom. A transparent cover over the reservoir provides a dead air space above the plate. The reservoir bottom and sidewalls include insulation.

Used for the recovery of potable water from river or sea. 28. 3. 77 as 782147 (+31. 1. 77-US-764256) (6pp1050)

UNVO ★ D15 31385B/16 ★US 4110-174

Desalinating sea water in multistage flash evaporator - with solar pond heating and power generation via turbine

UOP INC 16.12.76-US-751424
(29.08.78) B01d-03/06

An appts. for desalinating water comprises preheating a first sea water stream and further increasing its temp. in a solar pond. The heated sea water is fed to a series of 4-10 vacuum flash evaporators. Vapour from the first stage drives a turbine to generate power while vapour from the remaining stages is condensed by indirectly contacting the first sea water stream to yield potable water.

Vapour from the turbine is condensed by indirect contact with a second stream of the sea water colder than the first and used also to condense vapour from the final stage of the appts. Preferably the final stage is operated [illegible] Pref. a temp. difference of 15°F exists between the two streams.

The appts. generates power and potable water. 16. 12. 76 as 751424 (10pp295)

GEOP D15 49552A/27 =US 4110-208

Removal of metal hydroxide(s) by magnetic method - by treating with water soluble ferromagnetic organic compsn.

GEORGIA PACIFIC CORP 24.11.75-US-634832 (24.06.77-US-809640)
*A97 E31 (29.08.78) *US4089-779 C02b-01/20*

Agent for flocculation of finely dispersed particles in an aq. medium comprises mixt. of (a) water-soluble salt(s) of Al and/or Fe with (b) ferromagnetic lignosulphonate, ferromagnetic sulphonated tannin or ferromagnetic sulphonated phenol condensed with an aldehyde present in the mixt. in an amt. such that the metal content of (b) is 0. 5-20% of the metal content of (a).

A magnetic floc comprises Fe- and/or Al hydroxide associated with a ferromagnetic lignosulphonate in an amt. sufficient to impart magnetisation to the hydroxide to be attracted to a magnetic field of a magnetic filter. 24. 6. 77 as 809640 (5pp984)

CHER/ D15 77610X/42 =US 4110-209

Chemical treatment of waste water and sewage - by intensive mixing with flocculating agents under turbulent conditions

CHERDRON E (GIUL) 31.05.75-DT-524172
*(29.08.78) *BE-842-304 C02b-01/20*

Chemical efficiency of a precipitating agent with a metal base is increased in the treatment of a medium contg. wat by initially conducting, by pressure, the medium to be tre ated into a mixing cell and mixing it in free turbulence wit a precipitant soln. contg. the agent. A reaction mixt. is formed contg. flocs, and conducted into a sepg. basin. Flocs are removed from clear water in the basin. Pref. the precipitating agent is ⩾1 water-sol. aluminium or iron (III) salt.

Esp. used in the treatment of water, waste water and sludge contg. dissolved and undissolved organic and inorganic contaminants. 1. 6. 76 as 691717 (4pp931)

HENR/ D15 06711A/04 #US 4110-21

Lime water soln. for sewage treatment - is homogenised by ascension between slats forming filter and fine deposition zones

HENRIKSON S A 12.07.76-SW-007957 (07.07.77-US-813773)
*(29.08.78) *DT2731-271 B01d-21/02 +C02b-01/20*

Homogeneous lime water solns. are prepd. from a lime suspension by introducing the suspension at the bottom of a compartment in which it is caused to rise to leave at th top. During the upward flow, the suspension is caused to pass lamellas which create a sludge zone at their lower end in the compartment. The rising lime suspension is f tered in the zone, while the lamellas create a clarificatio zone in which the fine particles are sepd. at the upper en of the compartment. 7. 7. 77 as 813773 (6pp974)

LANK D15 56148Y/32 =US 4110-21

Nonflammable, nontoxic compsn. for dispersing oil spillages comprises ester emulsifier, diester solvent and glycol ether as pou point depressant

LANKRO CHEMICALS LTD 07.11.75-GB-046255
*A97 E17 H03 (E14) (29.08.78) *FR2330-653 B01f-17/36 C02 01/18 +B01d-17/02*

Concentrate for dispersing oil spillages comprises 20-75 wt. % emulsifying agent which is a monoester of an aliphatic carboxylic acid and a polyoxyalkylene glycol and has formula $RCOO(C_mH_{2m}O)_eH$ where R is the aliphatic hyd carbyl gp. of a 10-22C fatty acid; m is 2-4 such that the is ⩾1 C_2H_4O gp. per molecule; and e is ⩾2.

Concentrate further comprises 77-15 wt. % solvent wh ich is a diester of an aryl or alkyldicarboxylic acid with monohydric aliphatic alcohol and has formula R^2O-CO-F $COOR^4$ where R^2 and R^4 are 5-13C aliphatic hydrocarbyl gps. and OCO-R^3-COO is the diacyloxy gp. derived fron the acid; and 3-15 wt. % pourpoint depressant which is a monoalkyl ether of (polyoxy)alkylene glycol and has forn $HO(C_2H_{2n}O)fR^5$ where n is 2-4; f is 1-5; and R^5 is 1-6C alkyl.

The compsn. is free of hydrocarbon solvent, chemic stable over a wide temp. range, and is readily diluted

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8th June 1979

CENTRAL PATENTS INDEX

Material Despatched in Consignment of 8th June 1979

1: ALERTING BULLETINS - COUNTRY ORDER

31553B - 33320B (B17)

EXAMINED JAPANESE APPLICATIONS

The advanced version of the alerting abstracts which will appear as the current version in Week B22 Alerting Bulletins (Country Order) are included in this week's consignment.

2: ALERTING BULLETINS - CLASSIFIED

29731B - 31552B (B16)

3: WEEKLY ALERTING BULLETIN INDEX BOOKLET

31553B - 33320B (B17)

4: BASIC ABSTRACTS JOURNALS

27847B - 29730B (B15)

7: COMPLETE SERIES BASIC ABSTRACTS ON MICROFILM

Reel 249 00001B - 02500B B01/2 delayed for technical reasons

8: PROFILE BOOKLETS

DELAYED

PROFILE MANUAL CODE CARDS

Profile 2A
Section A

A2 140080 - 140087 (B12)
A10 140228 - 140253 (B12)

Profile 21A
Section H

14109 - 14113 (B12)

Section J

19915 - 19919 (B12)

Section N

02788 - 02814 (B10)

Directors: M. Hyams *(Chair. & Man.)* V. S. Hyams B. G. Paver A. B. Comfort P. T. Smith *Executive Directors:* A. M. Brooks M. J. Whiffin H. Birnbaum M. D. Dixon H. Winning I. S. Smith P. Norton S. J. Newey C. J. Page K. M. Walker M. E. Pope R. H. Hope T. M. Harvey

9: CS MICROFILM

A	Reel 26	19845B - 20276B	(B11)
A	Reel 28	21682B - 22110B	(B12)
B	Reel 13	20394B - 22099B	(B12)
C	Reel 6	15652B - 18270B	(B10)
D	Reel 10	20392B - 22436B	(B12)
E	Reel 17	21713B - 22298B	(B12)
E	Reel 18	22299B - 23821B	(B12)
L	Reel 7	17313B - 20173B	(B11)

10: COMPLETE SPECIFICATION BOOKS

B	No. 1113	27847B - 28136B	(B15)
B	No. 1114	28137B - 29730B	(B15)
C	No. 683	27847B - 29730B	(B15)

13: COMPANY CODE CARDS

25901B - 27846B	(B14)

14: SECTIONAL BASIC PATENTEE INDEXES

D, F, G, K	(A01-A51)

17: MANUAL CODE CARDS

A	140072 - 140431	(B12)
B	25901B - 27846B	(B14)
C	25901B - 27846B	(B14)
D	23343 - 23401	(B12)
E	60643 - 60818	(B12)
F	31193 - 31262	(B12)
G	20684 - 20760	(B12)
H	14084 - 14126	(B12)
J	19875 - 19948	(B12)
K	06349 - 06361	(B12)
L	27500 - 27585	(B12)
M	33931 - 34017	(B12)

19: PUNCH CODE CARDS

B	18002B - 19996B (358 cards)	(B10)
C	18002B - 19972B (256 cards)	(B10)
E	14159B - 15966B	(B08)

Item 19 - The following delayed cards are included in this week's consignment:

Section B

B10: 92081A

B11: NIL

Section C

B10: 91907A, 92198A(2)

B11: 00456B, 00458B(4), 00828B, 01784B(3), 01848B(4)

Section E

38390A, 88406A, 88909A(4)

23: WEEKLY SDI TAPE

29731B - 31552B	(B16)
D4085B - D6253B	(B16)
31553B - 33320B	(B17)
D6254B - D8359B	(B17)

RIN SERVICE

Screen Cards

B	Nos. 001 - 037	(B09)
C	Nos. 001 - 018	(B09)
E	Nos. 001 - 070	(B08)

WEEKLY INDEXES

DELAYED

Sheets and Cards

DELAYED

CS MICROFILM BY COUNTRY

EPO PATENTS	EP9	OPI 18.4.79
CANADA	1676-1679	OPI 1.5.79
FRENCH NEW LAW	2101-2104	OPI 23.3.79
DT OLS	3591-3596	OPI 10.5.79
DT DAS	572-573	OPI 10.5.79
NL	983-984	OPI 9.5.79
GB NEW LAW	GB21-24	OPI 23.5.79
PCT PATENTS	WO8	OPI 19.4.79

Vapour from the turbine is [illegible] act with a second stream of the sea water colder than the first and used also to condense vapour from the final stage of the appts. Preferably the final stage is operated

HO([illegible]

alkyl.

The compsn. is free of hydrocarbon solvent, chemic

stable over a wide temp. range, and is readily diluted

SECTION B MANUAL CODE CORRECTIONS

Der. No.	Correct Code	Original Code (Incorrect)
77282V	B2-O	B2-A
17939W	B3-A	B2-A
12119Y	B12-A1	B12-A12
12548Y	B4-C3D	B3-C3D
52178Y	B6-E3	B6-E5
62044A	B12-D1	B1-D1
65051A	B12-H2	B12-H3
65270A	B2-C	B2-P
65977A	B12-A1	B12-A2
66444A	B10-H1	B10-H
66944A	B12-B1	B12-B2
67800A	B5-B1D	B5-B2C
71406A	B7-A2	B4-A7E
72521A	B12-M3	B10-C4E, B12-M1, B12-M2
72616A	B12-C5, B12-C10	B12-C10
73946A	B7-D5	B7-D4
78418A	B8-D2	B10-E2
78760A	B4-B4M	B4-B4L
82278A	B7-A2	B7-D7
82551A	B12-H2	B12-H3
83015A	B12-H3	B12-H5
84139A	B12-B2	B12-B5
84140A	B12-B2	B12-B5
86487A	B12-M10	B12-M11
86553A	B4-A7E	B4-A7F
87765A	B12-L4	B12-L5
89494A	B12-G4	B12-G7
90931A	B10-F2	B10-J2
00024B	B7-A2	B7-A3
02886B	B12-D1, B12-D7, B12-D8	B12-D7
04559B	B7-A2	B7-A3
06028B	B12-J4	B12-J5
06142B	B12-L4	B10-E4D
08372B	B12-A6	B12-D2
09349B	B11-C8	B11-C7B
09713B	B11-C3	B11-C6
10089B	B10-D1	B10-A15
10354B	B5-A4	B5-A3B
10449B	B4-B4F	B4-B4C
14330B	B10-A23	B10-B1A
14499B	B6-E5	B6-F3
17021B	B10-B2E	B10-B1B
18180B	B7-H	B7-H2
20265B	B12-E9	B12-E8
20298B	B6-H	B6-A1, B6-A2, B6-A3

As a result of technical difficulties beyond our control our despatch for Weeks B17 - B19 will be delayed as follows:

B17	8 June 1979	(Fri)
B18	14 June 1979	(Thurs)
B19	20 June 1979	(Wed)

PATENTS ABSTRACTS PUBLICATIONS DESPATCHED THIS WEEK

Belgian Patents Abstracts	B18
British Patents Abstracts	B17
French Patents Abstracts	B17
German Patents Abstracts	B17
German Patents Gazette	B17
Japanese Patents Report	No. 18 (Despatch 1.6.79)
Japanese Patents Gazette	B17
Netherlands Patents Report	B17
Soviet Inventions Illustrated	B17
U.S. Patents Report	B17
WPA Journals	B17
European Patents Report	B18
PCT Patents Report	None

WORLD PATENTS INDEX

Gazettes Sections P, Q, R, Ch	B17 (Despatched 6.6.79)
Priority Index	B17 (Despatched 6.6.79)

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first and used also to condense vapour from the final stage of the appts. Preferably the final stage is operated Pref. a temp. difference of 15°F ex-

alkyl.

The compsn. is free of hydrocarbon solvent, chemic stable over a wide temp. range, and is readily diluted water esp. sea water, without risk of gellation. 8.11.76 as 739993 (7pp945)

SUNO ★ D15 31403B/16 ★US 4110-215
Liq. level control in sepn. tank - by selectively opening weir by pneumatic system controlled by liq. level
SUN OIL CO PENNSYLV 22.03.76-US-668871
H05 (29.08.78) B01d-33/38

Sepn. tank separates scum and settled sludge from polluted water while allowing pollutant-free water to be discharged. This discharge is via a weir box which includes a pneumatically controlled gate which alters the liq. level in the settling tank.

A stilling well located on the sidewall of the sepg. tank is connected to a pneumatic sensor which detects the liq. level in the tank. A pneumatic control circuit connects this sensor to the weir control to maintain a predetermined liq. level in the tank.

Appts. dynamically controls the liq. level in the sepn. tank despite rapid variations in the influent flow rate. 22.3.76 as 668871 (7pp 295)

NAKA/ ★ D15 31405B/16 ★US 4110-217
Continuous sewage sludge heat treatment appts. - has porous plate to divide sludge into thin strings
NAKAMURA G 11.04.77-US-786467
Q76 (29.08.78) F26b-17/12

Sludge from the final settling tank of a sewage disposal system is delivered to a vertical cylindrical vessel which has a conical head. The sludge is introduced through an upper inlet and is removed through a lower discharge. Steam is fed from a surrounding jacket through pores in the side wall of the vessel.

A porous plate is positioned across the vessel just below the conical section so that the sludge is divided into thin strings prior to treatment with the steam. The steam is at a relatively low pressure and temp.

Appts. is used to continuously treat sludge from the final settling tank of a sewage disposal system on a large industrial scale. The sludge is treated with steam at a relatively low pressure and temp. without requiring a long period of aging. 11.4.77 as 786467 (5pp295)

MAPL/ ★ D15 31407B/16 ★US 4110-219
Reverse osmosis water purifier - with osmosis modules in recess of support base for connected water container
MAPLES P D 02.02.77-US-764828
J01 (29.08.78) B01d-31 C02b-01/82

A purifier comprises a portable water container on a base container on a base with a recess holding a reverse osmosis unit laid lengthwise and connected by a tube with the container. A removable stopper end connector links the unit with the tube and has a seal to prevent leakage.

The overall length of unit and connector is slightly less than the distance between base end walls so that outward sliding of the connector is prevented. The unit pref. has at least a pair of modules connected in parallel and the connector has a cylindrical plug slidably insertable into the unit bore. 2.2.77 as 764828 (6pp1358)

See Also

D13 J5 4032187 D16 DT 2844311

D16: FERMENTATION INDUSTRY

SNAM ★ D16 29762B/16 ★BE -871-253
Radial flow catalytic enzyme reactor for isomerisation of fructose - uses catalytic bed of helically wound fibres contg. immobilised enzyme
SNAMPROGETTI SPA 13.10.77-IT-028553
J04 (13.04.79) B01j C12b

A radial flow reactor is claimed for carrying out catalytic reactions with the assistance of enzymes The reactor comprises a hollow, cylindrical casing with removable end cover. The casing contains a coaxial, annular, catalytic bed comprising fibres in which the enzymes are locked. The fibres are helically wound on a porous core tube. The pitch of the winding is determined to provide optimum hydraulic and chemical characteristics, and is pref. between 0.001mm and 10 cm.

The casing is designed to direct flow of liq. radially through the winding. The casing inlet has a by-pass branch outlet. The catalytic bed can be made up of several, helically wound cartridges which may be wound at different pitches to provide a bed compsn. of varying characteristics over its length.

Used partic. for the isomerisation of fructose with a glucose-isomerase enzyme. Also for the conversion of sucrose or lactose into fructose and glucose. Very low pressure drop through the reactor produces a much higher output. The catalytic bed can be easily made up to offer a wide variety of characteristics which are readily reproducible. 13.10.78 as 871253 (13pp448)

BERT/ ★ D16 B/16 ★BR 7705-914
Closed circuit fermentation vat - gives twenty per cent improvement in alcohol recovery from sugar cane juice
DA SILVA BERTAO J 05.09.77-BR-005914
(03.04.79) C12b-01/10 C12c-11

JAGA ★ D16 B/16 ★BR 7807-507
Prodn. of alcohol by fermentation - with collection of carbon dioxide and use in the process to prevent contamination
JGC-COM ASSSESSOR 16.11.78-BR-007507
(03.04.79) C12c-11/08

KRPP D16 81473T/52 =DS 2127-747
Biological fermentation appts - for heterotrophic microorganism and algae
KRUPP F GMBH 04.06.71-DT-127747
*(12.04.79) *DT2127-747 C12b-01/10*

Heterotropic microorganisms and algae, e.g. for the pharmaceutical, fermentation and food industries, are produced in a fermenter which is easily built. The fermenter has fitted above it an ejector entrance through which the fermentation medium is passed and where it is mixed with air by suction. Immediately after the ejector inlet there is a mixing chamber where nutrient soln. and salts are added and then there is a pipe to return the mixt. to the fermenter. 4.6.71 as 127747 (4pp068).

MOCH= D16 44497U/32 =DS 2300-088
Continuous sparkling wine prodn - from still wine
MOSC CHAMPAGNE WKS (MOS -) 04.01.72-SU-737547
*(12.04.79) *DT2300-088 C12g-01/06 +C12l-11*

In the continuous preparation of sparkling wine, the fermentation mixture undergoes, after the first fermentation, a secondary fermentation at a gradually dropping temp. and a constant pressure with several changes in the direction of flow. The fermentation takes place at a stable average linear flow velocity and the mixture is cooled by passing it from the centre of a tank in concentric rings up and down to the outside. External cooling is applied only in the last outermost section.

This simplifies the design of the vat, saves space and produces a high-quality sparkling wine. 2.1.73 as 300088 (4pp39).

BRAS- D16 43091U/31 =DS 2300-786
Brewery vat - with multistorey heating or cooling system for single vat process
BRASSERIES KRONENBO (BRA -) 11.01.72-FR-001637
*+Q34 (12.04.79) *DT2300-786 C12b-01/10*

A fermenting vat for beer breweries is a cylindrical tank with a domed top and a conical bottom. A central tube along the axis of the vat has radial branches of short, alternating with longer pipes for a cleaning fluid. The central tube also houses a system of pipes which extend radially in short, alternating with longer branches, for the sampling of beer for analysis. The longer branches are supported by struts and all branches end in spray heads.

This simplifies the supervision of the fermentation process and the vat cleaning even when they are of exceptional size (10 m dia. and 20 m height). 8.1.73 as 300786 (11pp39).

FARH D16 26055W/16 =DS 2348-753
Protein of high amino acid content - produced by fermentation in a broth of specified n-paraffin concn.
HOECHST AG 28.09.73-DT-348753
*H04 (12.04.79) *DT2348-753 C12c-11/08*

Yeast is fermented under aerobic conditions at pH 2.0-6.8 in a medium contg. a nitrogen source and an 8-23C n-paraffin as carbon source. The yeast is Candida lipolytica, Candida viswanathii, Candida parapsilosis or Candida guillermondi. The medium contains 0.04-0.12 wt.% n-paraffin, based on the culture suspension, during the phase of logarithmic growth.

The yeast prepd. may be used as a protein source in food or animal feeds. 28.9.73 as 348753 (4pp068).

BEHW D16 27155A/15 =DS 2644-622
Microorganism extn. with aq. guanidine salt soln. - esp. for preparing Staphylococcus extract suspensions used as diagnostic reagents (NL 4.4.78)
BEHRINGWERKE AG 02.10.76-DT-644622
*+R16 (12.04.79) *DT2644-622 C12k-01*

Microorganisms with a positive clumping factor or contg. a peptide binding the F_c-part are treated with a 4-8 molar aq. soln. of a guanidine salt, washed free of this and recovered.

The microorganisms are pref. dyed with basic red 23 and used to determine antigens. Pref. microorganism is Staphylococcus aureus ATCC 31243 or NCTT 8530. 2.10.76 as 644622 (4pp068).

KURE D16 26299Y/15 #DS 2708-112
Microbial food prepd. by culturing Methylomonas probus - in medium contg. methanol as carbon source
KUREHA KAGAKU KOGYO 29.08.75-JA-104093 (25.02.77-DT-708112)
*(D13) (12.04.79) *J52028-988 C12d-13/06*

Protein is prepd. by fermentation of Methylomonas probus FERM-P No. 3193 under aerobic conditions in a medium contg. methanol as carbon source, nitrogen and inorganic nutrients and recovering the bacterial cells formed.

The protein may be used for food and in animal feeds. 25.2.77 as 708112 (7pp068).

FARB D16 84216A/47 =DS 2719-912
Amino-sugar saccharase inhibitor isolation - from actinoplanaceae cultures by ion exchange adsorption
BAYER AG 04.05.77-DT-719912
*A91 B03 (12.04.79) *DT2719-912 C07h-15/20*

Isolation of O- 4,6-dideoxy-4-[1S(1,4,6/5)-4,5,6-trihydroxy-3-hydroxymethylcyclohex-2-ene-1-yl]amino -α-D-glucopyranosyl-1,4-O-α-D-glucopyranosyl-1,4-D-glucopyranose from culture media in which Actinoplanes species have been propagated comprises treatment with a strongly acidic cation exchange resin, (H^+ form), having little crosslinking, and an anion exchange resin (OH^- form); the resin is sepd., washed and eluted with dilute aq. salt or NH_3 soln; the eluate is then passed through a highly crosslinked strongly acidic cation exchange resin (H^+ form) followed by an anion exchange resin (OH^- form); the eluate is then passed through strongly acidic cation exchange resin (H^+ form) having little crosslinking; the resin is washed and eluted with aq. mineral acid of pH 1-2; the pH of the active fraction is raised to 5-7, and the soln. is concentrated; the prod. is filtered and dried.

Polystyrene resins with 2-6% and 7-20% crosslinking are prefd. Prefd. salts solns. for elution comprise alkali, alkaline earth and/or NH_4 salts or weak acids, esp. NaOAc. The prod. is an esp. active saccharose inhibitor. 4.5.77 as 719912.

STEI ★ D16 29914B/16 ★DT 2744-854
Cleaning system for tanks and vessels - using spray cleaner with strainer vessel on liquor return line having automatic cleaning cycle
STEINECKER A MASCH GMBH 05.10.77-DT-744854
J02 P43 (12.04.79) B01d-35 B08b-03

Cleaning system has series of wash liquor vessels, the contacts of which are pumped to the rotating spray head. The return liquor from the vessel being cleaned passes through a strainer to remove and collect dirt.

This consists of a cylindrical vessel containing a cylindrical screen which divides it into two chambers. The run off from the vessel being cleaned runs into the centre of this and a discharge to drain leaves from this. The liquor flows to the storage vessels after passing through the screen. Opening the drain valve allows dirt collected on the screen to be regularly discharged.

For use in industries where vessel cleaning is needed e.g. in breweries. Conventional filters require dismantling for cleaning. The system described allows an automatic cycle to be followed. 5.10.77 as 744854 (14pp1053)

KRAT ★ D16 29917B/16 ★DT 2744-950
Grape processing system - has vacuum in berry stripper and juice weighing machine to prevent oxidn.
BIZERBA-WERKE KRAUT KG 06.10.77-DT-744950
(12.04.79) C12g-01/02

Grapes are processed by stripping the berries, weighing the grape juice produced and pumping it into a storage tank. During all these operations, a vacuum is maintained in the stripper, weigher and interconnections.

Oxidn. of the grapes is prevented without the necessity of adding any chemical substances. 6.10.77 as 744950 (18 pp39)

BRIK- ★ D16 29946B/16 ★DT 2745-541
Purifying sulphydryl oxidase enzyme derived from whole milk - esp. prior to immobilising on glass beads; used to remove boiled taste of heated milk
BRIK PAK INC 10.10.77-DT-745541
B04 (D13) (12.04.79) A23c-09 C07g-07/02

Process comprises (a) preparing a crude, non-purified sulphydryl oxidase enzyme (I)-fraction from raw whole milk; (b) dissolving this non-purified (I)-fraction in a dil. neutral buffer soln; (c) equalising the non-purified (I)-fraction; (d) exposing the non-purified (I)-fraction in buffer soln. to a separate treatment, to separate a first (I)-fraction of molecularly larger materials; (e) concentrating the first enzyme fraction, esp. by ultra-filtration, to obtain a 2nd enzyme-fraction and (f) sepg. this 2nd enzyme fraction, pref. by centrifuging, to remove molecularly smaller materials and isolate (I).

The isolated enzyme is esp. dissolved in a neutral buffer soln., to obtain a 3rd enzyme fraction; the enzyme is sepd. from molecularly smaller materials; isolated to obtain an enzyme having higher specified activity, and pref. immobilised on glass beads.

The purified, immobilised (I) is used (i) to remove the boiled taste from milk heat-treated above 68°C, and (ii) in biosynthesis of disulphides in certain proteins. Sterilised treated milk can be obtd. which is marketable and resists storage at ambient temps. The specific activity of purified, immobilised (I) is $\geqslant 50$ (> 100) x higher than that of the crude (I)-fraction obtd. from the whey fraction sepd. from raw whole milk-derived skim milk. 10.10.77 as 745541 (34pp200)

TOXN ★ D16 30022B/16 ★DT 2842-940
Fermentative prodn. of sarcosine oxidase - using microorganism of genus Bacillus, for creatinine determn. in blood or urine etc. (NL 6.4.79)
TOYO BREWING KK 04.10.77-JA-119776
B04 R16 (12.04.79) C12d-13/10 C12k-03 G01n-31/14 G01n-33/16

Prodn. of sarcosine oxidase (SO) is carried out by culturing an SO-producing microorganism of the genus Bacillus, esp. the new species B-0618 (FERM-P 4049), in a nutrient medium and isolating the SO from the culture mass. Culture is pref. effected at 26-33°C under submerse aerobic conditions in a medium contg. N and C sources and minerals. Addn. of 0.5-1% creatine to the medium stimulates SO prodn.

SO catalyses the conversion of sarcosine to glycine, HCHO and H_2O_2. It can be used for the determn. of creatinine in blood or urine (in combination with creatinase and creatinase) or for determining the activity of creatininase. 2.10.78 as 842940 (20pp367)

KIKK ★ D16 30037B/16 ★DT 2843-351
Pectin esterase having methyl ester hydrolysing activity - prepd. by cultivating mould fungi; used for de:methoxylating pectin
KIKKOMAN SHOYU KK 12.10.77-JA-121398 (08.10.77-JA-120504)
(12.04.79) C12d-13

New pectin esterase (I), is prepd. by (1) cultivating a mould fungus of Aspergillus, Penicillium, Fusarium or Sclerotinia species, in a liq. or solid medium contg. C- and N-sources and inorganic salts, pref. for 1-5 days at 20-40°C, and separating (I) from culture.

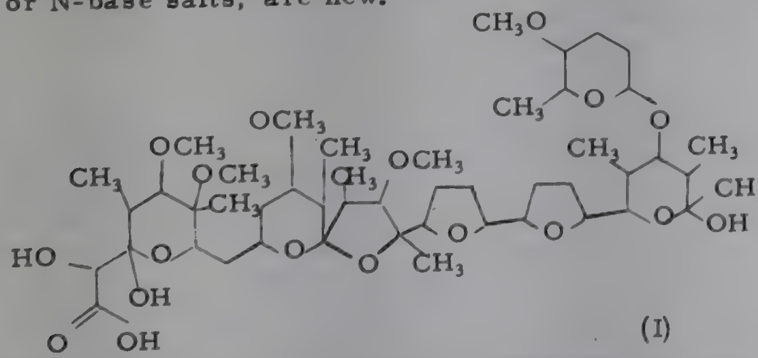
(I) has specified characteristics properties including (a) activity on Me ester bond of pectin, under statistical hydrolysis of the Me ester bond; selectivity towards pectin Me ester bond and no activity towards Et-, propyl- and ethylene glycol ester bonds; (b) optimum reactivity at pH 4.5 and stability at pH 3-6; and (c) activity at 25-50 (40-45)°C. (I) is an acid protein having isoelectric point PI 4.1.

(I) is used in enzymatic demethoxylation of pectin, to produce a demethoxylated pectin having a uniform MeO gp. content. The low methoxy-pectin can be used as gelling agent and film-former for yogurt and mayonnaise.

Pectin gel strength increases with decreasing MeO content, e.g. on reducing MeO gp. content from 10.5- to 6.3% gel strength increased from 2.45- to 21.20 x 10^4 dyne/cm^2 after adding 26 mg/g $CaCl_2$. 4.10.78 as 843351 (39pp200)

RHON ★ D16 30048B/16 ★DT 2843-702
Antibiotic 37454 RP for control of coccidiosis - prepd. by cultivation of Streptomyces gypseus
RHONE-POULENC INDUSTRIES 07.10.77-FR-030236
B03 C02 (12.04.79) A23k-01/17 A61k-31/33 C07d-493/10 C12d-09/16 C12k-03

Antibiotic of formula (I), designated 37454 RP, and its metal or N-base salts, are new.



(I)

The Na salt is a white crystalline powder sol. in chlorinated solvents, alcohols, DMF, acetone and ethyl acetate, slightly sol. in hexane and practically insol. in water. It has analyses 59.27% C; 8.45% H; 28.32% O and 2.36% Na ($C_{48}H_{81}O_{18}Na$); m. pt. 198-199.5°C and $[\alpha]^{20} = +2.3 \pm 0.5°$ and $[\alpha]^{20}_{436} = +1.3 \pm 0.6°$ (c=0.974% in methanol). It has characteristic IR and NMR spectra (given) but no characteristic UV absorption.

(I) has anticoccidiosis activity and is effective when incorporated in poultry feed at 0.005-0.04 wt. %. It also mice is 90 mg/kg (single dose). 6.10.78 as 843702 (33pp1251)

DAII- ★ D16 30061B/16 ★DT 2844-311
Agglutinant prepd. by Dematium fungus cultivation - used for flocculating (in)organic suspensions, colloids, proteins and germs from water
DAI-ICHI TOGYO 17.08.78-JA-100150 (11.10.77-JA-121687)
(D15) (12.04.79) C02b-01/20 C02c-05/02 C07g-07 C12d-13 C12k-01

Microorganism used in prepn. of an agglutinant, (A), by bacterial fermentation, is an (A)-forming Dematium fungus, of Dematiaceae species. Pref. culture medium contains 0.5-5% C source, and partic. carbohydrate as main C source. (A) has an agglutinating activity on organic and inorganic substances, minerals and living germs, present or floating as a suspension, dispersion or colloid in liqs.

(A) or an (A)-contg. prod. obtd. by cultivating an (A)-forming Dematium fungus, is used for flocculating inorganic or organic, insoluble suspensoids and colloids, and insoluble and soluble proteins, from water or industrial waste waters, partic. from crude water for drinking water prepn., and from waste waters of animal husbandry, food-, chemical- or paper- and other industries.

Max yield of (A) is obtd. in a medium having a low C source concn., e.g. 1%. Waste waters from agricultural plant, animal farms and food factories can be used as culture media for Dematium fungus. (A) have high agglutinating capacity, e.g. inorganic ions can be removed quantitatively. 11.10.78 as 844311 (+10.8.78-JA-097664) (55pp200)

MARI/ ★ D16 30092B/16 ★FR 2397-457
Detection of bacteria in samples - using appts. measuring small changes in pH caused by bacterial growth
MARIEL C 15.07.77-GB-029864
B04 P31 R16 (16.03.79) A61b-10 C12k-01/04 G01n-27/26 G01n-33/16

Appts. for the rapid detection of the presence of bacteria and also for determining the sensitivity of bacteria to various antibiotics comprises (a) a series of flasks into which culture media and blood samples are introduced aseptically each flash having a sterilisable electrode, (b) an electronic switch, to which each electrode is attached, (c) a pH meter attached to the switch, and (d) a potentiometric recorder and a mini-ordinator which follows a program and is connected to a keyboard and controls an alarm system.

Any bacterial growth in the flasks causes a change in pH in the medium, and this is detected and analysed to ensure that the change is significant; usually a change of 0.04 pH unit is significant.

Appts. does not give rise to contamination problems, nor involve the use of radioactive isotopes, unlike known diagnostic methods. 29.6.68 as 019530 (12pp520)

PETR D16 79492Y/45 =GB 1544-374
Hydrocarbon oil emulsion biomass separation - in cistern at contact surfaces with minimum use of energy
VEB PETROCHEM SCHWEDT (LUBB/) 19.07.76-DL-193941
*H04 (19.04.79) *DL-126-703 B01d-17/02*

An immiscible mixt. of an aq. culture liq. and a hydrocarbonaceous suspension of biological material is sepd. by coalescence and decantation. The mixt. is obtd. by the breeding of micro-organisms on an hydrocarbon phase.

Decantation is effected after contacting the mixt. with contact surfaces in the form of plates, screens, saddle structures, Raschig rings or turnings of loading amt. < 10 cm^3 of mixt. per cm^2 of contact surface per hr. Mixt. has flow velocity of 0.5-10 cm per min.

Esp. used where hydrocarbon phase is not completely consumed, but forms a floating biological, hydrocarbon phase and aq. phase when the culture mixt. is introduced into a suitable vessel. 18.7.77 as 030119 (3pp931)

PETR D16 79493Y/45 =GB 1544-569
Edible protein prodn. from fermentation of (N) paraffins - using higher b.pt. fractions with carbon numbers above 15 to increase yield
VEB PETROCHEM SCHWEDT (LUBB/) 16.12.76-DL-196391
*H04 (D13) (19.04.79) *DL-126-704 C12b-01/20 +C12c-11/18*

Culture in a fermenter of microorganisms on ≥1 straight chain paraffins for the prodn. of mono-cell proteins comprises use as the paraffins (i) ≥17C normal straight chain paraffin which, under normal conditions, has a commencing b.pt. of 260-320°C or (ii) a mixt. of normal straight chain paraffins having an average of 17C and which, under normal conditions, has a commencing b.pt. of 260-320°C, ≥ 70% of the mixt. having an average of ≥ 15C.

The resultant fermentation mixt. contg. microorganisms, C source and aq. nutrient medium is allowed to remain in the fermenter for ≥ 5 hrs. Pref. Candida guilliermondii is used as prodn. culture.

Evapn. losses of hydrocarbons are reduced to about half. Prod. is used for animal feedstuff or for food purposes. 16.12.77 as 005251 (4pp393)

REAP- ★ D16 30151B/16 ★GB 2005-410
Rapid identification of Streptococcus bacteria - by colour reactions of enzymes formed by cultivation in selected media
LAB RECH API 04.10.77-FR-030613
B04 R16 (19.04.79) C12k-01/06 G01n-31/14

Streptococcus genus bacteria are identified by colorimetric identification of characteristic enzymes produced after cultivation of the bacteria in a selected medium to stimulate prodn. of the enzymes.

The identification is rapid and the bacteria are readily classified into different sero gps. 28.9.78 as 038507 (4pp1248)

NIRA ★ D16 30194B/16 ★J5 4030-574
Filter material - prepd. by finely crushing fibrous material, moulding into sheet and impregnating with insoluble PVA powder
UNITIKA KK 10.08.77-JA-096470
A88 F04 J01 (A11 A14 D14) (07.03.79) B01d-37/02 B01d-39/02

Filter material is prepd. by (a) crushing fibrous material (e.g. cotton fibres, rayon fibres or pulp) to a granular size of several score microns to several hundred microns; (b) moulding into sheet form; and (c) impregnating the sheet with fine powdery insol. PVA having a granular dia. of several micron to several score micron.

Specifically a filter textile is overlapped with the layer of pulverised fibrous material and the layer is coated with the PVA.

Filter material is used in the brewery and foodstuffs industries, partic. for clarifying sake. 10.8.77 as 096470 (4pp15)

TOXN ★ D16 30548B/16 ★J5 4032-401
Sulphur-contg. peptide-B antibiotics - prepd. by culturing fungi of Actinoplanes genus
TOYO BREWING KK 29.07.77-JA-091876
B04 (09.03.79) A23k-01/17 C07g-11 C12d-09/16

New sulphur-contg. peptide-B antibiotics which comprises substantially S-contg. peptide B antibiotics have the following physical and chemical properties (a) Analysis:C, 48.40; H, 3.21; N, 14.49; S, 15.53(%); (b) degree of rotation $(a)^{24}_{D} = +33 \pm 1$. (C=1, pyridine, 10 cm. cell); (c) m.pt. 282-284°C (brown discolouration); (d) Mol. wt. 1100 -1400 (min. mol. wt. from threonine detection amt. by amino acid analysis), (e) Colouration: positive to potassium permanganate reaction, negative to ferric chloride reaction, ninhydrin reaction, Moelisch reaction, Torrens reaction and Febling reaction; (f) Solubility into solvent: Easy sol. in pyridine and dimethyl sulphoxide; Insol. in benzene, hexane and water. Ultraviolet, invisible and infrared adsorption spectra are also given.

The S-contg. peptide-B antibiotics are produced by culturing S-contg. peptide-B antibiotics-producing fungi of Actinoplanes genus, esp. Actinoplanes utahencis A-6984 (FERM-P No. 3891), in a culture medium and taking out S-contg. peptide-B antibiotics from culture mixt. 29.7.77 as 091876 (13pp69)

TOXN ★ D16 30549B/16 ★J5 4032-402
Sulphur-contg. peptide-C and -D antibiotics - obtd. by culturing Actinoplanes genus fungi
TOYO BREWING KK 30.07.77-JA-091898
B04 (09.03.79) C07g-11 C12d-09/16 C12d-13/06

Novel sulphur-contg. peptide-C antibiotics, and sulphur-contg. peptide-D antibiotics are obtd. by culturing fungi of Actinoplanes genus in suitable medium.

Analysis shows that peptide-C cpds. comprise (%):C, 49.41; H, 3.91, N, 13.7; S, 14.40; and peptide-D:C, 47.06 H, 3.41; N, 12.90 and S, 14.22. Mol.wt. of cpds. is 1100 -1400 (threonine analysis min. mol. wt.). Both are positive to $KMnO_4$, but negative to $FeCl_3$, Ninydrin, Torren's, and Fehlings reactions. 30.7.77 as 091898 (12pp69)

KAKE- ★ D16 30678B/16 ★J5 4032-612
Prepn. of fraction useful e.g. as antidiabetic - by fractionating active material accelerating insulin secretion produced by Bordetella strain
KAKENYAKKA KAKO KK 17.08.77-JA-098821
B04 (10.03.79) A61k-35/74

Prodn. of biologically active fractions activity = acceleration of insulin secretion, enhancement of immunity, and activity blocking the β-receptor of sympathetic nerve) comprises fractionating an active material accelerating insulin secretion produced by a strain of Bordetella (e.g. Bordetella pertussis, B. parapertussis, B. bronchiseptica) into 2-5 fractions. These fractions are aggregated each other to give a giologically active aggregate.

Fractions or aggregate can be used as anti-diabetics, immune controlling agents or β-receptor blocker. The active material produced by Bordetella has adverse reactions such as increase of number of leukocytes, enhancement of sensitivity to histamine and antigenicity. By fractionation or aggregation of the fractions of the active material, such adverse reactions can be reduced markedly without decrease of the insulin secretion acceleration. 17.8.77 as 098821 (47pp52)

AGEN ★ D16 30708B/16 ★J5 4032-68
Aggregating method for microbes - using prods. derived fro
cultivation of Nocardia strains
AGENCY OF IND SCI TECH 15.08.77-JA-097674
(10.03.79) C12b-01/26 C12c-11/24 C12d-13 C12k-03

Method comprises culturing the bacteria, which belongs
Nocardia and show the aggregating ability for microbes, and putting (a) the cultured product, (b) the sepd. bacteri
body (c), the filtrate of the culture medium or (d) their treated prod. in an aq. medium contg. microbes.

Bacterial strains of Nocardia show the excellent aggr
-gating activity for microbes. Suitable Nocardia strains are N erythropores KR-256-2(FERM-P 3923) and N. restorica KR-I-3(FERM-P 4169). 15.8.77 as 097674 (3p

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MITN ★ D16 30709B/16 ★J5 4032-6
Yeast mycelium prodn. by incubating specific strain - in mediu
contg. acetic acid and pref. methanol and/or ethanol
MITSUBISHI GAS CHEM IND 10.08.77-JA-095674
(10.03.79) A23k-01 A23l-01/34 C12c-11/08

Method comprises incubating a strain, to Candida boidin
Torulopsis pinus, Hansenula nonfermentans, Hansenula, henricii, Hansenula capsulata, Hansenula glycozyma, Hansenula philodendra, Hansenula wickerhamii, Pichia, pastoris or Pichia aganobii, and acceptable acetiac acid in culture medium including acetic acid as C source to increase mycelium, and isolated the mycelium. Pref. methanol and/or ethanol and acetic acid are included in the culture medium as an essential C source.

The essential C source may be produced in organic chemical industry in large scale in low cost. The yeast mycelium is useful for prodn. of animal feedstuff, nucl
acid, vitamin, coenzyme, protein, fat and oil. 10.8.77 095674 (11pp68)

TOYJ ★ - D16 30710B/16 ★J5 4032-
Bacterial body prepn. - by culturing bacteria of Pseudomonas be
in culture medium contg. water soluble carbon source
TOYO SODA KK 10.08.77-JA-094928
(10.03.79) A23k-01 A23l-01/34 C12k-03

The method comprises culturing the bacteria of Pseudomonas bells in the culture medium contg. water soluble C source and recovering bacterial body from the culture medium. The bacterial strain can grow at relatively high temp. of ca. 40°C and the bacterial body can be produced effectively.

The applicable bacterial strain is P. bella TS-1008 (FERM-P 4074). As water soluble C source mono-hydric alcohol poly-hydric alcohol etc.), sugar, fatty acid, etc. can be used. 10.8.77 as 094928 (6pp5)

TAKE/ ★ D16 30711B/16 ★J5 4032-690

Culturing photosynthesisable fine algae - by extn. of green juice from vegetable leaves, culturing, forming callus cells, decolouring, re colouring, etc.

TAKESHITA S 19.08.77-JA-098708
P14 (10.03.79) A01k-61 C12k-01 C12k-09

The method consists of following four processes. Green leaves of vegetables are pulverised using juicer or mixer to obtain green juice and the green juice is roughly filtered with a strainer to remove large solid particles. The green juice is mixed with synthetic culture medium and the mixt. is cultured under natural light. The green cells are dedifferentiated with wound hormone to callus cells and the pigments such as chlorophyll, carotine, xanthophyll, etc. are decomposed to become colourless.

When the culture is continued, callus cells are redifferentiated and colourless bodies are converted to chlorophyll, carotinoid, pigment, etc. in ca. 10 days. Callus cells are disappeared and small green cells are multiplied, i.e. the callus cells are restored through the atavism to autotrophic monocellular photo-synthetising algae and the algae can multiply through fission.

The induced algae can be multiplied vigorously either in inorganic medium or in organic medium continuously. 19.8.77 as 098708 (4pp5)

YAGI/ ★ D16 30713B/16 ★J5 4032-692

Fixed apo-enzyme of D-aminoacid oxidase prepn. - by reacting its competitive inhibitor complex with activated polysaccharide, expelling the inhibitor and dialysing

YAGI K 12.08.77-JA-096231
B04 (10.03.79) C07g-07/02

The method comprises (1) reacting the stable complex composed of D-aminoacid oxidase and its competitive inhibitor, with activated polysaccharide to fix the complex (2) expelling the inhibitor with the substrate to obtain fixed holo-enzyme and (3) dialysing it in aqs. KBr solution to obtain fixed apo-enzyme.

The fixed apo-enzyme of D-aminoacid oxidase is stabler than free apo-enzyme and the activity of the apo-enzyme obtained from the fixed holo-enzyme is much stronger than that of the apo-enzyme obtained by fixing apo-enzyme on activated polysaccharide. Thus prepared fixed apo-enzyme of D-aminoacid oxidase can be used for determining flavin-adenine-dinucleotide (FAD), which is the coenzyme of D-aminoacid oxidase. It can be preserved for 20 days with a decrease in activity of < 20%. 12.8.77 as 096231 (3pp5)

AJIN ★ D16 30714B/16 ★J5 4032-693

L-Threonine prodn. in high yield - by aerobic cultivation of Brevibacterium microorganisms

AJINOMOTO KK 10.08.77-JA-095765
B05 E16 (10.03.79) C12d-13/06

Process comprises aerobically incubating variant strain, belonging to the genus Brevibacterium and possessing resistance to α-amino-β-hydroxyvaleric acid and psychoflanine, decoinine or sulfaguanidine and produced L-threonine, in nutrient culture medium and isolating L-threonine accumulated in the culture medium.

Pref. the novel variant employed is produced by e.g. treatment of microorganism with N-methyl-N'-nitro-N-nitroso guanidine. 10.8.77 as 095765 (3pp68)

MOFO= ★ D16 31017B/16 ★SU -609-528

Flowing liquid foodstuffs heat steriliser - with super high frequency field acting on flow through outer and conical inner tubes

Appts. partic. for heat-treating dry wines before secondary fermentation in champagne mfr., comprises a super-high frequency generator, a waveguide and a working chamber in which are a non-absorptive pipeline and a coaxial inner auxiliary tube.

To intensify the process, provide more uniform heating and improve product quality, the inlet end of the auxiliary tube is located within the pipeline and the tube itself is conical.

Gubiev Yu. K., Gagarin M.A., Bakulin V P. et al. Bul. 21/30.6.76 as 378395 (2pp1358)

BAST= ★ D16 31115B/16 ★SU -609-763

Culture medium for nutrient yeast prodn. - comprises flax-soaking discharge and ammonium nitrate

BAST FIBRE PRETREAT 06.01.77-SU-441178
C03 (D13) (10.05.78) C12b-03/12 C12c-11/08

Nutrient medium for growing feedstuffs yeasts comprises 0.1-1.0 vol.% NH_4NO_3 and balance flax-soaking discharge The latter constitutes C source and source of mineral salts and trace elements. The nutrient medium is effective and inexpensive. A typical liquor is obtd. by soaking the flax at 35° ± 1°C for 30-48 hrs.

In an example, 1l of flax-soaking discharge contains (in mg/l): 2700 acetic acid, 800 propionic acid, 600 butyric acid, 50 valeric aicd, 20 isovaleric acid, 300 sugar 200 N, 250 Ca++, 100 K+, 140 P^{3+}, 30 Fe^{2+}, 0.16 Cu^{2+}, 2.0 Mu^{2+}, 0.1 Mo^{2+}, 0.005 Co^{2+} and 50 S^{2+}. 1g of NH_4NO_3 is added and the resulting medium is used to grow Trichosporon cutaneum yeast at 33°-35°C for 72 hrs. with aeration at 187l/hr. Absolute dry wt. yield of yeast is 2.01g. Tatarenko V.T., Kalugina E.V., Kogan E.M., Bul. 21/5.6.78 6.1.77 as 441178 (3pp314)

BEER= ★ D16 31116B/16 ★SU -609-764

Brewing wort prodn. - includes two/stage sepn. of mash into wort and sediment, to increase mash filtration process

BEER NON-ALCOHOL IN 29.11.76-SU-424452
(10.05.78) C12c-09/02

In the prodn. of a brewing wort, a saccharified mash is treated by : sepg. into a wort and a sediment; mixing the resulting sediment with 10-15 vol.% water at 75-80°C and recovering addnl. wort; diluting the sediment again with 10-15 vol.% water at 75-80°C and 10-12% of the hops, boiling for 30-40 mins; and saccharifying and filtering to obtain further wort. The wort obtd. after each stage is boiled for 30-50 mins and the worts are then combined and boiled with the remaining hops and processed conventionally.

The method speeds the mash filtration process. Glavinskii D.G., Gavrilova Yu. D., Shvyrkova O.A. Bul. 21/5.6.78 29.11.76 as 424452 (2pp314)

MULL/ D16 55712W/34 =US 4110-089

Centrifugal foam separator - with top and bottom shaft bearings partic. for use with large fermenters

MULLER H (PROC-) 13.05.74-CH-006530
*J01 +P41 (29.08.78) *CH-563-793 B01d-19/02*

Foam generated as a result of mixing gaseous and liq. phases in a vessel is broken up into its constituent gaseous and liq. components by means of a foam breaker. The foam breaker is located in a cylindrical portion of the vessel and comprises spaced conical members rotatable about a vertical axis, and vertical baffles around the vessel wall.

In operation, the liq. phase is flung towards the baffles by the rotating conical members, while the gaseous phase is swept upwardly. The foam breaker can be used in any size of vessel, and may be used in the foam-free discharge of gas from fermenters. 23.12.76 as 754093 (+1.5.75-US-573527) (4pp1379)

TATL D16 68908Y/39 =US 4110-162

Alginate-type polysaccharides by culture of Azotobacter vinelandii - with saccharide concn. limiting bacterial development

TATE & LYLE LTD 28.05.76-GB-022319
*A11 (29.08.78) *BE-855-083 C12d-13/04*

A polysaccharide is produced by subjecting Azotobacter vinelandii to continuous cultivation under aerobic conditions ide as carbon source, plus sources of phosphate, molybdenum, iron, magnesium, potassium, sodium, calcium and sulphate.

Medium contains a source of nitrogen as fixed nitrogen or gaseous nitrogen. Gaseous oxygen is supplied during cultivation. The pH during cultivation is maintained at 6.0-8.2. The concn. of the saccharide carbon source is maintained so that it is limiting the growth nutrient.

Effluents produced are non-polluting with low biological oxygen demand. Polysaccharide is produced in good yield. 20.5.77 as 798761 (3pp931)

NOVO D16 63489V/36 =US 4110-163
Beta-glucanase prepns. - prepd. by cultivation of aspergilus phoenicis in nutrient medium
NOVO INDUSTRI A/S 28.02.73-GB-009844
*(29.08.78) *DT2408-237 C07g-07/02 C12c-07 C12c-09/02*

An endo-beta-glucanase prepn. is produced which will hydrolyse the beta-glucan in barley and related glucans. Aspergillus phoenicis is cultivated at 25-30°C in a submerged culture in a nutrient medium contg. assimiliable sources of C and N plus other essential nutrients under anaerobic conditions. Prod. is recovered from the resultant broth.

Pref. aeration rate is 0.5-1.5 vol. of air per vol. of culture liq. per min. Fermentation is stopped after 3-15 days. Enzyme is recovered by pptn. from broth, then dried. Enzyme is esp. used to adjust the viscosity of wort and beer, through incorporation of the enzyme in mash or beer. 6.10.76 as 730014 (+19.2.74-US-443324) (3pp931)

STBR D16 74435A/42 =US 4110-164
Agglomerated fibrous ion-exchange cellulose - and use in immobilising glucose-isomerase for converting glucose into fructose
STANDARD BRANDS INC 19.04.77-US-788728
*A91 (A18 A97 D17) (29.08.78) *BE-865-900 C07g-07/02*

An agglomerated fibrous ion exchange cellulose composite is prepd. where the cellulose is embedded in a hydrophobic polymer. Relatively large portions of the cellulose contain absorbed enzymes. Pref. the polymer is polystyrene. Composite contains powdered metal oxides, silicates or their mixts. as a densification agent. Enzymes such as glucose isomerase are adsorbed into the fibrous anion exchange cellulose, esp. onto DEAE-cellulose.

Esp. used for the conversion of glucose to fructose. Fibrous matrix has enhanced porosity w.r.t. the flow of a soln. of a substrate, when matrix is an immobilised enzyme support. 19.4.77 as 788728 (4pp931)

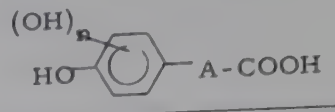
BEEC D16 72840W/44 =US 4110-165
Clavulanic acids and derivs - as antibacterials and beta-lactamase inhibitors prepd from Streptomyces clavuligerus
BEECHAM GROUP LTD 11.12.74-GB-053525 (20.04.74-GB-017410)
*B02 C02 (29.08.78) *DT2517-316 C12d-09/14*

Clavulanic acid (salt) is prepd. by cultivating a strain of Streptomyces clavuligerus in a medium contg. assimilable sources of C, N and mineral salt. Suitably ATCC-27064 or a high yielding mutant thereof is used. Cultivation is pref. effected at 15-40 (20-35)°C and pH 5-8.5 (6-7.5). The clavulanic acid may be extd. into a water immiscible organic solvent e.g. n-butanol.

Clavulanic acid (salt) is a broad spectrum antibiotic of medium potency and also enhances the effectiveness of β-lactam antibiotics against many β-lactamase producing bacteria. 24.9.76 as 726061 (+21.6.74, 9.10.74-GB-027715, 043651) (+17.4.75-US-569007) (23pp945)

FUJI D16 36211Y/21 =US 4110-166
Microbial prodn. of Nocardicine A antibiotic - with acid or aminoacid additive to increase yield
FUJISAWA PHARM IND KK 19.11.75-JA-139405
*B03 (29.08.78) *BE-848-430 C12d-09/14*

Nocardicin A is prepd. by culturing Nocardia uniformis subsp. tsuyamanensis in a fermentation medium contg. shikimic acid, carboxylic acid (I), glycine, alanine, serine, homoserine, α-aminobutyric acid or α,β-diaminopropionic acid or their ester, acid amide or hydrazine derivs. The cpds. are used at 2-0.001 wt.%. In the formula S is alkylene contg. a hydroxy, amino, acylamino or oxo gp.; and n is 0-4.



(I)

The antibiotic is obtd. in improved yield by using the inexpensive additives. 15.11.76 as 742013 (6pp945)

KROF/ D16 88321A/49 #US 4110-212
Waste liquids and sludge treatment - by reaction with acidic ferrous soln., alkali and siliceous material
KROFCHAK D 28.04.77-GB-017847 (21.04.77-US-789750)
*L02 M11 (M25) (29.08.78) *GB1535-024 +C02b-01/20 C02c-05/02*

Treatment of waste liq. contg. polluting cpds. includes (a) reacting the waste liq. with acidic ferrous salt soln. to adjust liq. pH to 2-5 and to reduce polluting cpds. to a form capable of reacting with an alkali to form a ppte.; (b) reacting adjusted waste liq. with an alkali to raise pH to 9-12.5 and produce the ppte.; and (c) reacting the alkaline waste liq. with a silicic cpd. to form large complex silicate molecules with the ppte and consequent solidification of the waste liq. into a stable non-polluting solid.

The method is applicable to slurries, sludges, silts, and slimes produced in e.g. automobile, steel and tanning industries, mines and sewage plants. 21.4.77 as 789750 (5pp918)

MERI ★ D16 31409B/16 ★US 4110-223
Appts. for recovering embryos from eggs - has tilted vibrating screen for sepg. embryo from yolk sac
MERCK & CO INC 23.11.76-US-744228 (28.04.75-US-572584)
J04 (29.08.78) A23j-01/09 B01d-33/22

Appts. for recovering embryos from embryonated eggs comprises an egg cracking mechanism for cracking an egg open to release its contents onto a flat perforated screen tilted at a cpd. angle from the horizontal so that on part of the screen is uppermost and the diagonally opposite part is lowermost. The screen is vibrated to separate the embryo from the yolk sac and accompanying fluid which is less cohesive than the embryo and passes through the screen. The embryo passes down the screen into a discharge chute at the lower corner of the screen.

Isolating embryos from chicken or duck eggs to produce live tissue from which cells can be produced for the mfr. of vaccine. Rapid recovery of embryo from a large numbe of eggs is achieved and the closed system involves min. human contact so that risk of embryo contamination is minimised. 23.11.76 as 744228 (8pp67)

DREE/ D16 81385X/44 =US 4110-281
Filler prodn from waste matl - for working into natural and artificial resins for forming building materials (NL121076)
DREER G (HELV-) 08.04.75-DT-515179 (15.02.74-DT-407383)
*A60 (A93) (29.08.78) *DT2515-179 C04b-31/40 C09d-03/66 C09d-05/18*

A compost is produced by grounding municipal waste magnetically freeing iron content, sepg. mixt. into componen of various sizes by fractionation. Mixt. is treated in a ta in a fermentation process at 65°C.

Air is passed through mixt. continuously. A solvent i mixed with mixt. Tank is heated until its contents are dried, forming compost. Pref. solvent:waste ratio of mixt. is 1:2-4 wt. parts waste:solvent. Dry compost is mixed with synthetic resin.

Fillers are mfd. from solid or municipal waste which can be incorporated into natural or synthetic resin for plastics, mfr. 14.3.77 as 777431 C.i.p. 4012231 (+6.7.74 18.7.74-DT-432606, 434487) (+18.2.75, 7.7.75, 18.7.75 7.4.76-US-550585, 593386, 597120, 674431) (6pp931)

PLAC D16 88395Y/50 =US 4110-32
Proteins e.g. enzymes separation and fractionation - by ammoniu sulphate precipitation on agarose gel and elution with a fallin ammonium sulphate gradient
MAX PLANCK GES WISSENSCH 24.05.76-DT-623276
*B04 (29.08.78) *DT2623-276 +A23j-01*

In the fractionation and sepn. of proteins by adsorption o organic gel and elution with a descending $(NH_4)_2SO_4$, the improvement comprises (a) treating a soln. of the protei with $(NH_4)_2SO_4$ down to a concn. 5.15% below the concn.

normally required for pptn. of the proteins, (b) mixing the soln. obtd. with unsubstd. agarose gel, so that the proteins are pptd. onto the gel and (c) fractionally eluting the latter.

Pref. $(NH_4)_2SO_4$ concn. is adjusted to 8-12% below the concn. normally required for pptn. and elution performed with a linearly descending gradient.

Method is esp. for sepn. of biologically active proteins. Very high yields of enzymatic activity, good reproducibility and good purificn. factors are achieved. 11.5.77 as 796050 (4pp393)

PHIG D16 75892Y/43 =US 4110-433

Prodn. of attenuated equine rhinopneumonia virus - for prepn. of live virus vaccine

PHILIPS ROXANE INC 23.04.76-US-679840

*B04 C03 (29.08.78) *BE-853-810 A61k-39/12 C12k-07*

Prodn. of an immunogenically active attenuated live equine rhinopneumonitis (ERP) virus comprises (a) introducing a live virulent equine rhinopneumonitis virus into a Vero cell culture, (b) incubating the culture until the cellular cytopathology becomes evident, (c) harvesting a portion of the virus so produced and reintroducing the harvested virus into fresh tissue cultures, (d) repeating serial passage of the virus in tissue culture at 22-33°C to produce a live avirulent virus and (e) recovering the virus.

Pref. incubation temp. of each passage is 26°C and serial passage is carried out $\geqslant$ 30 ($\geqslant$ 50) times. Vaccines obtd. from the virus give none of the usual ERP symptoms in horses, inoculated intramuscularly (no nasal or ocular discharge, no fever, no anorexia, etc.). Vaccination of a mare prior to breeding and during pregnancy prevents abortions caused by virulent ERP virus. 23.4.76 as 679840 (13pp992)

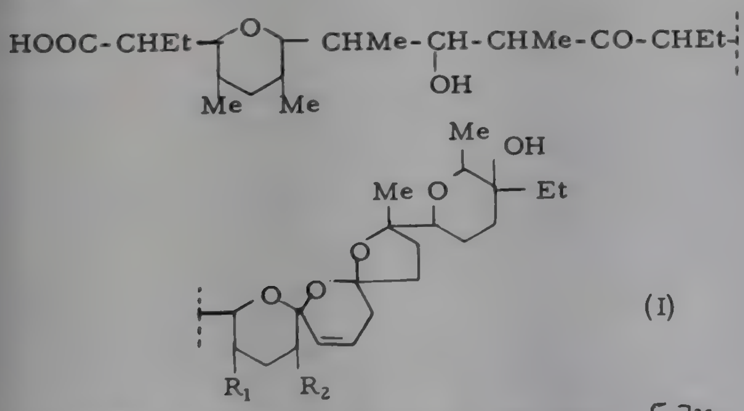
ELIL ★ D16 31488B/16 ★US 4110-435

Antibiotic A-28086 factor D an its acetyl and n butyryl ester(s) - useful as antibacterial, anticoccidial antiviral and antifungal agents

ELI LILLY & CO 26.01.77-US-762535 (21.04.75-US-569719)

B04 C03 (B03 C02) (29.08.78) A61k-35

Antibiotic A-28086 factor D (I) one of R_1 and R_2 is Me, the other is Et) and its acetyl and n-butyryl ester derivs. and their salts are new. (I) has empirical formula $C_{44}H_{74}O_{11}$ and is sol. in $CH_3OH_1C_2H_5OH$, DMF, DMSO, ethyl acetate, $CHCl_3$, acetone and benzene; slightly sol. in hexane and insol. in water.



(I)

(I) has a mol. wt. of 778; m. pt. 96-98°C; $[\alpha]_D^{25} = -56°$ (C=1 methanol); elemental compsn. 67.59% C, 9.38% H and 22.77% O; a titratable gp. with pKa value 8.67 in 80% aq. DMF and characteristic (given) infra red and nuclear magnetic resonance spectra; X-ray powder diffraction pattern; Rf values, etc. The acid gp. forms salts and ester derivs. and the OH gp(s) may be esterified.

(I) and its derivs. increase feed utilisation efficiency in ruminants and are active against a wide range of viruses. 26.1.77 as 762535 (+25.2.76-US-661185) (15pp1248)

ELIL ★ D16 31489B/16 ★US 4110-436

Treating coccidiosis in poultry - by admin. of antibiotic A-28086 factor D or its acetyl or n-butyryl ester derivs.

ELI LILLY & CO 26.01.77-US-762536 (21.04.75-US-569719)

B04 C03 (B03 C02) (29.08.78) A61k-35

Coccidiosis in poultry is treated or prevented by admin. of Antibiotic A-28086 factor D (I) or its acetyl and n-butyryl ester derivs., (I) is described in U.S. 4110435.

(I) is also an antibacterial agent and it increases feed utilisation efficiency in ruminants. (I) also has antifungal and antiviral activity against a wide range of viruses. 26.1.77 as 762536(+12.2.76-US-657423) (16pp1248)

CALI D16 86446A/48 =US 4110-475

Mono,di or tri:chloromethyl di:thioacetic acid - used as accelerator in cellulose fermentation by bacteria from sewage or rumen (NL 14.11.78)

CHEVRON RESEARCH CO 11.05.77-US-795680

*E16 (29.08.78) *DT2820-267 A23k-01/16*

The rate of cellulose fermentation by cellulose-digesting rumen microorganisms is accelerated by effecting the fermentation in the presence of 2-(chloromethyldithio)acetic acid, 2-(dichloromethyldithio)acetic acid or 2-(trichloromethyldithio)acetic acid.

Fermentation is pref. effected in vitro or in vivo. Cellulose is esp. cellulosic waste prods. or cellulosic animal feed. Microorganism is esp. Bacteroides succinogenes or Ruminococcus albus. 11.5.77 as 795680 (3pp936)

POLL- D16 ✓ 12450X/07 =US 4110-480

Improved brewing worts by treating malt etc with polar org cpds - before extraction with hot water, to reduce formation of 2-trans nonenal

POLLOCK INT LTD 24.07.74-GB-032704

*(29.08.78) *NL7508-781 C12c-01/16*

Prodn. of a wort for use in brewing comprises (i) contacting malt or ground malt with an organic substance (I) to reduce the amt. of precursors of 2-trans-nonenal present in the (ground) malt; (ii) extracting ground malt with hot water to form a wort; and (iii) sepg. the wort from insoluble matter. (I) is methanol, ethanol, 1- or 2-propanol, 2-butanol, isoamyl alcohol, 2-phenylethanol, dimethylsulphoxide, acetic acid or propylene glycol.

(I) may be in liq. or vapour form. Pref. the amt. of (I) is 5 wt.% of the (ground) malt and contact is effected for 24 hr. Method reduces the tendency of beers made from the wort to develop stable flavours of the type characterised by 2-trans-nonenal. 23.7.75 as 598421 (2pp927)

See Also

D13 GB 1544402
D13 J5 4032187
D13 J5 4033535
D17 DT 2842855
D13 GB 1544499
D13 J5 4032644
D15 FR 2397225
D13 US 4110477
D13 J5 4032645
D15 J5 4032696

D17: SUGAR; STARCH

ATLA- ★ D17 B/16 ★BR 7705-925

Sepn. of protein from sugar cane juice - by deposition on outside of rotary cylinder, using electrical energy

ATLANTICA TECH PESQ 05.09.77-BR-005925

(03.04.79) A23j-01/12 A23k-01/02

COOP- ★ D17 B/16 ★BR 7706-007

Sugar cane mill roller - has working rib faces formed by electrode deposits running over apexes

COOP ACUCAR ALCOOL 08.09.77-BR-006007

COOP- ★ D17 B/16 ★BR 7706-009

Sugar cane mill roller ribs - are mounted in sets along roller drum and separate from it

COOP ACUCAR ALCOOL 08.09.77-BR-006009

P71 (03.04.79) B30b-09/20

HAYB D17 ✓ 01629U/02 =DS 2226-581

High purity maltose prodn - by action of pure beta-amylase on amylopectin

HAYASHIBARA BIOCHEM 31.05.71-JA-036968

*F13 (12.04.79) *DT2226-581 +C12d-13/02*

Maltose of high purity is obtd. from starch consisting chiefly of amylopectin. The starch is suspended in aq. medium and maintained at < 130°C until the starch is in soln. Pure β-amylase is added and the mixt. maintained under reaction conditions until the β-amylase has formed maltose from all the non-reducing end gps. of the starch and before perceptible amts. of tri- and oligo-saccharides are formed. The mixt. is dialysed and maltose recovered with a purity $>95\%$. 31.5.72 as 226581 (5pp068).

HAYB ★ D17 30019B/16 ★DT 2842-855
Prods. based on new alpha-glucane - derived from sugars by action of microorganisms of Elsinoe strain
HAYASHIBARA SEIBUTS 30.09.77-JA-117667
A11 F01 (D16) (12.04.79) C08b-37

Prods. are composed of or contain a new α-glucane (elsinan) with recurring units of formula [3)-Glc-(1→4)-Glc-(1→4)-Glc-(1→] (in which Glc is an α-D-glucopyranose gp).

The main structure is almost linear, with three α-1,4-linked glucose gps. (i.e. maltotriose units) linked in succession through α-1,3-bonds, and also contains some maltotetrose units.

Used as granulate, fibres, yarns, films, papers, sponges, tubes, coatings, etc. in the foodstuffs, clothing, furnishing, building, agriculture and fishing industries, and as technical prods. for chemicals, cosmetics and pharmaceuticals. Elsinan is more stable than amylose and less water-sensitive than pullulan. It is sol. in hot water, transparent, non-toxic, edible and can be stored for long periods without change in properties. Films are tough, flexible, oil-resistant, impermeable to air and oxygen and have good electrical insulating properties. 2.10.78 as 842855 (32pp195)

HAME- ★ D17 B/16 ★SF 7702-260
Separation process for corn starch
HAMEEN PERUNA OY 22.07.77-SF-002260
(30.03.79) C13l

KAME/ ★ D17 31117B/16 ★SU -609-765
Purificn. of neutralised prod. from vegetable hydrolysis - by contacting with air or steam in mass-exchange appts.
KAMENNYI V I 24.12.75-SU-302364
(10.05.78) C13k-01/04

Neutralised materials from the hydrolysis of vegetable material are used in biochemical processes. They are purified by counter-contacting them in a mass-exchange plate appts. with air to steam at a flow rate of 1-3 m/sec. The method is effective and inexpensive.
Kamennyi V.I., Gelfand E.D., Bul. 21/5.6.78 24.12.75 as 302364 (2pp314)

CONF= ★ D17 31214B/16 ★SU -610-506
Confectionery sugar paste prodn. - includes spraying sugar syrup onto rotating surfaces and exposing to air flows
CONFECTIONERY IND 21.05.76-SU-364509
(10.05.78) A23g-03

The sugar syrup is sprayed and exposed to a multi-jet airflow, and thin films are formed and simultaneously cooled. To accelerate cooling and crystallisation and to improve prod. quality, the films are carried on rotating surfaces with repeated change in direction, and air temp. during spraying is 10-30°C.

The syrup is pref. supplied at 115-105°C and sprayed to a particle size of 30-50 um. Film thickness is pref. 700 um on the first rotating surface and 400 um on the next, temp. falling to 25-35 °C in 2-5 sec.

The surfaces are e.g. rollers. The thin films provides supercooling to optimum temp. without mechanical agitation.
Eingor M.B., Plaksii I.S., Kibrik E.D. et al. Bul. 22/15.6.78 21.5.76 as 364509 (3pp1358)

See Also
D16 US 4110164

D18: SKINS; HIDES; LEATHER; TOBACCO

BAUM- ★ D18 29786B/16 ★BE -872-712
Cigarette filters prodn. - from stable, rod-shaped elements obtd. from strand or tow of filaments or fibres
BAUMGARTNER PAPIERS 15.12.77-CH-015432
F04 P15 (30.03.79) A24c D04h

Stable, rod-shaped elements for cigarette filters are produced from filamentary or fibrous material in the form of a strand or tow which has been crimped and sized. The process comprises directing the strand or tow of loosely packed filaments of fibres to an endless transporter and shaping ribbon in a continuous feed, for shaping, wrapping and cutting. The cut rods are submitted to setting after cutting, then sub-divided by a cutter into short lengths. Appts. used provides cigarette filters which may contain inner chambers filled with e.g. active carbon.

Appts. does not submit the strand or tow to harmful stretching or compression during processing. Pref. the strand is unconstrained in any way while it is in contact with the transporter and shaper ribbon. 13.12.78 as 872712 (19pp1359)

HAUN ★ D18 29850B/16 ★DT 2742-868
Measurement of moisture content of flowing solids - using capacitance technique in diverging section with radially arranged electrodes and device to maintain solids compaction
HAUNI-WERKE KORBER KG 23.09.77-DT-742868
J04 R16 (12.04.79) G01n-27/22

The field lines of a condenser pass through the flowing material and are subjected to an oscillating circuit coupled to a high frequency generator. A means of compacting the material in the measurement zone is provided. The electrodes are mounted on the walls of the measurement chamber. At one side this has a screw pressure feeder to feed the material in, while on the outlet side a definite pr
ssure is maintained. The measurement chamber is of di
verging conical section.

Esp. for use on tobacco or any other flowing material where moisture control is needed. Gives a method of ge
eral accuracy and applicability. 23.9.77 as 742868 (16pp1053)

GLAT- ★ D18 29872B/16 ★DT 2743-9
Cigarette filter covering strip with cork appearance - has por
accentuated by embossing and given gloss finish with lacqu
which gives matt finish to strip
GLATZ J GMBH 30.09.77-DT-743986
A97 F09 P15 P78 (12.04.79) A24c-05/56 B44f-09/02 D21h-05/

Cigarette filter cover strip having the appearance of co
has the random distribution of pores in cork defined by
bossing depressions in the strip, which is then coated w
a layer of lacquer to impart glossy appearance to the er
bossed depressions and a matt appearance to the remai
der of the strip. The lacquer also renders the strip sal
-proof. Layer may be applied in an amt. of 0.5 to 15 g
m^2 and the lacquer may be shellack, ethyl cellulose or
polyethylene wax-styrolacylate. 30.9.77 as 743986 (8pp536)

PHIM D18 31816A/17 =GB 1544-
Synthetic smoking material for mixing with tobacco - prepd. f
cellulosic material by pyrolysis and extraction with a base
PHILIP MORRIS INC 20.10.76-US-734033
*P15 (19.04.79) *US4079-742 A24b-15*

A synthetic smoking material is mfd. by pyrolising a c
ulosic material at 150-400°C under conditions to ensur
wt. loss of 8-40 wt.% w.r.t. material following drying

constant wt. at 100°C.

Resultant pyrolysed material is then subjected to extraction with a basic liq. at 0-150°C and 1-100 psia pressure for time to remove 15-40 wt.% pyrolysed prod. Overall wt. loss of material in first and second steps are 25-65 wt.% w.r.t. starting material. Pref. basic liq. is water-soluble amines, quat.-ammonium bases, liq. ammonia, ammonium hydroxide or aq. soln. of basic inorganic cpds.

Smoking material is entirely a cellulose deriv., which can be blended with tobacco to form cigarettes. 7.10.77 as 041893 (10pp931)

ELEM- ★ D18 30106B/16 ★GB 1544-368

Programmed control appts. for blanking machines used in shoe mfr. - where the number of strokes made by a blank shearer is registered irrespective of the type of blank used

ELEMAC SPA 28.04.77-GB-017746

R26 (19.04.79) C14b-17/14 G05b-19/02

The unit comprises an appts. with several compartments for different blanks or dies. Each compartment has associated with it: a responsive device to indicate the presence of blanks or dies; a stroke counter to enable presetting of the number of strokes that the blanking or die cutting machine should produce for each blank or die; control members for controlling the number of strokes; and a signalling device to register the number of strokes. The control members and signalling device work in response to withdrawal of the blank or die from the compartment.

The total of all the strokes is registered without any discrimination as to the blank or die being used. 28.4.77 as 017746 (-pp959)

BRTA ★ D18 30110B/16 ★GB 1544-481

Mixing chamber for diluting tobacco smoke - used with smoking engine for testing cigarette smoke

BRIT AMER TOBACCO LTD 09.05.75-GB-019607

J04 (19.04.79) B01f-03/02

An aerosol diluting appts. comprises first aerosol-collection, dilution and mixing chamber and a further mixing chamber. The first chamber has an aerosol inlet and a valve controlled outlet. The outlet is connected to a further mixing chamber.

The first chamber also has ⩾ 1 gas inlet connected through a valve to a source of gas for diluting the aerosol. The gas and aerosol are combined in the first chamber, transferred to the further chamber where additional mixing occurs.

The appts. is used partic. for diluting tobacco smoke with air or other gas. The device may be associated with a smoking engine or inhaler. The appts. mixes tobacco smoke with air or other gases, over a wide range of concns. and with high accuracy. 9.5.75 as 019607 (6pp)

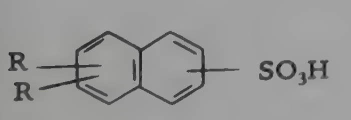
BRTA D18 28922A/16 =GB 1544-599

Cellulose or cellulose acetate-based filter for cigarettes - contains phosphoric ester(s) or naphthalene sulphonic acid(s) to reduce nicotine content

BAT CIGARETTENFAB G 06.10.76-DT-645036

*A88 E11 P15 (A11 E14) (19.04.79) *DT2645-036 A24b-15/03*

A filter for a cigarette, cigarillo or pipe includes, as an impregnant or coating, ⩾ 1 liq. phosphoric acid ester or naphthalene sulphonic acid of formula $(RO)PO(OH)_2$, $(RO)_2PO(OH)$, or (I), which is not soluble in water and is miscible with organic solvents.



(I)

In the formulae, each R is a straight-chain, branched or cyclic aliphatic hydrocarbon. The filter provides a high reduction in the nicotine of the smoke.

5.10.77 as 041461 (3pp910)

LERO= ★ D18 31118B/16 ★SU -609-766

Mineral oil-based compsn. for greasing fur pelts - includes emulsifiers forming emulsions of first and second orders, to improve plastic properties of pelts

LENGD ROT-FRONT FUR (LENI) 23.10.75-SU-183547

Compsn. for greasing fur pelts comprises (by wt.%): 5-10% phthalic acid ester; 39-45% mineral oil; 0.5-2% emulsifier (I) forming a first order emulsion; 0.25-1% emulsifier (II) forming a second order emulsion; and balance water. The binary emulsifier system improves the plastic qualities of the pelt leather.

(I) is pref. proxanol or Na oleate and (II) is pref. nonpolar esters of glycerine and higher acids or pentol.

Egorkov V.F., Shilina D.I., Kaleva B.M. et al. Bul. 21/5.6.78 23.10.75 as 183547 (2pp314)

SVRO= ★ D18 31119B/16 ★SU -609-767

Animal skin cleaning and curing unit - comprises container with corrugated surface reciprocating in vat with brine flow

SVERD ROCMYASOMOLRE 20.12.76-SU-429401

(10.05.78) C14c-15

The cleaning and curing of hides is improved using a simplified and cheaper flow line with pretreatment unit below the loader. It has a container with a corrugated surface reciprocating in the vat along a vertical plane, and featuring a unit inducing a flow of brine. The container is operated by a cylinder, and the brine is forced by two synchronously rotating activators mounted on oppostite walls of the container.

The preliminary treatment unit combines dung cleaning with brining and thus reduces the working time for curing. The hides loaded into the brine flow contact the corrugated surface of the container and are then subject to braking. The resulting friction between the skins promotes dung removal and accelerates diffusion of the brine.

Luzhetskii N.I., Kudlaev V.A., Bul. 21/5.6.78 20.12.76 as 429401 (5pp89)

TAKE D18 32268X/18 =US 4109-663

Tobacco products and tobacco substitutes - contg. or consisting of heat-gelling beta-1,3 glucan type polysaccharide

TAKEDA CHEMICAL IND KK (NISB) 30.04.75-JA-052863 (17.10.74-JA-120189)

*P15 (29.08.78) *DT2532-102 A24b-03/14 +A24d-01/18*

A smoking tobacco prod. is prepd. by incorporating a thermo-gelable β-1,3-glucan-type polysaccharide into a smoking material. Polysaccharide to be incorporated is a crude prepn. contg. ⩾ 80 wt.% polysaccharide on dry basis.

Pref. incorporated polysaccharide is 0.5-10 wt.% w.r.t. smoking material. Incorporation is by spraying or coating a dispersion, adding a gelatin prod., adding a sheet or shreads of a sheet made from polysaccharide onto the smoking material.

Prod. has improved flavour, taste and irritability. Smoking material has improved thickness, wet-proof qualities, tensile strength, elongation and filling capacity. 7.10.75 as 620351 (+30.4.75-JA-052863) (12pp931)

BRWI ★ D18 31308B/16 ★US 4109-664

Low density tobacco substitute - comprising a thermo-gelling, methoxy-substd. cellulose, water-insoluble inorganic diluent and closed air cells

BROWN & WILLIAMSON CORP 01.03.77-US-773342 (05.03.75-US-555603)

A97 P15 (A11) (29.08.78) A24d-01/18

A tobacco substitute comprises a mixt. of 7-13 wt.% (A) a binder comprising a water-soluble, thermogelling, methoxyl-substd. cellulose, with methoxyl degree of substitution ⩾ 1.5 gps. per anhydroglucose unit; 75-85 wt.% (B) a water-insoluble inorganic diluent; and (c) closed air cells dispersed through (A) and (B).

The material has low density and good flexibility and produces a min. of waste in processing during cigarette mfr. 1.3.77 as 773342 (6pp558)

LIGG D18 61144Y/35 =US 4109-666

Filter tip cigarette - comprising cylinder of tobacco extended with coaxial filter tip contg. a tube leading unfiltered fraction via diffuser to mouth

LIGGETT GROUP INC 01.03.76-US-662624

*A88 P15 (29.08.78) *BE-851-660 A24d-01/04*

A continuous length of cigarette filter is produced having a number of spaced axially disposed tubes surrounded by compacted filter material, and an outer cylindrical wrap, the material being compacted to a greater density around the tubes than it is between the tubes.

The length is cut up into units, which are then joined to sticks of tobacco and wrapped, pref. with perforated paper, the filter having the tube abutting the tobacco and a diffuser portion to disperse smoke received from the tube prior to entering the mouth. The filter improves the taste of the smoke. 1. 3. 76 as 662624 (8pp1379)

See Also

D13 US 4109662 D15 GB 1544430

D2: DISINFECTANTS; DETERGENTS

D21 : DENTAL; TOILET PREPARATIONS

ASS/ ★ D21 B/16 ★BR 7806-834
ental casting base with acrylic conical pin - surrounding hollow annula which receives protective plastics cap, and with auxiliary asting pin
DE ASSIS A L 17.10.78-BR-006834
A96 P32 (03.04.79) A61c-05/12

SCH/ D21 47850S/29 =DS 1965-859
having emulsion
ESCH A (ESC /) 31.12.69-DT-965859
*A16 (A11 A96) (12.04.79) *DT1965-859 A61k-07/15*

having emulsion comprises ~3 pts. methylcellulose, ~ 0.5 pts. honey, ~ 0.5 pts. tragacanth, ~ 0.3 pts. iq. polyvinyl acetate and ~100 pts. distilled water. The mulsion is non-irritating and makes the beard hair soft nd easy to remove. 31.12.69 as 965859 (2pp068).

CHM/ ★ D21 29907B/16 ★DT 2744-754
etermining contact points on artificial teeth - in which tooth is oated with carrier in volatile solvent and the solvent evaporated to eave film which is removed at contact points
SCHMIDT H H 05.10.77-DT-744754
P32 (12.04.79) A61c-11

he points of contact between an artificial tooth and another ody such as a toooth are made visible by coating the artiicial tooth with a fluid comprising a carrier in a volatile olvent. When the solvent evaporates a film is left by the arrier, and this film is removed at the contact points.

Pref. a double layer is deposited in the above way. The ilm can eventually be removed using the solvent. The arrier should be insoluble in water and saliva: the dried ap of the palaquium tree is preferred. The solvent is ref. trichloromethane. The opacity of the fluid can be djusted by an additive. 5.10.77 as 744754 (11pp1402)

OREA ★ D21 30070B/16 ★FR 2397-185
Non:irritant eye make/up remover - contains alkyl or hydroxy alkyl oly:glycoside with preservative and phosphate buffer
L'OREAL SA 06.02.78-FR-003212 (18.05.77-FR-015292)
E19 (16.03.79) A61k-07/02

n aq. compsn. contains (i) ⩾1 surfactant, which is an 1-18C (hydroxy)alkyl polyglycoside contg. 3-25 glycoside nits; (ii) ⩾1 preservative, which is sodium ethyl mercanthiosalicylate, a chlorhexidine salt, a phenylmercury alt, a 30/70 mixt. of sodium benzoate and monochloraceamide, or $RN^+(Me_2)CH_2PhCl^-$, (I), (where R is a 12-8C alkyl or mixt. of such alkyls); and (iii) a phosphate uffer; the pH of the compsn. being 6.5-7.5, pref. 7-7.2

The compsn. pref. contains 2-5% of (i) and 0.002-0.3, artic. 0.02-2% of (ii). Other agents such as humectants, ofteners, perfumes or colourants, may also be present. 8.5.77 as 015292 (10pp1331)

CAV/ ★ D21 30071B/16 ★FR 2397-189
ompsn. for medical, thermal and beauty treatments - contains a ilicate and marine clay associated with oyster culture
DE SIRAN DE CAVANAC 13.07.77-FR-021598
E33 (16.03.79) A61k-07/48

ompsn. contains as its active principle, a heat-absorbng pelite, prepd. from a mixt. of silicate of alumina 'Rhassoul') and marine clay associated with oyster culure The silicate of alumina is ground into fine particles f size 0.10-0.15 mm.

The compsn. can also contain 0.1-10% of $MgCl_2$, as well s other marine substances. The max. level of silicate lumina is pref. 70 wt.% together with the clay, which as degreasing properties, talc and limestone powder (oyster shells).

The compsn. is a medico-thermal product, used for ealth, beauty, and toilet purposes. It has absorbent pow-

or mud applications, it pref. contains 50 wt % of the marine clay contg. oyster secretions. 13.7.77 as 021598 (4pp1331)

COLG D21 36931A/21 =GB 1544-563
Surfactant mixt. for skin-softening foam baths - contg. water-soluble, cationic nitrogen-contg. polymer, zwitterionic betaine or sulpho-betaine and nonionic organic oxide
COLGATE PALMOLIVE CO 16.11.76-US-742326
*A96 (19.04.79) *DT2750-777 C11d-01/94 +C11d-03/37*

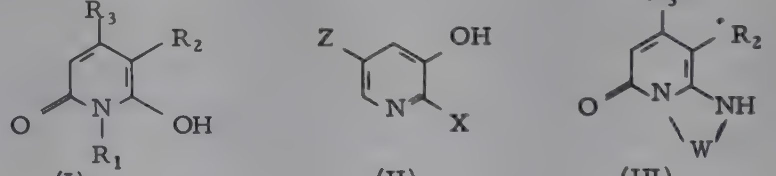
Surfactant compsn. for producing an emollient bubble bath comprises 0.5-2 pts. ⩾ 1 water-sol. cationic N-contg. polymer of mol. wt. 2,000-3,000,000 and cationic charge density > 0.001 in aq. soln. Compsn. also contains 4-7 pts. per pt. of N-contg. polymer, of ⩾ 1 zwitterionic (sulpho)betaine of formula $R-(XR')_xR^2R^2N^+-R^3-Z^-$ or $R-(XR')_x-CH(N^+R^2R^2R^2)R^3-Z^-$; and 8-15 pts. per pt. of N-contg. polymer, of ⩾ 1 polar nonionic organic oxide of formula $R-(XR')_xR^2(R^2)_yY\rightarrow O$.

In the formulae, R is 10-20C alkyl, alkenyl or hydroxyalkyl, X is -CONH- or -O-, R' is 2-3C (hydroxy)alkylene, x is 0 or 1 when X is -CONH- and 0-5 when X is -O-; R^2 are each 1-4C (hydroxy)alkyl or bonded with adjacent N as morpholinyl, piperidinyl, pyrrolidinyl or N-alkyl piperazinyl; R^3 is 1-4C (hydroxy)alkylene, Z is -COO- or $-SO_3-$, Y is N, P or S, y is 0 when Y is S and 1 when Y is N or P.

Compsn. has good emollient effect in bubble bath. 16.11.77 as 047702 (7pp931)

HENK D21 19950A/11 =GB 1544-587
Hair colouring agents giving wide range of colours - by successive application of diazonium salts and specific pyridine derivs. as coupling agent
HENKEL KG AUF AKTIEN (CIBA) 02.09.76-CH-011135
*E21 (19.04.79) *DT2739-227 D06p-03/04*

Human hair is dyed with developing dyes by applying a diazo salt and a coupling component successively but in either sequence, to the hair and coupling them. The coupling component is of formula (I), (II) or (III).

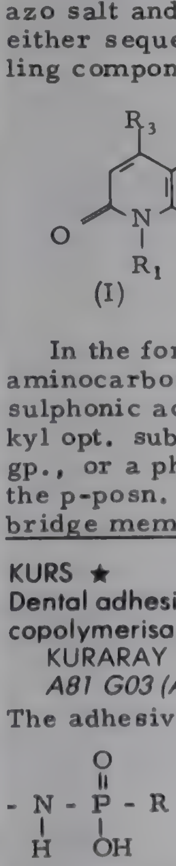


(I) (II) (III)

In the formulae, R_1 is H or an organic gp.; R_2 is CN, aminocarbonyl or alkyl substd. by carboxylic acid gp. or sulphonic acid or alkylsulphonic acid gp.; R_3 is ⩽ 5C alkyl opt. substd. by carboxylic acid gp. or sulphonic acid gp., or a phenyl gp. opt. further substd. by pyridone in the p-posn.; X is OH or NH_2; Z is H or halogen; W is a bridge member. 2.9.77 as 036798 (14pp910)

KURS ★ D21 30180B/16 ★J5 3144-939
Dental adhesive compsn. contg. organo-phosphorus gps. - and pref. copolymerisable functional gps.
KURARAY KK 24.05.77-JA-060766
A81 G03 (A14 A96) (16.12.78) C08k-05/51 C09j-03/14

The adhesives contain cpd. contg. gps. of formula (I).



$$-\underset{\substack{|\\H}}{N}-\overset{\substack{O\\ \|}}{\underset{\substack{|\\OH}}{P}}-R \quad (I)$$

(where R is R', OR' or NR'R''; R' and R'' are H or organic residues). The adhesives have appropriate hardness, compression strength and water-absorbing property and excellent adhesive power to enamel.

Pref. the cpds. contg. the gps. of formula (I) contain functional gps. copolymerisable with other monomers.

compsns. is 0.1-0.3 wt.%. The cpds. contg. gps. (I) may be added to resins or may be used as primer.

In the case where the cpds. are added to resins, the resins are mixed with inorganic materials such as quartz powder, glass powder, alumina powder, and polymethyl methacrylate, etc. to improve the property of the resins and to minimise contraction of vol. on polymerisation and curing. The cpds. contg. gps. (I) may be used in the form of cement by mixing with ZnO, MgO, etc. The OH gp. of the cpds. may partially be substd. by salts such as ONa. 24.5.77 as 060766 (4pp136)

OSOL ★ D21 30515B/16 ★J5 4032-185

Aerosol compsn. contg. water, alcohol and liquefied petroleum gas - used e.g. for application of sweat-suppressing agent

OSAKA AEROSOL KOGYO KK 16.08.77-JA-097482
G04 P34 (09.03.79) A61k-09/12 A61l-09 A61m-11/02 C09k-03/30

Water-contg. aerosol (I), which is not effervescent and can be injected is prepd. using mixt. of 30-80 wt.% of water and 20-70 wt.% of 1-6 C alcohol (II), and adding 10-30 w/v % of liquefied petroleum gas, that has vapour pressure of 0.8-8.0 kg/cm² at 20°C.

(I) is flame resistant and can be sprayed in fine mist and dried easily. (I) is prepd. inexpensively and can dissolve a number of cpds. Toxic gas and solvent contg. chlorine are not used in (I). Examples of (II) are (m)ethanol, (iso)propanol, butanol and glycerol.

In an example, (I) for sweat suppressive spray was prepd. by mixing 0.3 wt.% of sweat-suppressive agent, 5.7 wt.% of talc, 46.0 wt.% of distilled water, 22.7 wt.% of ethanol denatured by geraniol, 0.3 wt.% of surfactant, 22.0 wt.% of dimethyl ether and 3.0 wt.% of liquefied petroleum gas. 16.8.77 as 097482 (4pp42)

TSUR ★ D21 30681B/16 ★J5 4032-616

Bath salts compsn. used e.g. for skin care - by granulating e.g. starch with water, drying using IR rays and impregnating with medicinal plant extract

TSUMURA JUNTENDO KK (NOSA) 17.08.77-JA-097794
(10.03.79) A61k-07/50

A bath mixt. is prepd. by granulating with water a carrier consisting of starch and/or corn opt. with a swelling agent and/or a binding agent, drying the granules by irradiation of IR rays of 3-55μ, and impregnating the dried granules with an extract of medicinal plants. The medicinal plants used are selected magnolia bark, cnidium rhizome, cinnamon, huromoji oil, ligusticum root, etc.

It is useful for skin care and promotion of blood circulation and metabolism. 17.8.77 as 097794 (5pp16)

TSUR ★ D21 30682B/16 ★J5 4032-617

Bath salts compsn. used e.g. for skin care - by granulating e.g. starch with water, drying using IR rays and impregnating with perfumes

TSUMURA JUNTENDO KK (NOSA) 18.08.77-JA-098259
(10.03.79) A61k-07/50

A bath mixt. is prepd. by granulating with water a carrier consisting of starch and/or corn powder opt. with a swelling agent and/or a binding agent, drying the granules by irradiation of IR rays of 3-55μ, and impregnating the dried granules with a bath perfume. The bath perfumes are selected from jasmine oil, rose oil, lavender oil, lime oil, limonene, linalool, geraniol, citronellol, etc. 18.8.77 ad 098259 (5pp16)

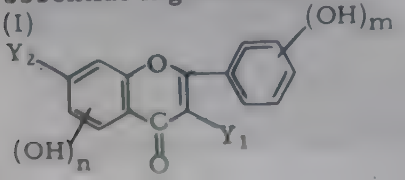
ASAE ★ D21 30696B/16 ★J5 4032-638

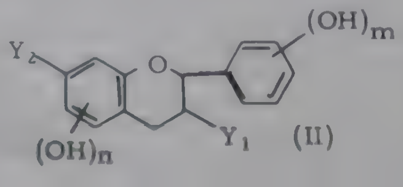
Cosmetic base compsn. - contg. alkylene oxide polymer and benzopyran deriv(s).

ASAHI ELECTROCHEM IND KK 17.08.77-JA-098520
A96 E13 P34 (A25) (10.03.79) A61k-07 A61l-09/ C08l-101*

The cosmetic base compsn. contains ≥1 of the cpds. of formula (I) and (II) and an alkyleneoxide polymer as the essential ingredients.

(I)





(II)

In the formulae, Y_1 and Y_2 are H, OH or a sugar gp. (e.g. rutinose gp.) n is 1-3 and m is 1-5. (I), (II) and thei glucosides (e.g. gossypetin, quercetin, taxifolin, luteolin, eryodictyol, epigallocatechin, epicatechin, rutin, quercitrin, eriocitrin, etc.) show an excellent sterilising effect on alkyleneoxide polymers. Their stabilising effect can be further increased by using together with another antioxidant, e.g. tocopherol.

(I) or(II) is used at 50-1000 (500-800) ppm, w.r.t. alky -eneoxide polymer. 17.8.77 as 098520 (4pp5)

HATA/ ★ D21 30697B/16 ★J5 4032-639

Hair tonic prepn. - includes crushing mixt. of sesame, aloe, sea tangle and gardenia flower or barley, and mixing with shiitake extract and alcohol

HATA S 10.08.77-JA-095850
(10.03.79) A61k-07/06

Method comprises (1) mixing a crushed prod. of (a) sesame, (b) aloe, (c) sea tangle and (d) gardenia flower o barley, present in a wt. ratio of (a):(b):(c):(d) of 0.66-1: 0.46:0.33:0.06-0.13, (2) mixing the mixt. with a liq. mix composed of a small amt. of shiitake extract and alcohol, (3) maturing the mixt. and (4) filtering to remove solids.

Prod. is nontoxic and free from harmful after-effects. It gives refreshing feeling and shows a sterilising effect. The components activate hormones through their synergic effects and convert tyrosine to melanin, so it is effective to prevent the whitening of hair. 10.8.77 as 095850 (3pp5)

TOAE- ★ D21 30960B/16 ★J5 4033-88

Aerosol e.g. antiperspirant prepn. - by suspending powder in LPG o liquefied di:methyl ether in presence of methylene chloride an surfactant

TOYO AEROSOL KOGYO 22.08.77-JA-099476
E19 G04 (12.03.79) C09k-03/30

In suspending a powder used as a main agent in a liquefie gas to obtain a sprayable suspension, the improvement comprises using ≥1 of liquefied petroleum gas and dimethyl ether as the liquefied gas, and suspending the pow der with methylene chloride and an organic phosphoric ester type surfactant used as a suspending agent in the liquefied gas.

The powder is e.g. bentonite, kaolin, iron oxide, aluminium salt, talc or acid clay. The organic phosphor ester is hexyl alcohol, 2-ethylhexyl alcohol, isoactyl alcohol, stearyl alcohol, decylalcohol, lauryl alcohol, myristyl alcohol, cetyl alcohol or glycol.

Addn. of methylene chloride provides an aerosol whic is difficult to explode and burn. 22.8.77 as 099476 (4pp

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TOAE- ★ D21 30961B/16 ★J5 4033-8

Suspension of powder suitable for aerosol spray - to whi methylene chloride is added to reduce risk of explosion a combustion

TOYO AEROSOL KOGYO 22.08.77-JA-099477
A96 E17 G04 (12.03.79) C09k-03/30

In suspending a powder used as a main agent in a liquefi gas to obtain a suspension which can be sprayed, improv ment comprises using ≥1 of liquefied petroleum gas or dimethyl ether as the liquefied gas, suspending the powd with methylene chloride and a fatty acid polyethylene gly col ester system non-ionic surfactant used as a suspend agent in the liquefied gas.

The powder is, e.g. talc, kaolin, bentonite, acid cla iron oxide, or aluminium salt. The surfactant is monooleic acid polyethylene glycol ($C_{17}H_{33}COO(CH_2CH_2O)_nH$, n = 4.5-13.6), dilauric acid polyethylene glycol ($C_{11}H_{23}COO(CH_2CH_2O)_nCOC_{11}H_{23}$, n= 4.5-8), dioleic acid polyethylene glycol ($C_{17}H_{35}COO$-$(CH_2CH_2O)_nCOC_{17}H_{33}$, n = 4.5-13.6), or monostearic ac polyethylene glycol ($C_{17}H_{35}COO(CH_2CH_2O)_nH$, n = 9.0-13.6).

With the addn. of methylene chloride, an aerosol wh is more difficult wrt explosion and combustion properti can be obtd. Useful e.g. in antiperspirants. 22.8.77 099477 (7pp51)

URAL= ★ D21 31220B/16 ★SU-610-526

Bright green aromatic mixt. for bath water - contg. methyl cellulose, alcohol, pine extract, fluorescein, dye and water

URALS CHEM IND RES 03.01.77-SU-440394

A96 (18.05.78) A61k-07/50

The bright green aromatic mixt. is used as bath additive. The mixt. comprises (in wt.%) methyl-cellulose (I) 3.5-4.5; glycerol 10-12; ethyl alcohol 10-11; pine extract (carbonate) (II) 2-2.5; fluorescin 0.0125:0.0130; torquoise dye (tight, stable (III) 0.025-0.03 and water the rest.

Addn. of (I), (II) and (III) improves light-stability and solubility of the compsn. which is not toxic to man. The mixt. has biological activity and can be used as hygienic and deodorising agent for bath.

The compsn. has high storability and solubiltiy in bath water.

Machulenko L.N., Kozhevnikova M.S., Penkina G.E.
Bul. 22/15.6.78 3.1.77 as 440394 (2pp938)

PROC ★ D21 31351B/16 ★US 4110-083

Abrasive compsn. esp. for dentifrice - in which particles are coated with cationic water soluble polymer

PROCTER & GAMBLE CO 16.04.76-US-677592 (21.05.74-US-471941)

A96 P61 (29.08.78) A61k-07/16 B24d-03/30

A coated abrasive compsn. consists of (A) a mineral substance of 1-30 μ particle size and of Moh's hardness ⩾ 2; and (B) as a coating on the particles, 2-25 wt.% based on (A), of a cationic water-soluble polymer having a cationic charge density of > 0.003 and a mol. wt. of 500-1,000,000

The polymer is chosen from (a) polyacryloxyalkyl ammonium salts, (b) polymethacryloxyalkylammonium salts, (c) polyacrylamide alkyl ammonium salts, (d) polyalkenyl ammonium salts, (e) polyvinyloxy ammonium salts, (f) polyvinylbenzyl ammonium salts, (g) polydiallyl ammonium salts, (h) polyvinyl pyridinium ammonium salts, (i) polyvinylimidazolium salts, (j) polyalkylation quaterneries and (k) polycondensation quaterneries.

The cationic coating renders the abrasive less adsorptive to therapeutic cationic agents (e.g. stannous fluoride) which may be present in the dentifrice. 16.4.76 as 677592 (9pp914)

ICIL D21 77544V/45 =US 4110-184

Dental filling polyurethane fluid compsn.

IMPERIAL CHEM INDS LTD 24.04.73-GB-019270

*A96 (A25) (29.08.78) *BE-814-037 C08f-02/46 C08f-04*

Dental filling compsn. comprises (a) 60-80 wt.% an inorganic particulate filler selected from glass, quartz or silica of which ⩾ 50% of the particles have a max. dimension of ⩽ 300 μ and (b) a polymerisable material comprising (1) a polymerisable prepolymer which is the reaction prod. of a urethane prepolymer and 2-hydroxy-ethyl methacrylate. (2) ⩽ 100 wt.% methacrylic acid (ester) selected from methyl methacrylate, ethylene glycol dimethacrylate, hydroxyethyl methacrylate, triethylene glycol dimethacrylate and allyl methacrylate; and (3) 0.01-10 wt.% photosensitive catalyst comprising a photosensitizer selected from fluorenone, benzil, camphorquinone and α-naphthil, and a reducing agent being dimethylamino ethyl methacrylate.

The urethane prepolymer is the reaction prod. of a di-isocyanate selected from 4,4'-di-isocyanatodiphenyl methane, hexamethylene di-isocyanate, 4,4'-dicyclohex methane di-isocyanate and 2,4-tolylene di-isocyanate, and a diol which is the condensate obtd. by reacting 2,2 bis(p-hydroxyphenyl)propane and propylene oxide in a molar ratio of 1:2.

The compsns. are cured by visible radiation. 11.10.74 as 514289 (+22.4.74-US-463145) (11pp)

COOQ D21 30934Y/18 =US 4110-328

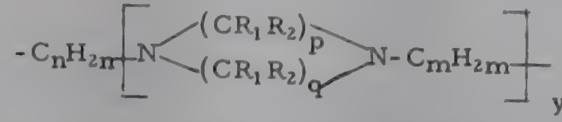
(Thio)carbamyl-guanidino substd. (cyclic) azalkanes - topical antimicrobials for control of dental plaque

COOPER LABS INC 26.10.76-US-735319 (30.10.75-US-627139)

*B03 (29.08.78) *BE-847-735 C07d-413/14 +C07d-241/06 C07d-295/12 C07d-403/06*

Bis-carbamylguanidinoazaalkane cpds. of formula Z-NH-

y=1-2; R_1 and R_2 are each H or 1-4C alkyl; and Z is 1-12C alkyl; di(1-10C alkylamino)-2-10C alkyl, (1-piperidino) alkyl or (1-morpholino) alkyl having total C content of 4-12; 3-12C alkenyl, 3-12C alkynyl or cycloalkyl, 4-12C cycloalkylalkyl, 6-12C cycloalkenyl, 7-14C cycloalkenyl alkyl, 7-12C polycycloalkyl, 8-14C polycycloalkylalkyl,



(II)

7-12C polycycloalkenyl, or 8-14C polycycloalkenylalkyl; 1-10C alkoxy 2-10C alkyl having total C content 3-14; phenoxy 2-6C alkyl; phenylthio 2-6C alkyl; 6-14C aryl; 7-14C aralkyl or 9-14C arylcycloalkyl; 9-12C benzocycloalkyl, or 6-14C aryl or aralkyl, all opt. substd.

(I) are antimicrobial cpds., effective against the microorganisms, that produce dental plaque. A specifically claimed cpd. is 1,4-bis 2-((2-indanyl)carbamylquanidino) ethyl)-piperazine. 26.10.76 as 735319 (15pp936)

ARMS- ★ D21 31462B/16 ★US 4110-358

Ampholytic quat. ammonium cpds. - prepd. from tert-amine; alpha, beta-unsatd. cpd. and alkylene oxide, for use as foaming agents in shaving creams, cleaning compsns. etc.

ARMSTRONG CHEM CO I 24.05.76-US-688950

E16 (29.08.78) C09f-05

Ampholytic quat. NH_4 cpds. of formula $RR_1R_2N\text{-}CH(R_3)\text{-}CH_2OCH(R_4)CH_2X$ (I) are new. In (I), R, R_1 and R_2 are 1-22C alkyl; R_3=H, Me or Et; R_4=H or Me; X=CO_2H, CN, CHO, or CO_2Me. (I) are prepd. by reacting a tert. amine (RR_1R_2N) with a conjugated α,β-unsatd. cpd. (e.g. acrylic acid) and mixing the obtd. intermediate with an alkylene oxide.

In an example, ethylene oxide (60 g) was added ove 4 hr. to a mixt. of acrylic acid (90 g), 'Amine CPA' (RTM) (394.8 g), and H_2O (1 kg) in a sealed autoclave at 150°F. The prod. was crystal clear in H_2O and sol. in 20% KOH soln. and cond. HCl and cond. H_2SO_4. 24.5.76 as 688950 (4pp478)

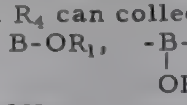
COLG ★ D21 31485B/16 ★US 4110-426

Self-heating cosmetic compsns. - contg. organic boron cpds. having boron-oxygen bonds

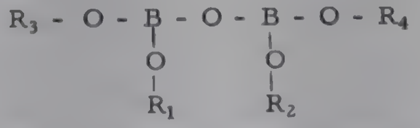
COLGATE PALMOLIVE CO 04.03.76-US-663941 (24.06.66-US-560055)

A96 E12 (29.08.78) A61k-07/15 A61k-09/14

Skin and hair are treated with a self-heating cosmetic compsn., which is applied with water, and contains 20-80 wt.% of boron cpd(s), of formula (I) and no substances with which (I) react. In (I) R_1, R_2, R_3 and R_4 are each 2-8C alkyl, acetyl, mononuclear aryl, aralkyl or aroyl, cycloalkyl or an ethoxylated deriv. thereof; or R_1 and R_3 or R_2 and R_4 can collectively form $-CH_2-CH_2-CH_2-$; $-CH_2-CH_2-$, $>B-OR_1$,



$-\underset{OR_1}{\underset{|}{B}}-O-\underset{OR_1}{\underset{|}{B}}-$; $-CH_2-CHOH-CH_2-$, or $-CH_2-CH-CH_2OH$.



$$R_3-O-\underset{\underset{R_1}{|}}{\underset{\underset{|}{O}}{B}}-O-\underset{\underset{R_2}{|}}{\underset{\underset{|}{O}}{B}}-O-R_4$$

(I)

(I) are non-toxic, non-irritating, and react without formation of noxious or toxic fumes. 4.3.76 as 663941 (+17.7.70, 24.7.73-US-056244, 382066) (-pp955)

UNIL D21 65433S/41 =US 4110-428

Anti-perspirant aerosol powder

LEVER BROTHERS CO 23.03.70-GB-013827

*A25 (A96) (29.08.78) *NL7103-689 A61k-07/32 +A61k-09/14*

An antiperspirant compsn. comprises a suspension of 0.1-10 wt.% finely divided Al chlorohydrate in a soln. contg. isopropyl myristate and a halogenated hydrocarbon aerosol propellant selected from F_2Cl_2C, FCl_3C, $F_4Cl_2C_2$, $F_3Cl_3C_2$ or their mixts.

The improvement comprises replacing the isopropyl myristate with a colourless water or propellant miscible cpd. of formula $C_4Hg(OC_nH_{2n})xOH$. In the formula n is 2

-propyleneoxide respectively such that the viscosity of the cpd. is 660-3520 Saybolt Universal Seconds at 100°F. The amt. of the colourless water and propellant miscible cpd. is 2.5-7.5 wt.% and the amt. of the Al chlorohydrate is 3.5 wt.%.

The level of staining on clothing is reduced. 12.8.76 as 713775 (+15.3.71, 19.11.76-US-124453, 525267) (5pp918)

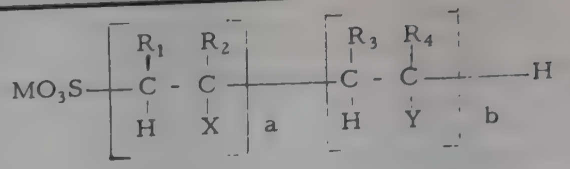
COLG ★ D21 31486B/16 ★US 4110-429

Non-staining antibacterial oral compsns. - contg. soluble sulphonated oligomers as anti stain additives

COLGATE PALMOLIVE CO 30.12.76-US-755895

A96 E19 (29.08.78) A61k-17/22

Oral compsns. contg. a vehicle, and cationic or long chain amine antibacterial antiplaque agents, which normally cause staining of toothsurfaces, also contain as anti-staining additive ≥1 water-soluble oligomer of formula (I) (where M is a water-soluble orally acceptable cation, R_1-$_4$ and each H, Me or Et, Y is ≥1 of $COOM_1$, $CONH_2$, CH_2OH, X is ≥1 of CN, $COOR_5OR_1$ CONHR, $COONHR_5COR$, or OOCR, M_1 is H or M, R is 1-8C alkyl, R_5 is 1-4C alkylene a is 0-7 and a+b is 4-15). The mole ratio of (I) to the antiplaque agent is 0.2:1 to 6:1.



$$MO_3S-\left[\begin{matrix} R_1 & & R_2\\ | & & |\\ C & - & C\\ | & & |\\ H & & X\end{matrix}\right]_a\left[\begin{matrix} R_3 & & R_4\\ | & & |\\ C & - & C\\ | & & |\\ H & & Y\end{matrix}\right]_b-H \qquad (I)$$

The compsn. is a mouthwash, rinse, dental tablet, tooth powder, toothpaste, etc. 30.12.76 as 755895 (7pp955)

HAAR D21 54226W/33 = US 4110-430

Para-isopropyl(tert,-butyl)-alpha-methyl hydrocinnamic alcohol - for use as germicidal, antiperspiratory and deodorising agent

HAARMANN & REIMER GMBH 02.02.74-DT-405004

*E14 P34 (29.08.78) *DT2405-004 A61k-07/32*

Deodorising method comprises applying to the place to be deodourised, a deodourising ingredient (I) which is p-isopropyl-α-methyl hydrocinnamic alcohol and/or p-tert. butyl-α-methyl hydrocinnamic alcohol. Pref. amt. of (I) is 0.001-0.1 mg.

(I) have a germ-inhibiting, microbicidal effect and can be used in body-care preparations and cosmetics. 22.1.75 as 543201 (4pp918)

See Also

D15 DT 2745083 D15 DT 2745084

D22 : BANDAGES; DRESSINGS

FMCC D22 69830V/40 = DS 2412-262

Granulating pulverulent sodium dichloro-isocyanurate - hydrated to reduce percentage of fines to be recycled and suitable as chlorine source

FMC CORP 19.03.73-US-342511

*E12 (12.04.79) *DT2412-262 C07d-251/36*

Granulated sodium dichlorisocyanurate is prepd. from powdered, hydrated sodium dichloroisocyanurate contg. 11-14% water. The powder, particle size < 0.074 mm is pressed between two rollers with a force of 13135N (1339.37 kp) ± 50% to form a slab which is granulated, sieved and remaining powder recycled.

The presence of water increases the amt. of granules obtd.. The granules are useful as a source of chlorine in bleaches, detergents and swimming baths. 14.3.74 as 412262 (4pp068).

HENK ★ D22 29896B/16 ★DT 2744-466

Sanitary tampon - with hydrophilic admixture band to increase suction capacity

HENKEL KG AUF AKTIEN 03.10.77-DT-744466

A96 F07 P32 (12.04.79) A61f-13/20

A sanitary tampon, made of cotton- or rayon-type of wadding, is treated in a certain zone by a hydrophilic admixture of magnified absorption capacity. In the finished rolled tampon, the treated zone can lie in the centre or at either of the ends.

The tampon has, in addn. to its normal good absorption capacity, a suction reverse in case of a sudden fluid efflux. 3.10.77 as 744466 (12pp39)

DEFE- ★ D22 29940B/16 ★DT 2745-444

Room disinfecting cylinder - with heater for disinfectant solution and relief valve for vapour ejection

DEUT FEUERLOSCHER 08.10.77-DT-745444

P34 (12.04.79) A61l-01

Rooms in hospitals or private houses where patients with infectious diseases have been, or germ laboratories, are disinfected by heating a disinfectant soln. in an enclosed cylinder to a set pressure above atmosphere. On reaching this pressure, evapd. soln. is sprayed in the room, while the pressure in the cylinder is maintained.

The arrangement requires no elaborate preparation or sealing of the rooms. A quick and reliable disinfection is achieved by a simple and low-cost appliance. 8.10.77 as 745444 (17pp39)

SALV- ★ D22 29976B/16 ★DT 2840-667

Surgical bandage pack - with blood stanching roll between foldable muslin insert and muslin strap

SALVE SA 07.10.77-SW-011267

P32 (12.04.79) A61f-17

A surgical bandage pack consists of a muslin strap and a muslin insert which are joined by two seams to leave space between them for a blood-stanching element. The insert can be folded over several times for small wounds or left spread out for major ones.

The bandage is immediately ready for use without extra preparation and is applicable to a great variety of wounds. 19.9.78 as 840667 (8pp39)

NAAR D22 06104Y/04 = GB 1544-221

Solid gels for controlled release of volatile cpds. - e.g. insecticides or perfumes comprising separate gelled hydrocarbon and soap phases(NL040177)

NAARDEN INT NV 02.07.75-NL-007892

*C03 P34 (19.04.79) *DT2630-422 A01n-17/02 A61l-09/**

Solid gel for the gradual release of volatile material into the atmos. comprises a first gel of hydrocarbon material contg. volatile material and polyvalent metal soap embedded in a spongy skeleton contg. a gel of 1-4C alcohol and sodium soap of 8-20C fatty acid.

Pref. solid gel comprises 1.5-7.5 wt.% sodium soap, 5.0-20.0 wt.% alcohol, 2.0-15.0 wt.% polyvalent metal soap, 55.0-92.5 wt.% soln. of volatile material in hydrocarbon, and 0-6.0 wt.% water. Proportion of volatile material in hydrocarbon is ≤ 40 wt.% w.r.t. solid gel.

Esp. used as air freshener, room deodorant, perfumi agents or insecticide. 1.7.76 as 027480 (4pp931)

PRBB ★ D22 30102B/16 ★GB 1544-26

Sterilisation of pharmaceuticals in flexible containers - withou distortion of containers by pressure increase in sterilising autoclave

PREBBLES MEDICAL LTD 15.09.76-GB-038131

B07 P34 (19.04.79) A23l-03/10 A61l-01

Filled and sealed flexible containers are sterilised by hea treatment. The containers are placed in an enclosure fo the heat treatment step and the enclosure is pressurised reduce the tendency of the containers to distort because c heat and internal pressure. The pressure is controlled b varying the admission of air and/or steam to the enclosu

Pref. the max. pressure reached is 1 to 2 atmosphere over normal atmospheric. Pref. the pressure is varied according to the temp.

The method is used to sterilise liquids e.g. pharmaceuticals packaged in flexible containers such as sachets. Sterilisation in a steam auroclave has previously been successful using rigid containers whereas flexible containers have tended to weaken and leak or burst resulting in a distorted unsaleable product. The present method overcomes these difficulties. 13.9.77 (4pp295)

TEVI- D22 60120X/32 =GB 1544-434

Body fluid absorbing sheet - with permeable polypropylene fibre mat over absorbent cellulose mat on polyethylene foil backing BE160776)

TEVIC INT BV 24.01.75-NL-000874

*A96 F07 P21 P32 +P34 P73 (19.04.79) *DT2601-617 A61f-13/16 A61l-13 B32b-05/26 B32b-07/14 B32b-27/02*

A moisture-absorbing device comprises a moisture-resistant moisture-permeable surface layer and a separate subjacent layer of moisture-absorbing material. Moisture permeable layer is a non-woven tissue contg. solely polypropylene fibres of regain < 0.5%, being felted without a binder.

Pref. moisture-permeable layer has wt. of 5-15 gm/sq.infor use as a wound dressing, or 15-25 gm/sq.in. for use as a diaper or sanitary towel, or 25-45 gm/sq. in. for use as a mattress cover, or 30-80 gm/sq. in. for use as an obstetric binderor pressure dressing.

Moisture-permeable layer is employed in contact with skin or wound because of its properties in not irritating the skin or sticking to wounds. 22.1.76 as 002416 (3pp931)

COLG D22 36019X/20 =GB 1544-536

Dentifrices contg alkaline alpha-alumina trihydrate - acidified to pH 5.4-6.7 to prevent gas formation in aluminium tubes

COLGATE PALMOLIVE CO 13.12.74-GB-053932 (00.00.76-GB-043829)

*E33 (19.04.79) *BE-836-597 A61k-07/16*

Aq. toothpaste contains alkali metal fluoride (pref. 500-1500 ppm F), milled α-Al_2O_3 trihydrate abrasive particles reactive with the fluoride and a detergent comprising carboxylic acid having an ⩾8C aliphatic hydrocarbon chain attached to the carboxyl through an amide linkage, or a salt of such acid.

Pref. the pH of the toothpase is 500-1500 ppm F. The attack on unlined Al tubes is inhibited. 12.12.75 Div. ex. 53932/74 (6pp393)

COLG D22 36019X/20 =GB 1544-537

Dentifrices contg alkaline alpha-alumina trihydrate - acidified to pH 5.4-6.7 to prevent gas formation in aluminium tubes

COLGATE PALMOLIVE CO 13.12.74-GB-053932 (00.00.76-GB-043832)

*E33 (19.04.79) *BE-836-597 A61k-07/16 +C01f-07/02*

Particulate material useful as an abrasive ingredient for a dentrifrice comprises alpha-alumina trihydrate produced by pptn. from a soln. of sodium aluminate and ground in the presence of a non-toxic surface-modifying agent. Pref. surface-modifying agent is benzoic acid, or hydrophilic pyrogenic silica and is present in an amt. of 0.01-2 wt.% w.r.t. alpha-alumina trihydrate.

Toothpaste can be packed in Al tubes and does not gas on storage. 12.12.76 Div. ex. 53932/74 (8pp931)

COLG D22 36019X/20 =GB 1544-538

Dentifrices contg alkaline alpha-alumina trihydrate - acidified to pH 5.4-6.7 to prevent gas formation in aluminium tubes

COLGATE PALMOLIVE CO 13.12.74-GB-053932 (00.00.76-GB-043835)

*E33 (19.04.79) *BE-836-597 +A61k-07/16*

Aq. toothpaste contains milled alpha-alumina trihydrate abrasive particles and a minor proportion (w.r.t. alumina cpd.) of particles of hydrophilic pyrogenic silica. Prod. is packaged in an unlined aluminium tube.

Presence of hydrophilic pyrogenic silica reduces gassing on aging of toothpastes contg. alpha-alumina trihydrate, esp. the highly alkaline grade, packed in unlined alunimium tubes. 12.12.75 as 43835/76 Div. ex. 53932/74 (4pp931)

AOKI/ ★ D22 30456B/16 ★J5 4031-983

Tool for curing vesicular eczema - comprises open-cell semi-elastic material of soft polyethylene or chlorinated polyethylene

AOKI S 15.08.77-JA-097957

A96 P32 P34 (A11 A17) (09.03.79) A61f-13/06 A61l-05

Tool consists of open-cell semielastic material having a porosity of 30-75% and an average pore dia. of $< 5\,\mu$. The open-cell semielastic material is soft polyethylene or chlorinated polyethylene.

Vesicular eczema can be cured by applying this tool to an affected part. In an example a compsn. is prepd. by mixing 1600 pts.wt. of soft polyethylene, 6000 pts.wt. of $CaCO_3$, 1000 pts.wt. of polyoxyalkylene glycol, 400 pts. wt. of methyl cellulose, 10 pts.wt. of an antioxidant and 30 pts.wt. of a foaming agent. The compsn. is kneaded and formed into pellets. The pellets are formed by heating into an embossed sheet. The $CaCO_3$ is eluted from the sheet by a 35% HCl soln. contg. 0.05% of nonionic surfactant to produce an open-cell semielastic sheet. 15.8.77 as 097957 (3pp86)

KIMM- ★ D22 30762B/16 ★J5 4033-174

Chemical body warmer giving off heat on shaking - comprises cast iron powder, manganese di:oxide, and silica gel supporting aq. cupric oxide soln.

KIMMEI INSATSU KK 16.08.77-JA-097492

A92 E37 G04 P32 Q74 (10.03.79) A61f-07/04 F24j-03

A heat-emitting pack is prepd. by enclosing a mixt. of (a) 48.4 wt.% cast iron powder, (b) 12.9 wt.% manganese dioxide, and (c) 38.7 wt.% silica gel supporting 11.2-14 ml of 2.44 N cupric chloride aq. soln. in a bag having an air-permeability of 0.2 sec./100 cc.

Emission of heat is initiated by slight shaking, without addn. of water, etc. 16.8.77 as 097492 (3pp173)

HEMA= ★ D22 31013B/16 ★SU -609-524

Soln. for protecting freeze-stored cells of bone marrow - contg. polyvinyl-pyrrolidone, gelatin, di:sodium salt of EDTA tri:sodium citrate, glycerol and diluent

HEMATOLOGY BLOOT TR 20.12.76-SU-433334

A96 (A14) (04.05.78) A01n-01/02

Polyvinylpyrrolidone-contg. soln. protecting cells of bone marrow freeze-stored prior to transplantation, is improved by addn. of the following components (in wt.%) medical gelatin 1.9-2.5, disodium EDTA 0.09-0.15, trisodium citrate 0.9-1.2 glycerol 6.0-7.0, polyvinylpyrrolidone 6.8-7.2; the balance is hemodes. Hemodes is a saline soln. contg. 6% polyvinylpyrrolidone and Na, K, Ca, Mg and Cl ions. The percentage of viable bone marrow cells, is increased to 63.0 ± 5.1%. The compsn. is nontoxic and apyrogenic; it has no allercic properties.

Shishkina I.D., Fedotenkov A.G. Danilova L.A. et al. Bul. 21/5.6.78 20.12.76 as 433334 (2pp70)

MSHV/ ★ D22 31222B/16 ★SU -610-528

Prescriptions disinfecting cabinet - has pivoted, partitioned chamber with bactericidal lamps and magnetic holders

MSHVIDOBADZE G N 05.01.77-SU-438625

P34 (22.05.78) A61l-03

Faster disinfection and enhanced reliability of treating prescriptions are due to chamber attached to the L-shaped support. The chamber can be tilted around the vertical axis, and the partition divides it into two parts. Each part has bactericidal lamps and magnet holders. The support carries a terminal connected to the supply.

The prescriptions are pushed on needles of the holders, and the chamber is tilted to close the door, followed by connection of the supply to the terminal. The lamps irradiate the prescriptions for 3-4 mins.

Mshvidobadze G.N., Mshvidobadze D.G., Bul. 22/15.6.78 5.1.77 as 438625 (2pp89)

RUGG- D22 94630X/51 =US 4109-354

Tampon compressing system - produces greater compression forces on the periphery than on the core of an absorbent wadding tampon

RUGGLI K AG 30.05.75-CH-006973

*F04 P32 +P71 (29.08.78) *DT2623-368 +D04h-01/22*

A machine for manufacturing tampons comprises a number of pressing dies about a common axis and movable along compression position.

A second set of dies is also arranged for pivotal movement about the axis, each second die movable between positions within the arcuate gaps between adjacent pairs of first dies after the latter are in compression positions. Each die has concave and convex surfaces having an included angle of about 360° divided by the no. of dies in a set. Tampons produced have a greater resistance to buckling. 28.5.76 as 691013 (10pp1379)

CONC D22 90245X/48 =US 4109-441

Supporting open mouthed pouches during autoclave sterilisation - then sealing mouths by multiple jaw clamp with lost motion

CONTINENTAL CAN CO 21.04.75-US-569938 (19.07.76-US-706375)

*Q31 (29.08.78) *US3991-543 B65b-55/18 +B65b-31/02*

To sterilise the contents of open-mouthed pouches of heat-sealable material, the pouches are gripped at opposite edges and housed in a chamber. Heated sterilising media is introduced to the chamber and the pouches are heated to sealing temp., the mouths then being sealed.

The chamber is pref. evacuated before and after sterilisation. The mouths are pref. closed under pressure and sequentially in a single operation. The pouch is thus sealed in a sterile condition and may be used for surgical instruments, etc.

The parent specification relates to appts. for effecting the process. 19.7.76 as 706375 Div. ex. 3911543 (9pp1379)

BECT D22 21559A/12 =US 4110-185

Sterilising semi-crystalline polymer esp. polypropylene - by irradiation in presence of liquid additive, e.g. hydrocarbon oils, to retain flexibility

BECTON DICKINSON CO 10.11.76-US-740618

*A35 +P34 (A60) (29.08.78) *BE-860-656 A61l-01 C08f-08/18 C08j-03/28 +C08f-02/54*

Semicrystalline polymer of crystalline content 20-90% cont contg. a non-crystalline liq. mobilising additive which increases the free vol. of the polymer and retains its flexibility is sterilised by high energy irradiation. Typically the polymer is polypropylene and the mobiliser is hydrocarbon oil or a phthalic ester present at 0.1-20 wt.%.

The polymer may be in the form of a syringe, package film, tissue culture flask, etc. and after such sterilisation does not become brittle during storage. 10.11.76 as 740618 (3pp945)

WFMF- ★ D22 31425B/16 ★US 4110-261

Fragrance-emitting moulded articles - comprising petroleum wax, olefin polymer and perfume

W & F MFG CO INC 18.03.77-US-779245 (18.09.75-US-614493)

A97 (A17 D23) (29.08.78) A61k-07/46 C10l-05 C11b-09

The articles have a compsn. suitable for flush moulding, and comprise 75 wt.% petroleum wax, 10 wt.% of a polymer (I) with a M_w of <10,000 and 15 wt.% perfume. Specifically, (I) is ethylene vinyl acetate, ethylene vinyl acetate acid terpolymer, ethylene ethyl acrylate, ethylene isobutyl acrylate, polyethylene or polypropylene.

The moulded articles (e.g. figurines) give a high rate o perfume emission, are tough and durable, have a high sur face gloss and are readily cleaned. The compsns. can be processed at lower temps. than prior art polyamide compsns. The moulded article pref. comprises an outer shel of the above compsn. surrounding a body of aerated core wax not contg. perfume. 18.3.77 as 779245 (4pp367)

PROC ★ D22 31432B/16 ★US 4110-27

Pharmacologically acceptable stable resilient polyester foam - derived from poly-ol, propylene oxide based poly hydrox crosslinker and acyl halide

PROCTER & GAMBLE CO 19.10.77-US-843606 (02.11.76-US 737930)

A23 (A96) (29.08.78) C08j-09

A stable resilient polyester foam comprises a 3-D conden sate of (a) polyol(s) having ⩾2 OH gps. and equiv. wt. o ⩾1000, (b) propylene oxide-based polyhydroxy cross-linker having ⩾3 OH gps. and equiv. wt. of <250 and pref. a mol. wt. of ⩾1000 and (c) acyl halide(s) with ⩾ COX gps. (where X is halogen).

The foams have a controlled degree of hydrophilicity, do not produce an undesirable level of toxic gases as whe polyurethane foams burn and are pharmacologically accep table in contact with the human body. They are suitably used in catamenial tampons, surgical bandages, househol sponges, furniture pads. 19.10.77 as 843606 (7pp966)

ASKE/ ★ D22 31516B/16 ★US 4110-5

Self-sanitising tufted carpet for hospitals - having an adhesive lay contg. a tri:alkylamine and carboxylic acid salt

ASKEW A B 15.06.76-US-696219 (30.04.71-US-139265)

E16 F05 G03 (E12) (29.08.78) D03d-27

A tufted carpet includes a prim. backing sheet, rows of carpet yarn stitched into the backing sheet to produce a face of yarn on one side and tuft loop backs on the opposi side, and a layer of carpet construction adhesive on the loop backs. The adhesive is blended with a mixt. of a n ionic trialkyl-amine and a Gp. IIA or IIB metal salt of a 1-4C monocarboxylic acid.

The adhesive blend releases uniformly the amine-salt mixt., which migrates along the yarn fibres and inhibits the growth of a wide spectrum of bacteria and other orga isms. The use of dimethyl-lauryl-amine and Ba acetate as the antibacterial mixt. is claimed. 15.6.76 as 69621 Div. ex. 3705235 C.i.p. 3919410 (+27.9.72, 10.6.74, 25.4.75-US-292792, 478109, 571717) (5pp558)

See Also

D25 US 4110242

D23: OILS; FATS; WAXES

METG ★ D23 29954B/16 ★DT 2745-672

Linear hexane free from aromatics - recovered from mixt. of hexane benzene and non aromatics by extractive distn.

METALLGESELLSCHAFT AG 11.10.77-DT-745672

E17 (12.04.79) C07c-07/08 C07c-09/14

The mixt. of aromatics and non-aromatics to be worked up is distilled in a 2-column system, to prepare a hexane cut consisting of hexane, benzene and small quantities of non-aromatics boiling in the boiling range of both components.

Process comprises charging the mixt. of aromatics and non-aromatics into a 1st distn. column and distilling. A benzene-contg. sump prod. and the head prod. consisting of the light-boiling non-aromatics are drawn off. The distillate is drawn off sideways, above the inlet for the mixt. of aromatics and non-aromatics to be worked up, and charged to the upper part of a 2nd distn. column. The hexane cut is drawn off as sump rpod. from this 2nd distn. column.; charged to the centre of an extractive distn. column and extd. with a selective solvent, pref. N-Me pyrrolic which is charged above the inlet of the 2nd distn. colum sump prod. consisting of the hexane cut. A selective s vent-contg. sump prod. is drawn off. Vapours transpo ed overhead are condensed and drawn off as n-hexane f from aromatics.

n-Hexane is used as solvent and extractant, esp. fo oil-seeds. Process saves energy consumption. All co ponents can be recovered without causing environmenta pollution. Pure benzene is recovered in high yields. 11.10.77 as 745672 (16pp200)

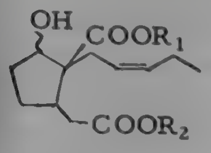
SAKB ★ D23 30568B/16 ★J5 4032

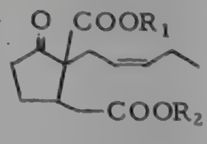
2-Cis:2:pentenyl cyclopentanone derivs. prepn. - useful as fla ingredients in jasmine oil

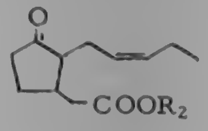
OTSUKA KAGAKU YAKUHIN 12.08.77-JA-097176

E15 (09.03.79) A61k-07/46 C07c-67/32 C07c-69/95 C11b-09

Prepn. of cyclopentanone derivs. of formula (III) are ful as main flavour ingredient in jasmine oil comprises oxidising a new cpd. of formula (I) to obtain a cpd. of formula (II) and decarboxylating the cpd. (II). (R_1, R_2 are lower alkyl, alkenyl or aralkyl).


(I)


(II)


(III)

The desired cpds. can be obtd. in extremely good yields.

The oxidn. (I II) is advantageously conducted in the presence of a solvent, e.g., dichloromethane, THF, n-hexane, benzene, etc., and an oxidising agent, e.g., chromic acid- H_2SO_4, $KMnO_4$, potassium bichromate, etc. The decarboxylation (II III) is advantageously conducted in the presence of a solvent, e.g., benzene, THF, n-hexane, dichloromethane, etc., and a catalyst, e.g., p-toluenesulphonic acid, sulphuric acid, BF_3, etc. 12.8.77 as 097176 (8pp140)

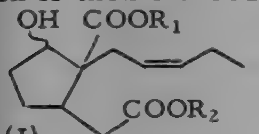
SAKB ★ D23 30569B/16 ★J5 4032-448

2-Cis:2:pentenyl cyclopentanone derivs. prepn. - useful as flavour ingredient in jasmine oil

OTSUKA KAGAKU YAKUHIN 12.08.77-JA-097177

E15 (09.03.79) A61k-07/46 C07c-69/95

Prepn. of cyclopentanone derivs. of formula (V) useful as main flavour ingredient in jasmone oil comprising oxidizing a new cpd. of formula I to obtain a cpd. of formula II cis-reducing the cpd. (II) to obtain a cpd. of formula III and decarboxylating the cpd. (III). Alternatively, the cpd. (II) is decarboxylated to obtain a cpd. of formula IV, which is then cis-reduced to obtain the cpd. (V).


(I)

(R_1 and R_2 are lower alkyl, alkenyl or aralkyl).

The desired cpds. are prepd. in extremely good yields.

The oxidn. (I→II) is advantageously conducted in the presence of a solvent and an oxidising agent. The redn. (II→III) is conducted in the presence of a Lindlar catalyst, pref. in an organic solvent. 12.8.77 as 097177 (9pp140)

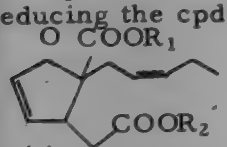
SAKB ★ D23 30570B/16 ★J5 4032-449

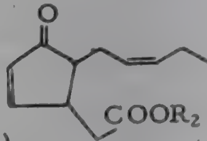
2-n-Pentyl cyclopentanone derivs. prepn. - useful as jasmine like flavour ingredients

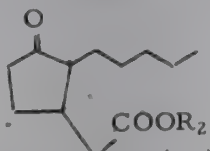
OTSUKA KAGAKU YAKUHIN 12.08.77-JA-097178

E15 (09.03.79) A61k-07/46 C07c-69/95

Prepn. of pentanone derivs. of formula III useful as jasmine-like flavour ingredient comprises decarboxylating a new cpd. of formula I to obtain a cpd. of formula II and reducing the cpd. II.

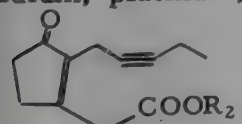

(I)


(II)


(III)

(R_1, R_2: lower alkyl, alkenyl or aralkyl).

The decarbosylation (I→II) is advantageously conducted in the presence of a solvent, e.g. benzene, toluene, tetrahydrofuran, dioxane, n-hexane, dichloromethane, etc., and a catalyst, e.g. p-toluenesulphonic acid, HCl, BF_3, etc. at 30-120°C, pref. 60-100°C. If the decarboxylation is conducted in DMF, dimethyl sulphoxide, etc. in the presence of edible salt at 100-200°C, a cpd. of formula IX is by-produced. The reduction (II→III) is pref. conducted in the presence of a solvent, e.g., methanol, ethanol, THF, n-hexane, benzene, etc., and a catalyst, e.g. palladium, platinum, nickel, etc. 12.8.77 as 097178 (6pp140)


(IX)

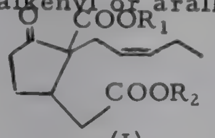
SAKB ★ D23 30571B/16 ★J5 4032-450

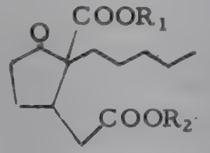
2-n-Pentyl-cyclopentanone derivs. prepn. - useful as jasmine-like flavour ingredients

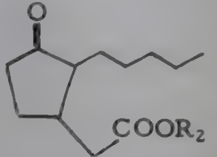
OTSUKA KAGAKU YAKUHIN 12.08.77-JA-097179

E15 (09.03.79) A61k-07/46 C07c-69/74

Prepn. of cyclopentanone derivs. of formula III useful as jasmine-like flavour ingredients comprises reducing a new cpd. of formula (I) to obtain a cpd. of formula (II) and decarboxylating the cpd. (II). (R_1, R_2 are lower alkyl, alkenyl or aralkyl).


(I)


(II)


(III)

The redn. (I→II) is pref. conducted in the presence of a solvent, e.g. methanol, ethanol, tetrahydrofuran, n-hexane, benzene, etc. and a catalyst, e.g. palladium, platinum, nickel, etc. The catalyst is used in an amt. of 1-200 wt.%, pref. 5-100 wt.%, based on the cpd. (I). The decarboxylation (II→III) is advantageously conducted in the presence of a solvent, e.g. benzene, toluene, tetrahydrofuran, n-hexane, dichloromethan, etc., and a catalyst, e.g., p-toluene-sulphonic acid, HCl, BF_3, etc. 12.8.77 as 097179(6pp140)

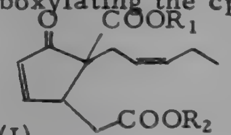
SAKB ★ D23 30572B/16 ★J5 4032-451

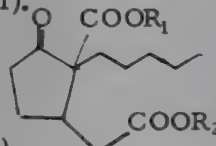
2-n-Pentyl-cyclopentanone derivs. prepn. - useful as jasmine-like flavour ingredients

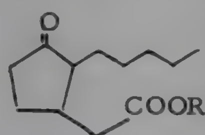
OTSUKA KAGAKU YAKUHIN 12.08.77-JA-097180

E15 (09.03.79) A61k-07/46 C07c-67/32 C07c-69/95 C11b-09

Prepn. of cyclopentanone derivs. of formula III useful as jasmine-like flavour ingredient comprises reducing a new cpd. of formula I to obtain a cpd. of formula II and decarboxylating the cpd. (II).


(I)


(II)


(III)

(R_1, R_2 is lower alkyl, alkenyl or aralkyl).

Redn. (I→II) is pref. conducted in the presence of a solvent, e.g. (m)ethanol, THF, n-hexane, benzene, etc., and a catalyst, e.g. palladium, platinum, nickel, etc. The catalyst, is used in an amt. of 1-200 wt.%, pref. 5-100 wt.%, based on the cpd. (I). The decarboxylation (II→III) is advantageously conducted in the presence of a solvent, e.g. benzene, toluene, tetrahydrofuran, n-hexane, dichloromethane, etc., and a catalyst, e.g., p-toluenesulfonic acid, hydrochloric acid, boron trifluoride, etc. 12.8.77 as 097180 (7pp140)

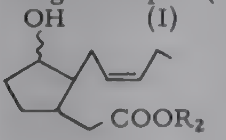
SAKB ★ D23 30573B/16 ★J5 4032-453

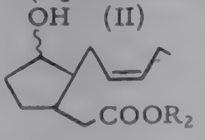
2-Cis:2:pentenyl cyclopentanone derivs. prepn. - useful as flavour ingredients in jasmine oil

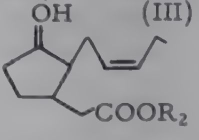
OTSUKA KAGAKU YAKUHIN 12.08.77-JA-097182

E15 (09.03.79) A61k-07/46 C07c-69/74

Prepn. of pentanone derivs. of formula (III) useful as main flavour ingredient in jasmine oil comprises cis-reducing a cpd. of formula (I) to obtain a cpd. of formula (II) and oxidising the cpd. (II). (R_2 is lower alkyl, alkenyl or aralkyl)

(I)


(II)


(III)


The desired cpds. can be obtd. at extremely good yields. The cis-redn. (I-II) is conducted in the presence of a Lindlar catalyst in an amt. of 1-500 wt.%, pref. 10-100 wt.% based on the cpd. (I), pref. in a solvent, e.g methanol, acetone, tetrahydrofuran, etc. The oxidn. (II-III) is advantageously conducted in the presence of a solvent, e.g. dichloromethane, tetrahydrofuran, n-hexane, benzene, etc., and an oxidising agent, e.g., chromic acid: H_2SO_4, $KMnO_4$, potassium, bichormate, etc. 12.8.77 as 097182 (6pp140)

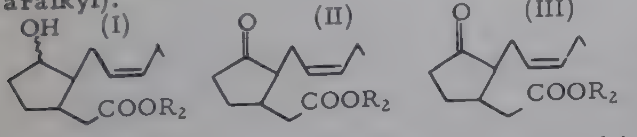
SAKB ★ D23 30574B/16 ★J5 4032-454

2-Cis:2:pentenyl cyclopentanone derivs. prepn. - useful as flavour ingredients in jasmine oil

OTSUKA KAGAKU YAKUHIN 12.08.77-JA-097183

E15 (09.03.79) A61k-07/46 C07c-69/95

Prepn. of cyclopentanone derivs. of formula (III) useful as main flavour ingredient in jasmine oil comprises oxidising a cpd. of formula (I) ot obtain a cpd. of formula (II) and cis -reducing the cpd. (II) (R_2 is lower alkyl, alkenyl or aralkyl).



The desired cpds. can be obtd. in extremely good yields.

Oxidn. (I-II) id advantageously conducted in the presence of a solvent, e.g. dichloromethane, THF, n-hexane etc., and an oxidising egent, e.g., chromic acid H_2SO_4 $KMnO_4$, potassium bichromate, etc. The cis-reduction (II-III) is conducted in the presence of a Lindlar catalyst. pref. in a solvent, e.g. methanol, acetone, THF, etc. 12.8.77 as 097183 (6pp140)

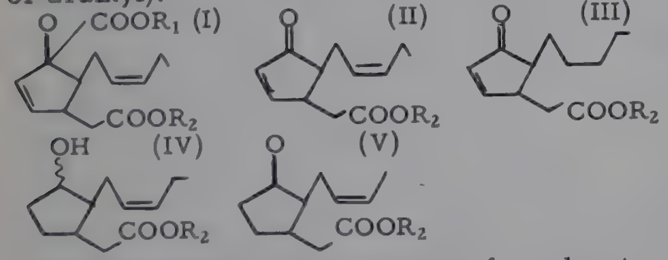
SAKB ★ D23 30575B/16 ★J5 4032-455

2-Cis:2:pentenyl cyclopentanone derivs. prepn. - useful as flavouring ingredient for jasmine oil

OTSUKA KAGAKU YAKUHIN 12.08.77-JA-097184

E15 (09.03.79) A61k-07/46 C07c-69/95

Prepn. of cyclopentanone derivs. of formula (V) useful as main flavour ingredient in jasmine oil comprises decarboxylating a cpd. of formula (I) to obtain a cpd. of formula (II), cis-reducing the cpd. (II) to obtain a cpd. of formula (III), reducing the cpd. (III) to obtain a cpd. of formula (IV) and oxidising the cpd. (IV). (R_{1-2} is lower alkyl, alkenyl or aralkyl).



The desired cpd can be obtd in extremely good yields. Decarboxylation (I-II) is advantageously conducted in the presence of a solvent and a catalyst, e.g. p-toluenesulphonic acid, etc. The cis-redn. (II-III) is conducted in the presence of a Lindlar catalyst, pref. a solvent. The redn. (III-IV) is advantageously conducted in the presence of a solvent and a reducing agent, e.g. sodium borohydride, etc. 12.8.77 as 097184 (7pp140)

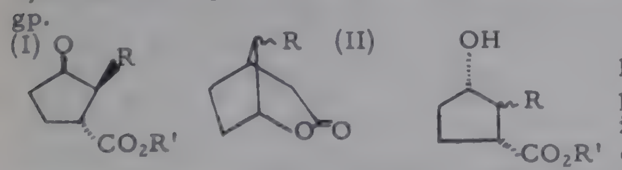
SAGA ★ D23 30576B/16 ★J5 4032-456

Jasmonic acid ester derivs. prepn. - by reacting bi:cyclooctane deriv. with alkali metal cpd. and oxidising ester formed

SAGAMI CHEM RES CENTRE 18.08.77-JA-098268

E15 (09.03.79) C07c-69/95

Prepn. of jasmonic acid ester analogues of formula (I), useful as flavour ingredient, comprises reacting an 8-alkyl-3-oxo-2-oxabicyclo-(3.2.1)octane of formula (II) with an alkali metal cpd. of formula R'OM (III) to obtain a 2-alkyl-3-hydroxycyclopentylacetic acid ester of formula (IV) and oxidising the ester (IV). In the formulae R and R' are alkyl; M is alkali metal. In the formula (II) or (IV), R is syn- and anti-positioned w.r.t. the lactone or the hydroxy gp.



The alcoholysis (II+III) is pref. conducted in a solvent, e.g. methanol ethanol, etc. at -20° to 100°C, pref. room temp. The alkali metal cpd. (III) is pref. used in an equimolar or more amt. based on the cpd. (III). The oxidation of the cpd (IV) is pref. conducted in the presence of an equimolar or more amt. of an oxidising agent, eg., pyridinium chlor-ochromate, chromium trioxide, dimethyl sulphoxide-chlorine, etc., in a solvent, e.g. chloroform, dichloromethane, etc. at -10° to 100°C, pref. 0-30°C.

The starting cpd. (II) is easily derived from unexpensive cyclopentadiene. 18.8.77 as 098268 (10pp140)

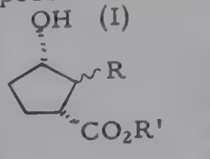
SAGA ★ D23 30577B/16 ★J5 4032-457

2-Alkyl-3-hydroxy-cyclopentyl acetic acid ester prepn. - from 7-alkyl-nor-camphor, useful as jasmine-like flavourant and in mfr. of di:hydro-jasmonic acid ester analogues

SAGAMI CHEM RES CENTRE 18.08.77-JA-098269

E15 (09.03.79) A61k-07/46 C07c-67 C07c-69/74 C07d-311/94

A racemic modification of a 2-alkyl-3-hydroxycyclopentyl-acetic acid ester of formula (I) is claimed. In (I), R is alkyl; R' is alkyl, aryl or aralkyl; R is cis- and trans-positioned w.r.t. the hydroxy gp..



(I) is stable against oxygen, sunlight, temp. and humidity; resistant against acids and alkalis; and is not irritating. Prepn. of (I) comprises reacting a 7-alkylnorcamphor with a peroxide to obtain a 8-alkyl-3-oxo-2-oxabicyclo-(3.2.1)octane and reacting this with an alkali metal cpd. 18.8.77 as 098269 (11pp140)

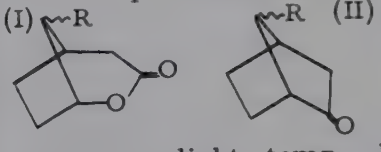
SAGA ★ D23 30586B/16 ★J5 4032-471

8-Alkyl-3-oxo-2-oxa-bi:cyclo(3,2,1)octane - useful as jasmine-like flavourant and intermediate for di:hydro-jasmonic acid ester analogues

SAGAMI CHEM RES CENTRE 18.08.77-JA-098270

E13 (09.03.79) A61k-07/46 C07d-311

The racemic modification of an 8-alkyl-3-oxo-2-oxabicyclo-(3.2.1)octane of formula (I) is new. In (I) R is alkyl, syn- and anti-positioned w.r.t. the lactone ring. (I) is useful



as an intermediates for dihydrojasmonic acid ester analogues and also useful as jasmine-like flavourant per se. The cpd. (I) is stable against oxygen, sunlight, temp., humidity, etc. and is partic. resistant against acids and alkalis and is not irritating.

(I) is prepd. by reacting a 7-alkylnorcamphor of formula (II) with a peroxide such as peracetic acid, hydrogen peroxide, m-chloroperbenzoic acid or monoperphthalic acid. The reaction is conducted in a solvent, pref. acetic acid, at -10° to 100°C, pref. room. temp. A strong acid, e.g. sulphuric acid, boron trifluoride, etc. is pref. added to the reaction system to accelerate the reaction. 18.8.77 as 098270 (10pp140)

KYOK- ★ D23 30607B/16 ★J5 4032-510

Refined fatty acid prepn. from fats and oils - esp. from alkali-treated rice bran cake

KYOKUTO SHIBOSAN KK 17.08.77-JA-097756

E17 (09.03.79) C11b-13 C11c-01/02

Fatty acids which are obtd. by splitting of fats and oils, esp. alkali-treated oil cake (e.g., rice bran cake of which neutral impurities are preliminarily saponified), with aq. soln. of inorganic acid washing with a mixt. of water and water soluble organic solvent, and then dehydrating or distilling after dehydration.

Inorganic acid (e.g., H_2SO_4, H_3PO_4, HCl) contained in fats and oils or in fatty acids as an impurity is advantageously removed completely by the washing with a mixt. of water and water soluble organic solvent. Light coloured refined fats and oils or fatty acids having hardly deteriorative characters (e.g., colouration and increase acid valu with the passage of time do not occur)are obtd. without causing the degeneration of effective components (e.g. oryzenin). 17.8.77 as 097756 (6pp170)

DAII ★ D23 30608B/16 ★J5 4032-511

Reforming fats and oils - by blending with oil soluble nonionic surface active agent for foods, melting and cooling on standing or with shaking

DAIICHI KOGYO SEIYAKU 18.08.77-JA-099242

(D13) (09.03.79) A23d-05 C11b-15

Fats and oils are blended with 5-50 wt.% of oil soluble nonionic surface active agent for foods and melted by heating, then cooled on standing or with shaking. Nonfluid oil is obtd. by the cooling on standing, and fluid oil is obtd. by the cooling with shaking. The preservability and transportability of the fats and oils are improved. Raw materials ar liq. at ordinary temp., e.g. corn oil, cottonseed oil, olive oil, palm oil, sardine oil, herring oil, seal oil, beanoil-tallow oil, rapeseed oil-lard, etc.

Nonionic surface active agent is cane sugar fatty acid ester, sorbitan fatty acid ester, propyleneglycol fatty acid ester, glycerine fatty acid ester, soybean phospholipoid, etc. having HLB value. 5. Nonfluid oils are readily converted into semipermanent fluid oils by shaking. 18. 8. 77 as 099242 (3pp170)

LANC- ★ D23 31343B/16 ★US 4110-066
Oil lamp with floating wick - in central well of floating support with buoyancy cavities spaced around well
LANCASTER COLONY CO 28.02.77-US-772381
Q73 (29.08.78) F23d-03/24

A lamp comprises a wick and a thin formed member of oil-impervious material for floating on oil. The member has a central depending frustoconical well and annularly spaced elongate buoyancy segmental cavities opening to the member underside and surrounding the well.

Channels extend radially between the cavities from well to member periphery so that oil can flow into the well. The well bottom wall has a recess mounting an upstanding wick for oil impregnation, and the cavities are spaced sufficiently from the wick so that they do not suffer heat distortion. The member may be transparent or opaque and is e. g. of plastics. 28. 2. 77 as 772381 (4pp1358)

SCMZ ★ D23 31461B/16 ★US 4110-356
Treatment of clay used to bleach oils - to recover absorbed triglyceride cpds.
SCM CORP 09.09.77-US-831958
(29.08.78) C11b-13/04

Crystalline clay that has been used for bleaching glyceride esters is treated by forming a suspension of the clay at a temp. of at least 80°C, a pH of 10.5-10.8, the wt. ratio of water to spend clay being 2-6:1, and removing the glyceride that separates. A greater proportion of glyceride can be recovered at this pH.

The pH is pref. achieved using NaOH, and the temp. is pref. 85-95°C. The treatment soln. should contain a salt, esp. 10-17 wt. % Na sulphate. 9. 7. 77 as 831958 (5pp955)

SHIS D23 56056Y/32 =US 4110-626
Perfume fragrance modification - by adding aliphatic dibasic acid diesters pref. diisobutyl or diisoamyl adipate (NL 2.8.77)
SHISEIDO KK 30.01.76-JA-009674
*E17 (29.08.78) *DT2703-360 +C11b-09*

The quality of the fragrance of a natural or synthetic perfume is improved by formulating a perfume contg. ≥1 aliphatic dibasic acid diester (I) of formula $R^1OCOR^2COOR^3$ (where R^1 and R^3 are each satd. branched chain 4 or 5C alkyl, and R^2 is satd. straight chain 4C alkylene) as an active ingredient. Pref. (I) is diisobutyl- or diisoamyl-adipate, and esp. (I) is incorporated in an amount of 5-50 (10-30) wt. % based on the wt. of the perfume.

The perfume controlling agent concurrently possesses the effects of a stabilizer, a diluent and fixative, ensures great safety and is odourless. 27. 1. 77 as 763214 (9pp990)

See Also

D22 US 4110261

D24: SOAP; SOAP DETERGENTS

NOTHING TO REPORT

D25: OTHER DETERGENTS

DOWC ★ D25 29759B/16 ★BE -871-243
Detergent contg. silicon cpd. as perfume - with perfume alcohol residues bonded to silicon via oxygen
DOW CHEMICAL CO 13.10.78-BE-871243 (15.10.77-GB-042971)
A97 E11 (13.04.79) C11d D06m

Powdered or granular detergent compsns. contain as perfume (I) ≥1 Si cpd. having ≥1 Si-bonded OR group (R is the residue of an (a) cyclic monoterpene alcohol, aliphatic essential alcohol with aryl substits. or essential phenol with aliphatic substits). All other substits on Si are H or organic groups (devoid of S or P) attached by a Si-C or Si-O-C bonds.

Suitably (I) is present as a coating on a solid, water-soluble support and/or encapsulated in a water-soluble film former. The compsn. may also contain an organopolysiloxane antifoam.

In this form the perfume alcohols are more persistant on articles washed in the compsn. 13. 10. 78 as 871243 (13pp1251)

HENK ★ D25 29838B/16 ★DS 2748-970
Silicone foam inhibitor-contg. detergent prepn. - by mixing spray-dried powder contg. builder, silicone and surfactant with per-cpd. and nonionic surfactant premix
HENKEL KG AUF AKTIEN 02.11.77-DT-748970
A97 E17 (A26 E33 E34) (12.04.79) C11d-11

Powdery detergent compsns. contg. organic Si polymers (I) as anti-foaming agents, are prepd. by mixing (a) 1 pt.wt. powder, free from per cpds., spray-dried with hot gases and contg., by wt., 0.02-2% (I), 5-30% ≥1 anionic and/or nonionic wash-active substance, 50-94% ≥1 alkali metal phosphate, polyphosphate, silicate, and/or phosphonate, as builder, and 1-20% further standard detergent components, with (b) 0.05-1 pts. wt. powdery or granular prex, preliminarily prepd. by granulating a powdery per-cpd. and/or ≥1 builder substance listed under (a), with 3-25 wt.%, w.r.t. pre-mix, of ≥1 nonionic polyglycol ether gp.-contg. wash active substance which contains > 40 wt.% cpd., (II), contg. 12-22C in hydrophobic gp. and in which ratio ethylene glycol ether gp. no. :C atom no. in hydrophobic gp. is 1 : 3 to 1 : 6. Proportions are such that the total mixt. contains 0.02-1.6 wt.% (I) and 1-10 wt.% (II).

The compsns. can be used for washing textiles, e.g. in 3-8 g/l concn., in front-loading washing machines. Mixing of powder components improves compsn. solubility, i.e. the compsn. is easily dissolved out of loading compartment into drum. 2.11.77 as 748970 (8pp200).

PROC ★ D25 30185B/16 ★J5 4011-107
Laundry detergent compsn. - comprising a blend of anionic surfactant, orthophosphate, pyrophosphate, sodium aluminosilicate and silica
PROCTER & GAMBLE CO 21.12.77-CA-293605 (27.06.77-CA-281476)
E37 (E14 E17) (27.01.79) C11d-01/02 C11d-03/06 C11d-10/02

The compsn. comprises a homogeneous blend of (a) a non-soap type anionic surfactant (b) alkali metal salt of orthophosphoric acid, (c) alkali metal salt of pyrophosphoric acid and (d) hydrated crystalline sodium alumino-silicate, hydrated amorphous sodium alumino-silicate and hydrated amorphous precipitate silica as a re-precipitating inhibitor.

Total amt. of phosphorus pentoxide in the compsn. is formula: $Na_z[(AlO_2)_z.(SiO_2)_y]_xH_2O$ where z and y are 6, molar ratio of y/z is 1.0-0.5 and x is 15-264.

The non-soap type of anionic surfactant is alkylbenzene-sulphonate, higher alcohol sulphate or higher alcohol-polyethoxy sulphate.

The compsn. does not cause pptn. on internal wall of exhaust pipe of laundry machine. 15.3.78 as 029757 (19pp15)

DOTO/ ★ D25 30190B/16 ★J5 4014-406

Detergent compsn. for carpets and glass - comprises limonene, solvent, surfactant and polishing agent

DOTOLO V 05.07.77-US-812688

E19 (02.02.79) C11d-01 C11d-03/14 C11d-10/02

The compsn. comprises a homogeneous blend of 42-45 vol.% of D-limonene, 1-3 vol.% of solvent, 3-11 vol.% of surfactant and balance polishing agent.

The surfactant is nonionic, anionic, cationic or amphoteric surfactant partic. octylphenyl-polyethoxy ethanol and nonylphenoxy-poly(ethyleneoxy)-ethanol. The solvent is 1,1,1-trichloroethylene and the polishing agent, diatomaceous earth or pumice stone. 12.4.78 as 043074 (5pp15)

SITR D25 69199W/42 =J7 9006-039

Combined prodn. of titanium dioxide and tripolyphosphate - using sulphuric acid by-product for rock phosphate digension

SOC ITALIANA RESINE SPA 25.03.74-IT-067939

*E34 G01 (E32) (23.03.79) *DT2512-904 C01b-25/40 C01g-23/06*

The combined prodn. of TiO_2 and Na tripolyphosphate from Ti- and P-contg. materials is carried out by (a) treating ilmenite or Ti-contg. slag with concn. H_2SO_4 at high temp. and dissolving the resulting solid prod. in H_2O or a weak acid to form a soln. of Ti and Fe sulphates; (b) quantitatively reducing the Fe sulphates to $FeSO_4$ and removing solids from the soln; (c) sepg. $FeSO_4.7H_2O$ from the soln; (d) pptg. hydrated TiO_2 from the soln; (e) converting the ppte. into a rutile or anatase pigment; (f) concentrating the residual soln. to an H_2SO_4 concn. of $\leqslant$70 wt.%; (g) using the concd. soln. to treat phosphate mineral at high temp., the soln. being used in excess of the stoichmetric amt. reqd. to liberate H_3PO_4; (h) purifying the resulting soln. to remove F, Si, sulphate, H_2SO_4, As and org. substances, (i) adding sufficient NaOH to separate V Cr and Fe and to convert the H_3PO_4 into Na phosphate; and (j) converting the Na phosphates into Na tripolyphosphate.

The process uses the highly impure H_2SO_4 soln. obtd. from TiO_2 prodn. to produce Na tripolyphosphate of sufficient purity for use in detergent formulations. 25.3.75 as 036508 (clg. 25.3.74-IT-067939) C01g-23/06; C01b-25/40 (23.3.79) SOC ITALIANA RESINE SPA (7pp) (J5 0158599)

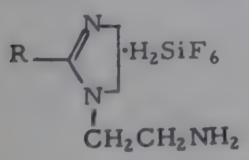
ZHUK/ ★ D25 31108B/16 ★SU -609-755

2-Alkyl-1-aminoethyl-imidazoline hexa-fluorosilicate - prepd. by reacting alkyl aminoethyl imidazoline with hexa:fluoro-silicic acid in acetone, used as surfactant

ZHUKOV I N (LEKR=) 01.04.76-SU-341717

E11 (11.05.78) C07d-233/06 C11d-01/26

2-alkyl-1-(2'-aminoethyl)-2-imidazoline hexafluorosilicate salt is of formula (I) where R is $C_{10}H_{21}$ or $C_{20}H_{41}$



These cpd. are surface active agents. They are described as new.

Cpds. (I) are prepd. by reacting corresp. 2-alkyl-1-(2'-aminoethyl)-2-imidazoline with hexafluorosilicic acid in acetone at 20-40°C.

Zhukov I.N., Remizov Yu.V., Chistyakov B.E. et al.
Bul. 21/5.6.78 1.4.76 as 341717 (3pp938)

FMCC D25 25936B/14 =US 4110-074

Activator for per:oxygenated bleach - comprises a carboxylic-sulphonic anhydride

FMC CORP 03.10.77-US-838902

*E19 (29.08.78) *BE-870-943 +D06i-03/02*

Soil and/or stains is/are removed from fabrics by immersing the fabrics in a peroxygen bleach bath contg., as a peroxygen activator, an anhydride of a carboxylic acid with a sulphonic acid of formula $R_1-(SO_2OC(O)-R_2)_n$ or $(R_1-SO_2-OC(O))_n-R_2$.

In the formulae, n is 1, 2 or 3. R_1 an- R_2 each is a 1-3 valent hydrocarbon radical derived from a 1-16 C alkane, 3-7C cycloalkane or 6-12C arene, or together R_1 and R_2 complete an o-phenylene or o-naphthalene ring. The hydrocarbon radicals opt. bear 1-3 substits. selected from 1-16C alkoxy or the arene, 1-16C aliphatic carboxamido on the arene, 1-16C alkyl or the arene, benzamido on the arene, NO_2, Cl, Br and F.

The bleaching capacity of peroxygen bleaches is increased by the presence of the activator. 3.10.77 as 838902 (8pp992)

CHEM D25 43765Y/25 =US 4110-075

Washing textiles in automatic washing machine - with separate controlled addn. of active ingredients before or during washing

CHEM WERKE HULS AG 04.12.75-DT-554592

*A97 E12 +P43 (E17 E34) (29.08.78) *DT2554-592 +B08b-03*

Washing process for textiles in an automatic washing machine comprises loading the textiles in the machine; adding water; applying active washing substances, structural substances and bleaching agents; agitating the textiles in the washing soln; pumping off the washing soln. and rinsing.

The water is added in an amt. of 4-30 litres water to 1 kg. of textiles. The active washing substances are kept in pumpable form in a separate container in the washing machine and 0.5-3.5 g active washing substance and 2-6.5 g structural substances per litre of water. The textiles are agitated for $\leqslant$50 mins and there are 2-5 rinse cycles.

The consumption of washing agents, water and energy is reduced. 6.12.76 as 747420 (18pp918)

UNIL D25 43673X/23 =US 4110-238

Coloured, non-staining liq. detergent compsn. - contg. oil sol. and water-soluble anthraquinone dyes

LEVER BROTHERS CO 05.05.75-US-574487 (05.02.76-US-655346)

*E22 (29.08.78) *US3958-928 C09b-01/28 C11d-03/42*

Prodn. of a synthetic liq. detergent having a Gardner Reflectometer '6' colour value of -5 to -15 is described. The process mixing liq. detergent exhibiting reduced staining characteristics while retaining the ability to impart bluing to fabrics, a dye mixt. consisting of 0.0005-0.003 wt.% 1,4-bis-(2-ethylhexylamino)anthraquinone and water soluble 1-amino-2-sulpho, 4-(2-sulpho-para-toluidino) anthraquinone Na salt and/or 1,4-bis(3-Na sulphonate sulphonate-mesitylidino) anthraquinone.

The Parent patent describes the liq. detergent compsn. also contg. builder, nonionic detergent, etc. 5.2.76 as 655346 Div. ex. 3958928 (8pp924)

UNIL D25 86798X/46 =US 4110-239

High lathering, non mushing synthetic toilet bars - contg. alkane sulphonates fatty acids and binder modifier

LEVER BROS CO 28.11.73-US-419558 (10.07.70-US-054008)

*E19 (29.08.78) *US3989-647 C11d-01/02*

A non-mushing high lathering synthetic toilet bar having a pH of 4.5-9.5 consists of (based on total wt. of active con ponents) (i) 40-85% of a prim. alkane sulphonate or mixt. alkane sulphonates in which the C chain contains 12C or averages 12C; (ii) 5-35% of natural and/or synthetic fatty acid(s) in which the C chain contains or averages 12C; (iii) 5-30% of a binder modifier (I); and (iv) 5-25%, based on total wt. of bar, of water.

(I) is selected from alkali metal, Mg and ammonium salts of 12-16C prim. alkyl phosphonates or phosphates. The Parent Patent claimed a bar of similar compsn. in which (I) is chosen from alkali metal, Mg and ammonium salts of 10-16C acyl isethionates or of 6-14C alkyl sulpho succinates or their mixts. 14.6.76 as 695707 Div. ex. 3989647 (+26.4.73-US-137228) (8pp927)

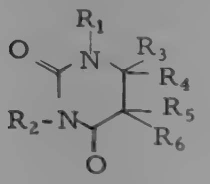
HENK D25 76011Y/43 =US 4110-242

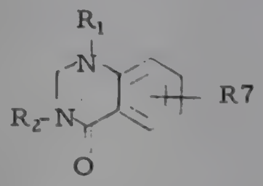
Acylated dihydro-uracil bleach activators - added to oxidn., bleaching and washing compsns. contg. inorganic per-cpds.

HENKEL KG AUF AKTIEN 02.04.76-DT-614148
*E13 +P34 (D22) (29.08.78) *DT2614-148 +A61l-13*

Activation of aq. solns. of per-cpds., i. e. H_2O and water insol. inorganic peroxyhydrates contg. 20-500 mg per litre of active oxygen is described. The soln. has a pH of 4-12 and a temp. of 10-70°C.

Process comprises adding to the soln. an activator of formula (I) or (II).


(I)


(II)

In the formulae, $\geqslant$ 1 of R_1 and R_2 is 2-4C acyl in benzoyl and the other is 2-4C alkanoyl or benzoyl. R_{3-6} are each H, 1-4C alkyl, 1-4C haloalkyl, 2-6 alkoxyalkyl, 2-4C carboxyalkyl or 3-6C alkoxycarbalkyl. R_7 is H, halogen 1-4C alkyl, CO_2Mg, SO_3Mo, amido, cyano, sulphamido or nitro (where m is alkal metal or ammonium).

Specifically (I) is 1,3-diacetyl-5,6-dihydrouracil. The activated solns. are used in washing and bleaching agents. The per cpds. may be activated at < 70°C. 29.3.77 as 782334 (11pp964)

PROC D25 64946Y/37 =US 4110-262

Builder free stable conc. liq. washing agents - contg. polyethoxylated nonionic wash-active cpd., a polybasic acid and a liq. carrier

PROCTER & GAMBLE CO 08.03.76-GB-009257
*A97 E19 (A25) (29.08.78) *BE-852-171 C11d-01/82 +C11d-07/50*

A liq. conc. homogeneous stable heavy duty detergent contains 20-70 wt.% soluble ethoxylated nonionic surfactant, 0.10-1.25 wt.% polyacid and the balance being a liq. carrier, pH of compsn. is 6.0-7.5.

Ethoxylated cpd. is ethoxylated alcohols contg. 2-24 mols. ethylene oxide. Alcohol is straight- or branched-chain prim- or sec-, satd. or unsatd. aliphatic alcohols contg. 8-24 C hydrocarbyl gp., 1-12C alkyl phenols where $\geqslant$ 1 alkyl gp. has $\geqslant$6C to yield $\geqslant$15C in alkyl gps.

Polyacid is ethylenediamine tetramethylene phosphonic acid, hexamethylene diamine tetramethylene phosphonic acid, diethylene triamine pentamethylene phosphonic acid or aminotrimethylene phosphonic acid.

Esp. used for washing or pretreating and washing heavily soiled cotton fabrics. 7.3.77 as 775214 (9pp931)

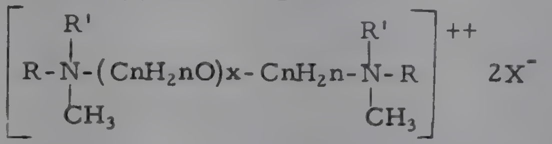
JOHJ D25 91499A/51 =US 4110-263

Mild cosmetic detergent compsn. esp. for shampoos and baths - contg. anionic or amphoteric detergent and bis quat. ammonium cpd.

JOHNSON & JOHNSON B 17.06.77-US-807768
*A96 E16 (29.08.78) *BE-868-215 +C11d-01/94*

Cosmetic cleansing compsn. is prepd. contg. a detergent component in admixture with an alkyleneoxylated bisquat. ammonium cponent.

Detergent component is $\geqslant$1 anionic and/or amphoteric detergent. Alkyleneoxylated bisquat. ammonium cpd. is $\geqslant$ 1 cpd. of formula (I) where R is 10-26C aliphatic, R' is Me, Et, Pr or R, X is an anion, n is 2 or 3, x is 1-30. Detergent compsn. is present to 4-40 wt.% compsn. and wt. ratio of (I) to detergent is 0.01-0.3:1.



$$\left[R-\overset{R'}{\underset{CH_3}{N}}-(CnH_2nO)x-CnH_2n-\overset{R'}{\underset{CH_3}{N}}-R \right]^{++} 2X^- \qquad (I)$$

Prod. is mild cleansing compsn. having reduced irritant properties. Esp. used in fluid detergent compsns. such as shampoos, bubble baths, baby baths, etc. 17.6.77 as 807768 (11pp931)

CPI INDEXES

ALERTING PATENTEE INDEX (II)

Weekly by section and overall, lists all current patents in patentee code order and, within a given patentee, in earliest priority date order. The first line gives patentee code, earliest priority date, patentee name, CPI classes and finally the current patent number. The second line gives the first part of the title, followed by the accession number.

```
EIGE/ 24.01.75  EIGENMANN L    A93  *DT 2602-948
    Bonding fluid for road marking strips - 60224X/32
EIGE/ 27.01.75  EIGENMANN L    A93 L02(A21)  *DT 2602-947
    Bonding fluid for road marking strips - 60223X/32
```

Not in Basic Abstracts Journal

CPI CLASS INDEX (IV)

Weekly only. Headings are all the CPI classes within the section to which an Alerting Bulletin relates, arranged in numerical order. Posted under each class heading is a list, in country then patent number order, of all basic or equivalent documents referenced or cross-referenced under that heading.

```
     M22
*BE -836-489
*CA -987-881
=DS 1569-023
=DS 2245-330
*DS 2517-206
*DS 2519-679
=DS 2520-359
*DT 2450-918
*DT 2451-494
=DT 2451-607
```

In Country Alerting Bulletin only

BASIC NUMBER INDEX (V)

Weekly by section and overall, lists all entries by accession number. Each heading consists of the accession number in bold, followed by the CPI section letters. There then follows a list of all the family members, commencing with the basic and finishing with the current week's patent. For each family member the CPI week of issue is quoted, and a plus sign indicates that a multiple priority has been claimed.

```
09125-X ACDF
  US 3933-788   X05+
  CA -990-674   X26
09192-X BC
  US 3933-948   X05
  BE  -832-423  X10
  NL 7509-762   X10
  DT 2535-514   X11
  SW7509-042    X15
  NO7502-837    X16
  SF 7502-292   X19
  ZA 7504-766   X21
```

In all Editions

PATENT NUMBER INDEX (VII)

Weekly by section and overall. Lists left to right the patent type (* for basic, = for equivalent or ≠ sign for non-convention equivalent or where the priority has been artificially "added" to the specification), patent number, accession number and CPI classes.

```
US 3963
#636 36477U  A97D15M14
*645 49861X  A41E19J04
=646 19776V  A41E19J04
=647 21100X  A17+R4
=650 06289S  A22
#651 24399W  A97K05L02M22
=652 73248V  A12
=653 70544V  A81G03
*654 49862X  A88H01Q4
*655 49863X  A81G03
```

In all Editions

BASIC PATENTEE INDEX (X)

Weekly by section in BAJ only. Entries under any given patentee code heading are in earliest priority date order. The title, truncated to 105 characters, is followed by the accession number and current patent number. The last line of each entry consists of the patentee name, the priority details (earliest then latest if there is more than one) and finally the Derwent classes. This index is cumulated quarterly and annually by section as hard copy. Overall A—M cumulations of from a quarter up to 5 years are available as COM.

```
CALI
Nitrile rubber smooth rolled sleeve for well impression packer - also contg
natural rubber, hydrated                             49862X/26  *US 3963-654
  CHEVRON RESEARCH CO 25.06.73-US-373341 +29.07.74-US-492377 A88 H01
Mica contg. plastified sulphur mixt - for coating walls and floors or solidifying
earth in dams                                        49433X/26  *DT 2554-327
  CHEVRON RESEARCH CO 03.12.74-US-529258 +13.11.75-US-631781 A82L02
CANA
Emulsifying agents of microbial origin - used esp. for oil spills, are made by
cultivating a species of                             48076X/26  *CA -990-668
  CANADIAN PAT & DEV LTD 31.08.72-US-285159 A97 D16 H03
```

In Basic Abstracts Journal only

MANUAL CODE INDEX IN Basic Abstracts Journal only

At the start of each main group of codes, the manual code and its descriptor are printed in the middle of the column. Each sub-division of a manual code group appearing during the week is given, accompanied by its descriptor. All manual codes occurring during the week within each sub-division are then listed, with accession numbers posted against them.

In all there are about 3,600 manual codes in CPI, each one having an average of less than 200 documents assigned to it per year. The full classification is set out in the Manual Code Instruction Manual, which also contains a keyword index of terms for easy reference.

APPENDIX 1

COUNTRY COVERAGE

"Major" Countries

Covered completely in CPI and WPI from the commencement of the service except: Research Disclosure 1978, Europe and PCT 1979, Sweden transferred from "Minor Countries" 1979. Average weekly numbers are listed alongside.

Fast publishing

Belgium	180	
Europe	150	
France	740	
Germany, W. unexamined	1050	
Japan unexamined	845*	
Netherlands unexamined	240	
PCT	40	
Research Disclosure	20	
South Africa	100	
Sweden	260	
United Kingdom unexamined	600	3325

Slow publishing

Canada	450	
Germany, E.	100	
Germany, W. examined	465	
Japan examined	340*	
Netherlands examined	60	
Soviet Union	1200	
Switzerland	260	
United Kingdom examined	300	
United States	1200	4375

*Only CPI coverage for Japan.

"Minor" Countries

Complete coverage, but only introduced during 1975, with exception of Italy 1978.

Fast publishing

Brazil	140	
Denmark	120	
Finland	60	
Norway	80	
Portugal	30	430

Slow publishing

Austria	125	
Czechoslvakia	180	
Hungary	35	
Israel	40	
Italy	155	
Rumania	25	560

MINOR AND MAJOR COUNTRIES

If the first publication of an invention takes place in one of the 'major' countries listed above, then this publication is called the basic patent, a WPI accession number is assigned, and this is used for all subsequent members of the family.

If, however, the first publication occurs in one of the 'minor' countries listed above, then the document is regarded as a provisional basic. No accession number is assigned, since an abstract is not provided. If this provisional basic is then followed by further family members also from 'minor' countries, these produce entries in the same indexes even though an accession number has still not been assigned.

However, as soon as a member of the family is published in one of the 'major' countries, then this is regarded as the first disclosure. An accession number is assigned, and will apply also to all the earlier members of the family (from the 'minor' countries). Hence it is possible to see, in Index V, entries where the basic has a later week number than some of its equivalents.

For CPI, if the first publication occurs in Sweden, South Africa or Japan — in the case of Non-Japanese nationals — then the document is treated as a provisional basic as outlined above. Other than for Japan where a heading is given, an Alerting abstract is included in CPI at this stage.

Subsequently, when a documentation abstract is available an accession number is assigned to the document and the abstract published in the BAJ and related products. Headings will be included in the Alerting Bulletins for Sweden and South Africa together with abstracts for the Japanese at this later stage.

Entries are included in WPI Gazettes at both stages. At the later stage both a basic and an equivalent heading will be given for each such patent number.

COUNTRY CODES

For patent number (not priority) purposes, DS distinguishes accepted West German specifications (DAS) from the unexamined applications (OLS) which are given the normal DT code. in the case of Japan J5 represents the unexamined applications, and J7 the examined of the present series.

Argentina	AR
Australia	AU
Austria	OE
Belgium	BE
Brazil	BR
Bulgaria	BG
Canada	CA
Chile	CE
Colombia	CO
Czechoslovakia	CS
Denmark	DK
Europe	EP
Finland	SF
France	FR
Germany, East	DL
Germany, West	DS
Germany, West	DT
Greece	GR
Hungary	HU
Iceland	IS
India	IN
Ireland	EI
Israel	IL
Italy	IT
Japan	JA
Japan, unex.	J5
Japan, ex.	J7
Luxembourg	LU
Malawi	MW
Mexico	MX
Monaco	MC
Netherlands	NL
New Zealand	NZ
Norway	NO
Pakistan	PK
PCT	WP
Philippines	RP
Poland	PO
Portugal	PT
Rhodesia	RH
Rumania	RU
South Africa	ZA
South Korea	KS
Spain	ES
Sudan	SD
Sweden	SW
Switzerland	CH
Syria	SR
Trinidad	TD
Turkey	TR
Untd. Kingdom	GB
U.S.A.	US
U.S.S.R.	SU
Yugoslavia	YU

ADOL/ 05.10.77 ADOLPHE M C03 D13 (D16) =DT 2803-754
Animal foodstuffs obtd. from brewery residues - 40420A/23

AGAH- 02.09.77 AGA HEATING AB D15 =NO 7802-952
Combined biological dry toilet and waste water purifier - 20411B/11

*AGEN 12.08.77 AGENCY OF IND SCI TECH D15 E36 J04 (E32) *J5 4030-892
Colorimetric determn. of phosphoric acid and arsenic acid ions - 30221B/16

*AGEN 15.08.77 AGENCY OF IND SCI TECH D15 *J5 4031-965
Preventing deactivation of activated sludge - 30452B/16

*AGEN 15.08.77 AGENCY OF IND SCI TECH D16 *J5 4032-686
Aggregating method for microbes - 30708B/16

*AGEN 15.08.77 AGENCY OF IND SCI TECH D15 (D16) *J5 4032-696
Aggregating agent NOC-1 for microbes - 30716B/16

AIDA/ 05.09.77 AIDA K B05 D16 =DK 7803-890
Fermentative prodn. of coenzyme/Q - 22325B/12

AIRL 28.07.72 AIR LIQUIDE L' D15 E36 =DS 2337-733
Monopersulphuric acid generator - 09271V/06

AIRW- 02.09.77 AIRWICK AG D25 E37 =GB 2005-139
Powdery carpet cleanser and deodorant compsns. - 24173B/13

*AJIN 10.08.77 AJINOMOTO KK B05 D16 E16 *J5 4032-693
L-Threonine prodn. in high yield - 30714B/16

AJIN 10.08.77 AJINOMOTO KK B02 C02 D16 =J5 4032-695
Purine arabinoside(s) enzymatic prodn. - 16275B/09

*AJIN 12.08.77 AJINOMOTO KK D13 *J5 4032-670
Rice extract prepd. from defatted rice bran - 30706B/16

*ALBR/ 01.12.69 ALBRIGHT C J D13 *US 4110-481
Multiple vessel pressurised food cooking - 31506B/16

ALFA 23.01.74 ALFA LAVAL AB D15 =IT 1028-021
Aerating propellor for biological purificn. of waste water - 34225W/21

*ALFA 11.07.77 ALFA-LAVAL D13 *FR 2397-148
Clean demoulding of cream cheese from metal mould - 30065B/16

AMCY 10.01.75 AMERICAN CYANAMID CO D21 E16 =CA 1052-275
Hair conditioning shampoo - 84866X/45

AMCY 07.02.77 AMERICAN CYANAMID CO A91 D15 (A14 A26) =BR 7800-706
Poly:anionic and poly:cationic polymer mixt. - 59073A/33

*AMOR- 05.10.77 AMER ORIGINAL CORP D12 *DT 2843-230
Edible shellfish treatment with sodium sulphite and/or metabisulphite - 30031B/16

AMOR- 05.10.77 AMER ORIGINAL CORP D12 =GB 2005-129
Edible shellfish treatment with sodium sulphite and/or metabisulphite - 30031B/16

*AOKI/ 15.08.77 AOKI S A96 D22 (A11 A17) *J5 4031-983
Tool for curing vesicular eczema - 30456B/16

*AQAC 30.06.76 AQUA CHEM INC D13 J03 *US 4110-175
De-acidification of whey contg. lactic acid - 31386B/16

*ARMS- 24.05.76 ARMSTRONG CHEM CO I D21 E16 *US 4110-358
Ampholytic quat. ammonium cpds. - 31462B/16

*ASAD 15.08.77 ASADA KAGAKU KOGYO D15 E33 *J5 4032-197
Chlorine-contg. basic aluminium sulphate prodn. - 30524B/16

*ASAE 15.08.77 ASAHI ELECTROCHEM IND KK D13 *J5 4031-407
Fat compsn. for e.g. margarine and shortening - 30343B/16

*ASAE 17.08.77 ASAHI ELECTROCHEM IND KK D13 E17 (D15 D16) *J5 4032-187
Defoaming agent for use in brewing, waste water treatment etc. - 30516B/16

*ASAE 17.08.77 ASAHI ELECTROCHEM IND KK A96 D21 E13 (A25) *J5 4032-638
Cosmetic base compsn. - 30696B/16

*ASAG 12.08.77 ASAHI GLASS KK D13 *J5 4030-558
Purifying and deodorising cooling medium for foodstuffs refrigeration - 30191B/16

*ASAG 16.08.77 ASAHI GLASS KK D15 *J5 4031-958
Reducing COD of waste water - 30449B/16

*ASKE/ 30.04.71 ASKEW A B D22 E16 F05 G03 (E12) *US 4110-504
Self-sanitising tufted carpet for hospitals - 31516B/16

ASKO- 02.09.77 ASKO-UPO OY D15 =NO 7802-952
Combined biological dry toilet and waste water purifier - 20411B/11

ASTR 14.09.73 ASTRA PROTEIN PROD D13 =CA 1052-170
Solvent evaporation from solvent extract of protein - 22459W/14

ATAR- 21.04.75 ATARA CORP D15 J02 =CH -609-881
Mixing gases into liquids - 85290X/46

ATLA 29.09.77 ATLAS AS D14 #NL 7710-665
Continuous peeling of fruit or vegetables - 91772Y/51

*ATLA- 05.09.77 ATLANTICA TECH PESQ D17 *BR 7705-925
Sepn. of protein from sugar cane juice - B/16

BADI 30.04.74 BASF AG A60 C03 D22 E19 (C01) =CH -609-966
N-Nitroso N-(cyclo)alkyl hydroxylamine aluminium salts prodn - 70719W/43

*BAEC- 13.12.78 BAECK ENGG NV D15 *BE -872-719
Sepg. pig slurry into clean water and compost - 29788B/16

BAHR/ 13.07.77 BAHR A D15 =FR 2397-222
Sewage aeration system - 08228B/05

*BAST= 06.01.77 BAST FIBRE PRETREAT C03 D16 (D13) *SU -609-763
Culture medium for nutrient yeast prodn. - 31115B/16

*BAUM- 15.12.77 BAUMGARTNER PAPIERS D18 F04 *BE -872-712
Cigarette filters prodn. - 29786B/16

BECI 28.09.77 BECKMAN INSTRUMENTS INC B04 D15 J04 (D16) =NL 7809-821
Detecting toxicity in aq. liquids by photometry - 10012B/06

BECT 10.11.76 BECTON DICKINSON CO A35 D22 (A60) =US 4110-185
Sterilising semi-crystalline polymer esp. polypropylene - 21559A/12

BEEC 20.04.74 BEECHAM GROUP LTD B02 C02 D16 =DT 2560-074
Clavulanic acids and derivs - 72840W/44

BEEC 20.04.74 BEECHAM GROUP LTD B02 C02 D16 =US 4110-165
Clavulanic acids and derivs - 72840W/44

*BEER= 29.11.76 BEER NON-ALCOHOL IN D16 *SU -609-764
Brewing wort prodn. - 31116B/16

BEHW 02.10.76 BEHRINGWERKE AG D16 =DS 2644-622
Microorganism extn. with aq. guanidine salt soln. - 27155A/15

BEHW 12.07.77 BEHRINGWERKE AG B04 D16 =FR 2397-194
Prodn. of killed Trypanosoma cruzi organisms - 06438B/04

BERO- 11.07.77 BERO BERATUNGS-& OR D15 J08 =FR 2397-602
Recovering waste heat from buildings - 23309A/13

*BERT/ 05.09.77 DA SILVA BERTAO J D16 *BR 7705-914
Closed circuit fermentation vat - B/16

*BILL- 05.09.77 BILLERUD UDDEHOLM A D15 F09 *SW 7709-924
Treatment of discoloured waste water contg. chlorine - B/16

BLGN 26.09.77 BELGONUCLEAIRE D15 K07 =NL 7809-692
Treating water contaminated radioactively, chemically or biologically - 25181A/14

BLUE- 25.08.77 BLUE WING CORP C03 D13 =NO 7800-037
Protein-contg. feed additive for ruminants - 20301B/11

BLUE- 25.08.77 BLUE WING CORP C03 D13 =NO 7800-038
Microencapsulation of lipids in protein to prepare foods - 01951B/02

BLUE- 25.08.77 BLUE WING CORP C03 D13 =SW 7808-944
Microencapsulation of lipids in protein to prepare foods - 01951B/02

*BOLY/ 13.12.76 BOLYACHKIN P I D15 J01 *SU -610-539
Raking device for pulp or soln. concentrator - 31230B/16

BORS/ 12.08.77 BORST A H D15 =SF 7802-354
Combined waste water treatment and rubbish disposal - 89700A/50

BORS/ 12.08.77 BORST A H D15 =SF 7802-355
Combined waste water treatment and rubbish disposal - 89700A/50

BRAS- 11.01.72 BRASSERIES KRONENBO D16 =DS 2300-786
Brewery vat - 43091U/31

BRBE- 30.09.77 BRITISH BEEF CO D12 =DT 2842-291
Conveyor system for animal carcasses - 28273B/15

*BRIK- 10.10.77 BRIK PAK INC B04 D16 (D13) *DT 2745-541
Purifying sulphydryl oxidase enzyme derived from whole milk - 29946B/16

BRIM 13.07.77 BRISTOL MYERS CO B02 D16 =FR 2397-416
Antibiotics Bu-2313A and Bu-2313B - 09321B/05

BRPE 03.01.74 BRITISH PETROLEUM LTD D15 H05 =IT 1028-175
Oil-containing effluent purification - 48087W/29

*BRTA 09.05.75 BRIT AMER TOBACCO LTD D18 J04 *GB 1544-481
Mixing chamber for diluting tobacco smoke - 30110B/16

BRTA 06.10.76 BAT CIGARETTENFAB G A88 D18 E11 (A11 E14) =GB 1544-599
Cellulose or cellulose acetate-based filter for cigarettes - 28922A/16

BRTA 06.09.77 BAT CIGARETTEN-FABR D18 J01 =DK 7803-910
Eliminating nitric or carbon mon:oxide(s) from tobacco smoke - 04112B/03

*BRWI 05.03.75 BROWN & WILLIAMSON CORP A97 D18 (A11) *US 4109-664
Low density tobacco substitute - 31308B/16

BUCM 07.04.76 BUCHERGUYER MASCH D14 =CH -609-879
Fruit juice extractor with rotatable receptacle - 77794Y/44

BUCM 14.10.76 BUCHERGUYER MASCH A88 D14 =CH -609-841
Separator of fluids from solids, esp. fruit juices - 30462A/17

BUCM 14.07.77 BUCHERGUYER MASCH D14 =FR 2397-286
Fruit extraction press - 10180B/06

CALI 11.05.77 CHEVRON RESEARCH CO D16 E16 =US 4110-475
Mono,di or tri:chloromethyl di:thioacetic acid - 86446A/48

CALI- 14.08.75 CALIF PROCESSING MA D13 =US 4109-570
Mechanised halving and stoning of peaches etc. - 36741Y/21

CALP- 13.08.77 CALPIS SHOKUHIN KOG D11 E17 =J5 4032-642
Treatment of wheat flour - 14566B/08

*CANA 03.06.74 CANADIAN PAT & DEV LTD D13 *US 4110-478
Dried potato granules prodn. - 31505B/16

CANT/ 27.12.74 CANTARELLI C D16 (D13) =IT 1028-075
Prepn. of grape must and fruit juices - 83618X/45

CARV/ 05.09.77 CARVALHO R J D15 #SW 7709-952
Waste water treatment by flocculation and oxidation - 70472Y/39

CASA- 02.04.76 CASA HERRERA INC D11 =US 4109-568
Distributing and processing apparatus - 68462X/36

CASS 02.07.77 CASSELLA AG D18 E19 F06 =BR 7804-208
Brightening and waterproofing cellulose textiles and leather - 02324B/02

CCAC- 15.05.73 CCA CHEM COMB AMSTERDAM A41 D13 E17 G02 =CH -609-961
Fatty acid esters of higher polyols and glycosides - 84417V/49

CECA- 12.05.76 CECA SA A97 D13 (A11) =DS 2721-199
Gelling mixt. for food e.g. yogurt - 85086Y/48

CEDE- 11.07.77 CEDERROTHS AB D22 =FR 2397-183
Adhesive medical plaster with impregnated gauze dressing - 80223A/45

CESK 12.11.76 CESKOSLOVENSKA AKAD A97 B04 D16 J04 =FR 2397-421
Carrier consisting of porous inorganic material and reactive polymer - 55343A/31
•CHAP- 11.07.77 CHAPLAIN M & CIE SA D15 *FR 2397-367
Continuous filtration plant for waste water prior to purificn. - 30084B/16
•CHAR/ 12.01.77 CHARIKOV V M D15 *SU -609-728
Purificn. of acidic iron-contg. aq. effluents from pigment mfr. - 31082B/16
CHEM 04.12.75 CHEM WERKE HULS AG A97 D25 E12 (E17 E34) =US 4110-075
Washing textiles in automatic washing machine - 43765Y/25
CHEM 28.09.77 CHEM WERKE HULS AG D25 E17 =NL 7809-778
Aq. cleaning solns. contg. alkyl glycol ether sulphate(s) - 25905B/14
CHEM- 02.01.74 CHEMFIX INC D15 =IT 1028-132
Improving quality of leachate from sanitary landfills - 75460V/43
CHEM- 09.01.75 CHEMORA ANSTALT C04 D13 =IT 1028-259
Natural fertilisers - X/34
CHEM- 17.11.76 CHEMED CORP A97 D15 (A13 A14) =GB 1544-586
Boiler scale inhibition using soluble polymers - 68573Y/38
CHER/ 31.05.75 CHERDRON E D15 =US 4110-209
Chemical treatment of waste water and sewage - 77610X/42
•CHIN/ 27.02.76 CHINFEN D L D12 *CA 1052-173
Extruding egg roll filling from adjustable die - 29813B/16
CIBA 07.07.77 CIBA GEIGY AG A41 B07 D25 E13 (A18 A81 B04 D21) =BR 7804-374
Monomeric vinyl ether(s) of hydantoin(s) - 04555B/03
CIBA 28.09.77 CIBA GEIGY AG D25 E34 =NL 7809-782
Aq. or powdery detergent compsns. - 28144B/15
CNSF 22.12.75 CONSOLIDATED FOODS CORP D15 =GB 1544-283
Liquid carbon dioxide carbonation appts. - 35926Y/20
COFR 28.12.73 CIE FRANCAISE RAFFINAGE D15 H05 J04 =IT 1028-047
Fully automatic gas chromatograph - 47973W/29
•COLG 24.06.66 COLGATE PALMOLIVE CO A96 D21 E12 *US 4110-426 *
Self-heating cosmetic compsns. - 31485B/16
COLG 24.09.73 COLGATE PALMOLIVE CO D21 =CA 1052-276
Dry astringent deodorant compsn. in aerosol dispenser - 22856W/14
COLG 16.11.73 COLGATE PALMOLIVE CO D21 =CA 1052-277
Regular particles for dentifrices - 24244W/15
COLG 24.11.75 COLGATE PALMOLIVE CO A96 D22 F07 =CA 1052-052
Babys napkin retained with detachable plastic straps - 23613Y/14
COLG 24.11.75 COLGATE PALMOLIVE CO A96 D22 F07 =CH -609-843
Babys napkin retained with detachable plastic straps - 23613Y/14
COLG 24.11.75 COLGATE PALMOLIVE CO D22 =CH -609-844
Baby's disposable napkins made fully watertight - 21978Y/13
COLG 29.12.75 COLGATE PALMOLIVE CO D22 =CH -609-539
Absorbent pad for disposable napkins, sanitary towels etc. - 31016Y/18
COLG 00.00.76 COLGATE PALMOLIVE CO D22 E33 =GB 1544-536
Dentifrices contg alkaline alpha-alumina trihydrate - 36019X/20
COLG 00.00.76 COLGATE PALMOLIVE CO D22 E33 =GB 1544-537
Dentifrices contg alkaline alpha-alumina trihydrate - 36019X/20
COLG 00.00.76 COLGATE PALMOLIVE CO D22 E33 =GB 1544-538
Dentifrices contg alkaline alpha-alumina trihydrate - 36019X/20
COLG 16.11.76 COLGATE PALMOLIVE CO A96 D21 =GB 1544-563
Surfactant mixt. for skin-softening foam baths - 36931A/21
•COLG 30.12.76 COLGATE PALMOLIVE CO A96 D21 E19 *US 4110-429
Non-staining antibacterial oral compsns. - 31486B/16
COLG 15.07.77 COLGATE PALMOLIVE CO D25 =FR 2397-454
Toilet soap contg. polyethylene oxide and fatty acids - 82204A/46
CONC 19.07.76 CONTINENTAL CAN CO D22 =US 4109-441
Supporting open mouthed pouches during autoclave sterilisation - 90245X/48
•CONF= 21.05.76 CONFECTIONERY IND D17 *SU -610-506
Confectionery sugar paste prodn. - 31214B/16
•COOP- 08.09.77 COOP ACUCAR ALCOOL D17 *BR 7706-007
Sugar cane mill roller - B/16
•COOP- 08.09.77 COOP ACUCAR ALCOOL D17 *BR 7706-009
Sugar cane mill roller ribs - B/16
COOQ 30.10.75 COOPER LABS INC B03 D21 =US 4110-328
(Thio)carbamyl-guanidino substd. (cyclic) azalkanes - 30934Y/18
CORP 02.11.67 CORN PRODUCTS CO D17 =IT 1028-001
Colour stable glycose syrups by electrod - 77106R/42
COSD 18.01.74 COSDEN TECHN INC D23 E14 =IT 1028-426
Phenyl-acetaldehyde prepn. from styrene oxide - 39247W/24
•COST/ 10.10.77 COSTA R D11 *DT 2841-199
Kneading machine for food e.g. bread dough - 29985B/16
•CSME- 24.04.75 CONSOL MEAT HOLDING D12 *GB 1544-527
Depilating animal carcasses or live animals - 30112B/16

DAHM/ 08.01.74 DAHM K P A96 D21 =IT 1028-217
Cosmetic stick for eye shadow application - 35961W/22
•DAII 18.08.77 DAIICHI KOGYO SEIYAKU D23 (D13) *J5 4032-511
Reforming fats and oils - 30608B/16
•DAII- 11.10.77 DAI-ICHI TOGYO D16 (D15) *DT 2844-311
Agglutinant prepd. by Dematium fungus cultivation - 30061B/16
•DAIK 17.08.77 DAIKIN KOGYO KK D15 J01 *J5 4032-172
Collecting water from the air - 30503B/16
•DAIL 10.01.77 DAICEL KK D15 J01 *J5 4033-876
Liq. separator contg. planar semipermeable membranes - 30956B/16
•DAIN 16.08.77 DAINIPPON PHARM KK A97 D15 (A26) *J5 4031-961
Surfactant-contg. treating agent for waste water - 30451B/16
•DAIR= 04.01.76 DAIRY IND RES INST D13 *SU -609-527
Continuous food grade caseinate soln. prodn. - 31016B/16
•DALM= 02.02.77 DALMOROPRODUKT D12 *SU -610-504
Packing crab-meat into jars - 31212B/16
DAMB- 01.07.76 DAMBACH IND GMBH D15 =CH -609-954
Canal cleaning grate - 04385A/03
•DASS/ 17.10.78 DE ASSIS A L A96 D21 *BR 7806-834
Dental casting base with acrylic conical pin - B/16
•DCAV/ 13.07.77 DE SIRAN DE CAVANAC D21 E33 *FR 2397-189
Compsn. for medical, thermal and beauty treatments - 30071B/16
•DEFE- 08.10.77 DEUT FEUERLOSCHER D22 *DT 2745-444
Room disinfecting cylinder - 29940B/16
DEGS 24.12.73 DEUTSCHE GOLD & SILBER A97 D25 E34 =CH -609-649
Alkali per-carbonate prodn. in presence of poly carboxylate - 46390W/28
DEGS 26.09.74 DEUTSCHE GOLD & SILBER D15 E17 =CH -609-654
Removing formaldehyde from waste water - 26476X/15
DEJI- 29.05.75 DEJ INT RES D13 =CH -609-839
Roasted coffee beans of high quality - 92441X/50
DEJI- 06.10.77 DEJ INT RES CO D13 =DT 2843-258
Prim. extn. of coffee from ground roast coffee beans - 27848B/15
DEJI- 05.10.78 DEJ INT RES CO BV D13 =GB 2005-126
Prim. extn. of coffee from ground roast coffee beans - 27848B/15
•DENK- 16.08.77 DENKI KAGAKU KEIKI D15 J04 *J5 4031-792
Pretreating sample for COD determination - 30436B/16
DERO- 01.09.77 DEUT ROTEN KREUZES D15 =GB 2005-154
High purity sterile water production - 20194B/11
•DNII 22.08.77 DAINIPPON INK INST CHEM D13 E24 (D16) *J5 4033-535
Red colour element extn. from microorganism of Monascus species - 30860B/16
•DNIN 22.08.77 DAINIPPON INK CHEM KK D13 E24 (D16) *J5 4033-535
Red colour element extn. from microorganism of Monascus species - 30860B/16
DOKO/ 30.08.75 DOKOUPIL J D18 =CH -610-009
Leather dewatering machine operating without kinking the surface - 16683Y/10
•DOTO/ 05.07.77 DOTOLO V D25 E19 *J5 4014-406
Detergent compsn. for carpets and glass - 30190B/16
•DOWA 14.12.77 DOWA MINING CO D15 J01 M25 *BE -872-703
Removal of arsenic from solns. of sulphuric acid - 29781B/16
•DOWC 15.10.77 DOW CHEMICAL CO A97 D25 E11 *BE -871-243
Detergent contg. silicon cpd. as perfume - 29759B/16
DREE/ 15.02.74 DREER G A60 D16 (A93) =US 4110-281
Filler prodn from waste matl - 81385X/44
DUPO 06.02.75 DU PONT OF CANADA D13 =CA 1052-389
Food grade oil extraction from oats - 75725Y/42
•DYAK/ 01.04.76 DYAKOV I P C03 D13 *SU -610-509
Carbamide-based feed for ruminants - 31217B/16
•DZHA= 29.11.76 DZHAMBUL LIGHT FOOD D11 *SU -610-502
Bread contg. increased quantity of sorghum flour - 31210B/16

EAST 11.07.77 EASTMAN KODAK CO B04 D16 J04 =FR 2397-637
Selected isoenzyme activity determn. - 04595B/03
EBAI 13.02.74 EBARA INFILCO KK D15 =IT 1028-355
Water purification using activated carbon - 56041W/34
•EBAI 10.08.77 EBARA INFILCO KK D15 *J5 4030-661
Treating ammonia- and phosphoric acid-contg. liquor - 30202B/16
•EBAI 12.08.77 EBARA INFILCO KK D15 E33 J01 *J5 4031-098
Regenerating activated alumina granules contg. adsorbed silicic acid - 30322B/16
•EBAI 15.08.77 EBARA INFILCO KK D15 *J5 4032-179
Operation control of water prodn. device - 30509B/16
EICH- 12.11.74 EICHLER A KG D15 =DS 2453-512
Metering valve for fluids and gases into fluid - 74112X/40
•ELEC- 29.09.71 ELECTRO-FOOD AB D14 *US 4109-566
Container for heating foodstuff - 31296B/16
•ELEM- 28.04.77 ELEMAC SPA D18 *GB 1544-368
Programmed control appts. for blanking machines used in shoe mfr. - 30106B/16
•ELIL 21.04.75 ELI LILLY & CO B04 C03 D16 (B03 C02) *US 4110-435
Antibiotic A-28086 factor D an its acetyl and n butyryl ester(s) - 31488B/16
•ELIL 21.04.75 ELI LILLY & CO B04 C03 D16 (B03 C02) *US 4110-436
Treating coccidiosis in poultry - 31489B/16
ERAP 29.09.77 ELF AQUITAINE D15 =DT 2842-591
Sludge incineration process - 28289B/15
ESCH/ 31.12.69 ESCH A A16 D21 (A11 A96) =DS 1965-859
Shaving emulsion - 47850S/29

EXTE- 27.09.77 EXTERMA-GERM PRODS A94 D22 E14 F06 (D25) =NL 7809-740
Impregnated material esp. with antimicrobial compsn. - 10007B/06

FARB 04.05.77 BAYER AG A91 B03 D16 =DS 2719-912
Amino-sugar saccharase inhibitor isolation - 84216A/47
FARB 15.06.77 BAYER AG B04 C03 D16 =DT 2726-899
Glucoside hydrolase inhibitors prodn. from bacteria - 45809A/26
FARB 27.08.77 BAYER AG B03 C02 D13 =NO 7802-713
Tri:hydroxy-piperidine derivs. - 18396B/10
FARB 03.09.77 BAYER AG D18 =DK 7803-883
Chrome tanning of hides and pelts - 20218B/11
FARH 28.09.73 HOECHST AG D16 H04 =DS 2348-753
Protein of high amino acid content - 26055W/16
FARH 29.12.73 HOECHST AG D25 E19 =IT 1028-087
Bleaching agent mixtures for detergents - 47872W/29
FARH 24.03.75 HOECHST AG A92 D12 (A11 A14) =DS 2512-995
Regenerated cellulose tubular casing for pasty prods - 75688X/41
FARH 25.07.77 HOECHST AG A60 D22 E16 M25 (D21) =SF 7802-308
Non-symmetrical sec. ether-amine derivs. - 10263B/06
*FARH 05.08.77 HOECHST AG A11 D12 *SF 7802-380
Cellulose hydrate tube - B/16
FARM- 09.09.77 FAR-MAR-CO INC D13 (D11) =SW 7801-213
Whole wheat grain fractionation - 22280B/12
FATE- 03.10.77 FATER SPA D22 F04 =NL 7809-828
Absorbent sanitary tampon of hydrophilic cellulose fibres - 10024B/06
FEDM 18.03.74 FEDERAL MOGUL CORP D21 M26 =IT 1028-449
Amalgamable silver-copper-tin alloy powder for dental amalgams - 22294W/13
*FERT- 05.10.77 FERTILIZERS & CHEMI C03 D13 *DT 2822-279
Non-protein nitrogenous animal feeds - 29962B/16
FIRM 11.02.76 FIRMENICH SA D23 E17 (D13) =CH -609-561
Cis:octenal useful as perfume and flavouring agent - 59710Y/34
FIRM 30.06.76 FIRMENICH SA D23 E15 =FR 2397-187
Modifying the characteristics of perfume or perfumed prod. - 04705A/03
FIRM 17.06.77 FIRMENICH SA D23 E13 (D13 D21) =FR 2397-411
Tri:cyclic norbornane derivs for perfumery use - 02215B/02
FIRM 07.09.77 FIRMENICH SA B07 D23 E13 (B03 D13) =GB 2005-138
Methyl-substd. 6-methylene-1-oxa-spiro-decene or deca-di:ene - 22319B/12
FIRM 15.09.77 FIRMENICH SA B07 D13 E13 (B05 D23) =GB 2005-258
2-Formyl-bi:cyclo-heptane-3-carboxylate derivs. prodn. - 24225B/13
FISO 20.05.76 FISONS LTD D15 F06 (D18) =GB 1544-430
Treating aqueous effluent contg. dissolved or dispersed dye - 82938Y/47
*FJIE 17.08.77 FUJI ELECTRIC MFG KK A85 D15 E36 J03 *J5 4032-192
Ozoniser for desulphurising exhaust gas, waste water treatment etc. - 30521B/16
FMCC 19.03.73 FMC CORP D22 E12 =DS 2412-262
Granulating pulverulent sodium dichloro-isocyanurate - 69830V/40
FMCC 07.01.75 FMC CORP D25 E34 #IT 1028-225
Sodium carbonate peroxide continuous prodn - 20877W/12
FMCC 28.03.77 FMC CORP D25 E19 F06 (D22) =BR 7801-850
Crystalline percarboxylic acids prepn. from carboxylic acids - 68934A/39
FMCC 03.10.77 FMC CORP D25 E13 F06 =DT 2843-059
Bleaching compsns. contg. (N)-sulphonyl-imidazole(s) - 70480A/39
FMCC 03.10.77 FMC CORP D25 E12 F06 =DT 2843-116
Low temp. bleaching of fabrics with peroxy cpds. - 07600B/04
FMCC 03.10.77 FMC CORP D25 E14 F06 (E13) =DT 2843-123
Low temp. bleaching of soiled and/or stained fabrics - 70479A/39
FMCC 03.10.77 FMC CORP D25 E11 F06 =DT 2843-126
Organo:phosphorus azide per:oxygen textile bleach activators - 83827A/46
FMCC 03.10.77 FMC CORP D25 E19 =DT 2843-127
Activator for per:oxygenated bleach - 25936B/14
FMCC 03.10.77 FMC CORP D25 E23 F06 (E14) =DT 2843-141
Aromatic sulphonyl azide(s) - 78107A/43
FMCC 03.10.77 FMC CORP D25 E19 F06 =DT 2843-142
Low temp. fabric bleaching with per-oxygen cpds. - 25655B/13
FMCC 03.10.77 FMC CORP D25 E19 =DT 2843-145
Di:sulphone derivs. - 78106A/43
FMCC 03.10.77 FMC CORP D25 E19 =NL 7809-818
Activator for per:oxygenated bleach - 25936B/14
FMCC 03.10.77 FMC CORP D25 E23 F06 (E14) =NL 7809-819
Aromatic sulphonyl azide(s) - 78107A/43
FMCC 03.10.77 FMC CORP D25 E14 F06 (E13) =NL 7809-856
Low temp. bleaching of soiled and/or stained fabrics - 70479A/39
FMCC 03.10.77 FMC CORP D25 E13 F06 =NL 7809-857
Bleaching compsns. contg. (N)-sulphonyl-imidazole(s) - 70480A/39
FMCC 03.10.77 FMC CORP D25 E19 =NL 7809-858
Di:sulphone derivs. - 78106A/43
FMCC 03.10.77 FMC CORP D25 E12 F06 =NL 7809-860
Low temp. bleaching of fabrics with peroxy cpds. - 07600B/04
FMCC 03.10.77 FMC CORP D25 E19 F06 =NL 7809-976
Low temp. fabric bleaching with per-oxygen cpds. - 25655B/13
FMCC 03.10.77 FMC CORP D25 E11 F06 =NL 7809-977
Organo:phosphorus azide per:oxygen textile bleach activators - 83827A/46
FMCC 03.10.77 FMC CORP D25 E19 =US 4110-074
Activator for per:oxygenated bleach - 25936B/14
FORM- 20.10.75 FORMAX INC D13 =CH -609-538
Machine for forming hamburgers or similar prods. - 32117Y/18
*FRES/ 12.07.77 FRESAFOND J P G D15 J02 (D16) *FR 2397-225
Crusher-mixer for dissolving granular products - 30075B/16
FRIT- 04.08.75 FRITZSCHE DODGE OLC B07 D13 E13 (D18) =US 4109-662
Alkyl dihydro hydroxy alkylidene oxo alkyl furan carboxylates - 13242Y/08
*FRIT- 04.10.77 FRITZSCHE DODGE D13 *DT 2843-322
Prepn. of aroma material esp. cocoa substitute or extender - 30034B/16
FRIT- 04.10.77 FRITZSCHE DODGE OLC D13 =GB 2005-123
Prepn. of aroma material esp. cocoa substitute or extender - 30034B/16
*FUCH/ 05.10.77 FUCHS M D11 *DT 2744-756
Fully automatic dough kneading and dividing machine - 29909B/16
FUJI 19.11.75 FUJISAWA PHARM IND KK B03 D16 =US 4110-166
Microbial prodn. of Nocardicine A antibiotic - 36211Y/21
FUKO 08.09.77 FUJI OIL KK D13 =SW 7809-425
Hard vegetable butter compsn. for chocolate - 22530B/12

GARD/ 13.01.75 GARDNER J W D13 #CA 1052-216
Edible nut skin slitting appts - 51769X/27
*GEBA- 27.12.77 GEBA GERATEBAU GMBH D12 *BE -872-809
Shrimp peeling machine - 29804B/16
*GEIG/ 09.09.77 GEIGER E E E D15 *BR 7706-010
Continuous flux electrolytic appts. - B/16
GENO 30.09.76 GENERAL FOODS LTD D13 =FR 2397-158
Protein isolate or micelle prepn. - 27209A/15
GENO 13.07.77 GENERAL FOODS LTD A97 D13 #FR 2397-162
Dry mix for milk-based drinks - 08149B/05
GENO 29.08.77 GENERAL FOODS CORP D13 E24 =DK 7803-815
Solubilising erythrosine food dye under acid conditions - 01971B/02
GENO 29.08.77 GENERAL FOODS CORP D13 E24 =NO 7802-924
Solubilising erythrosine food dye under acid conditions - 01971B/02
GENO 29.08.77 GENERAL FOODS CORP A97 D13 E23 =NO 7802-939
Stabilising erythrosine in acid food prods., esp. drinks - 04084B/03
GEOP 24.06.77 GEORGIA PACIFIC CORP A97 D15 E31 =US 4110-208
Removal of metal hydroxide(s) by magnetic method - 49552A/27
GIVA 18.09.73 GIVAUDAN L & CIE SA D22 E14 =CH -609-558
Bacteriostatic trifluoromethyl-substd. benzanilines - 21293W/13
GIVA 09.07.74 GIVAUDAN LTD A97 B04 D16 =CA 1052-305
Condensn prods of aromatic polyamines with dialdehydes or acrolein - 08582X/05
GIVA 00.00.76 GIVAUDAN L & CIE SA D23 E17 =CH -609-559
Perfume components prepd from 2,7-dimethyl-1,3,7 octatriene - 52331V/29
GIVA 00.00.76 GIVAUDAN L & CIE SA D23 E17 =CH -609-560
Perfume components prepd from 2,7-dimethyl-1,3,7 octatriene - 52331V/29
*GLAT- 30.09.77 GLATZ J GMBH A97 D18 F09 *DT 2743-986
Cigarette filter covering strip with cork appearance - 29872B/16
*GODA/ 11.12.78 GODAR S D15 *BE -872-668
Emergency installation for drinking water prodn. from rivers etc. - 29773B/16
GOOR/ 16.01.74 GOORDMAN R V C03 D15 =IT 1028-415
Synthetic top soil prepn - 47482W/28
GRAM- 06.10.77 BROEDRENE GRAM A/S D13 =DT 2843-783
Decoration of iced lollies with patterned imprint - 11967B/07
GRAM- 06.10.77 BRODRENE GRAM A/S D13 =GB 2005-124
Deeply inlaid decoration of iced lollies with contrast material - 11966B/07
GRAM- 06.10.77 BRODRENE GRAM A/S D13 =GB 2005-125
Decoration of iced lollies with patterned imprint - 11967B/07
GROT/ 10.10.77 GROTZ W D15 J02 =DT 2745-538
Motorised rotary agitator to aerate liq. manure etc. - 14204B/08
*GRUB/ 00.00.73 GRUBELNIK H D11 *DT 2744-807
Dough dividing machine - 29912B/16

HAAR 02.02.74 HAARMANN & REIMER GMBH D21 E14 =CH -609-861
Para-isopropyl(tert,-butyl)-alpha-methyl hydrocinnamic alcohol - 54226W/33
HAAR 02.02.74 HAARMANN & REIMER GMBH D21 E14 =US 4110-430
Para-isopropyl(tert,-butyl)-alpha-methyl hydrocinnamic alcohol - 54226W/33
*HAAS/ 06.10.77 HAAS F D11 *GB 2005-396
Cooler for baked wafer sheets - 30148B/16
*HACH/ 30.09.77 HACHENEY W D15 *DT 2744-026
Waste disposal system - 29874B/16
HAIM 12.02.74 ALPMA ALPENLAND MAS D13 =IT 1028-320
Continuous prodn of cheese curds - 55873W/34
*HAME- 22.07.77 HAMEEN PERUNA OY D17 *SF 7702-260
Separation process for corn starch - B/16
HANR- 22.07.71 HANOVER RES CORP C03 D15 (C04 D13) #J5 4033-870
Pure water and solids recovery from effluents - 34522W/21

HANR- 22.07.71 HANOVER RES CORP C03 D15 (C04 D13) #J5 4033-871

Pure water and solids recovery from effluents - 34522W/21

* HATA/ 10.08.77 HATA S D21 *J5 4032-639

Hair tonic prepn. - 30697B/16

* HAUN 23 09.77 HAUNI-WERKE KORBER KG D18 J04 *DT 2742-868

Measurement of moisture content of flowing solids - 29850B/16

HAYB 31.05.71 HAYASHIBARA BIOCHEM D17 E13 =DS 2226-581

High purity maltose prodn - 01629U/02

* HAYB 30.09.77 HAYASHIBARA SEIBUTS A11 D17 F01 (D16) *DT 2842-855

Prods. based on new alpha-glucane - 30019B/16

* HEMA= 20.12.76 HEMATOLOGY BLOOT TR A96 D22 (A14) *SU -609-524

Soln. for protecting freeze-stored cells of bone marrow - 31013B/16

HENK 02.04.76 HENKEL KG AUF AKTIEN D25 E13 (D22) =US 4110-242

Acylated dihydro-uracil bleach activators - 76011Y/43

HENK 02.09.76 HENKEL KG AUF AKTIEN D21 E21 =GB 1544-587

Hair colouring agents giving wide range of colours - 19950A/11

HENK 11.07.77 HENKEL KG AUF AKTIEN A96 D23 E17 (A25) =FR 2397-188

Clear, stable solns. of oil-soluble perfume oils - 10055B/06

HENK 16.07.77 HENKEL KG AUF AKTIEN D18 E33 =FR 2397-459

Additives for defatting and tanning in leather mfr. - 10088B/06

HENK 01.10.77 HENKEL KG AUF AKTIEN D21 E14 =DT 2744-326

Antiinflammatory agents for cosmetics - 82130A/46

* HENK 03.10.77 HENKEL KG AUF AKTIEN A96 D22 F07 *DT 2744-466

Sanitary tampon - 29896B/16

* HENK 07.10.77 HENKEL KG AUF AKTIEN B05 C04 D15 E11 (B03 C01 D13 D21) *DT 2745-083

1-Hydroxy-alkane-1,1-di:phosphonic acid derivs. - 29922B/16

* HENK 07.10.77 HENKEL KG AUF AKTIEN B03 C04 D15 E11 (C01 D13 D21) *DT 2745-084

5-Keto-piperazine-2,2-di:phosphonic acid derivs. - 29923B/16

* HENK 02.11.77 HENKEL KG AUF AKTIEN A97 D25 E17 (A26 E33 E34) *DS 2748-970

Silicone foam inhibitor-contg. detergent prepn. - 29838B/16

HENR/ 07.07.77 HENRIKSON S A D15 #US 4110-211

Lime water soln. for sewage treatment - 06711A/04

* HITA 12.08.77 HITACHI KK D15 J01 *J5 4030-575

Filter sheet for purifying pond water - 30195B/16

* HITA 22.08.77 HITACHI KK D13 J01 *J5 4033-877

Filtering soln. contg. protein and/or amino acid - 30957B/16

* HITA 22.08.77 HITACHI KK D15 E36 J03 *J5 4033-892

Ozoniser for prodn. of ozone to treat drain and industrial waters - 30970B/16

HITF 01.10.74 HITACHI SHIPBLD ENGG KK D15 J01 =J7 9006-029

Sea water desalination - 37159X/20

HOFF 21.06.74 HOFFMANN-LA ROCHE AG B02 D22 =CH -609-989

3-(Heterocyclylthio methyl) cephalosporins - 01980X/02

HOFF 12.08.77 HOFFMANN-LA ROCHE AG D23 E15 =J5 4032-440

2,2,4-Tri:methyl-cyclopent-4-en-1,3-di:one prepn. - 14605B/08

HOLB/ 02.06.77 HOLBEK K C03 D22 E12 F09 (E31 E32) =DK 7702-451

Wood preservative impregnated cellulose fibres - 87861A/49

* HOLM/ 13.12.73 HOLMQVIST M A D11 *GB 1544-525

Composite baking mould formed of extruded metal sections - 30111B/16

HOWM- 02.06.75 HOWMEDICA INC D21 M26 =CA 1052-137

Dental alloy - 29869X/16

HYCO- 26.09.77 HYCOR CORP D12 =GB 2005-148

Doctor blade cleaning assembly - 29403B/15

IBRA/ 22.03.76 IBRAHIM I E D13 =FR 2397-156

Dehydrated yoghurt and other fermented milk products - 26978A/15

ICIL 24.04.73 IMPERIAL CHEM INDS LTD A96 D21 (A25) =US 4110-184

Dental filling polyurethane fluid compsn. - 77544V/45

ICIL 02.08.77 IMPERIAL CHEM INDS LTD A97 D16 E13 (D17) =SF 7802-372

Enzyme fixed to support - 08018B/05

ICIL 02.08.77 IMPERIAL CHEM INDS LTD A97 D16 E13 (D17) =SW 7808-308

Enzyme fixed to support - 08018B/05

INFL 23.10.73 INT FLAVORS & FRAGR INC D18 E13 =CA 1052-378

Cycloalkyl pyrazinyl ketones and cycloalkyl pyridine ketones - 73928W/44

INSF 25.07.77 INST FRANCAIS DU PETROLE D17 E34 H01 (D16) =BR 7804-257

Extraction of oil by flooding with bio:polymer solns. - 14436B/08

INTT 12.07.76 ITT INDUSTRIES INC D11 =FR 2397-154

Microwave baking partly baked bread rolls - 08604A/05

* ISHI- 11.08.77 ISHIGAKI KIKO KK D15 J09 *J5 4030-679

Removing noxious gases in fluidised layer incinerating furnace - 30203B/16

* ISHI- 11.08.77 ISHIGAKI KIKO KK D15 J09 *J5 4030-680

Suppressing generation of noxious components in sludge incineration - 30204B/16

JAGA 15.05.74 JGC CORP D15 J01 (J08) =CH -609-953

Drying and regeneration of spent active carbon - 80571W/49

* JAGA 16.11.78 JGC-COM ASSSESSOR D16 *BR 7807-507

Prodn. of alcohol by fermentation - B/16

* JAPU/ 20.07.77 CIERO JAPUR C D11 *BR 7704-798

Maize flour roasting equipment - B/16

JOHJ 17.06.77 JOHNSON & JOHNSON B A96 D25 E16 =US 4110-263

Mild cosmetic detergent compsn. esp. for shampoos and baths - 91499A/51

JOHJ 27.10.77 JOHNSON & JOHNSON D21 L02 =BE -871-144

Low temp. maturing dental glaze - 78140A/43

* JOHN- 10.01.77 JOHNSON-RHODES CUL D13 *US 4110-476

Liq. yoghurt contg. large amts. of live organisms - 31503B/16

JOUR/ 12.07.77 JOURDAN L J D14 =FR 2397-163

Onion tailing machine - 09317B/05

* KAKE- 17.08.77 KAKENYAKKA KAKO KK B04 D16 *J5 4032-612

Prepn. of fraction useful e.g. as antidiabetic - 30678B/16

KALI 24.08.77 KALI-CHEMIE AG D25 E33 (E34) =NO 7802-864

Sodium sulphate addn. to sodium aluminium silicate - 18367B/10

* KAME/ 24.12.75 KAMENNYI V I D17 *SU -609-765

Purificn. of neutralised prod. from vegetable hydrolysis - 31117B/16

KANE 24.07.76 KANEBO KK D13 =GB 1544-376

Coffee beverage in sealed press. container - 08643A/05

KANF 11.08.77 KANEGAFUCHI CHEM KK D16 =J5 4032-687

Yeast fermentation appts. - 11920B/07

KATS/ 16.08.77 KATSUNUMA N B04 D16 =J5 4032-611

Oligosaccharide prepd. from Enterobacteriaceae - 18337B/10

KEMA 19.11.69 KEMANORD AB D15 J01 M25 =DS 1958-169

Mercury extraction from water by hydra- - 35589S/21

KEMP/ 00.00.72 KEMPER K D11 =DS 2249-383

Dough portion conveyor system - 34774V/19

KEMP/ 22.03.75 KEMPER K D11 =US 4109-569

Bread dough prepn machine - 77738X/42

* KIGO= 01.09.76 KIEV GORISPOLKOM D15 J01 *SU -610-543

Suspensions dewatering filter press - 31234B/16

* KIKK 08.10.77 KIKKOMAN SHOYU KK D16 *DT 2843-351

Pectin esterase having methyl ester hydrolysing activity - 30037B/16

* KIMM- 16.08.77 KIMMEI INSATSU KK A92 D22 E37 G04 *J5 4033-174

Chemical body warmer giving off heat on shaking - 30762B/16

* KIRS/ 28.04.76 KIRSCHMAN F C D15 *US 4110-170

Domestic water distillation - 31382B/16

KLEE- 16.06.75 KLEEN-RITE/ARUNDALE D15 =CA 1052-482

Purificn of waste water polluted with synthetic detergent - 77622X/42

* KNIU= 19.05.76 KNIUI COAL RES DES D15 J01 *SU -610-540

Deep loosening of charge in water filtering units - 31231B/16

* KOBA/ 16.08.77 KOBAYASHI K D12 *J5 4032-659

Fried meat having excellent taste, flavour and freshness - 30704B/16

KONN 15.10.75 GIST-BROCADES NV D13 =DS 2646-672

Prodn. of cocktail snacks - 27151Y/16

KONN 20.07.77 GIST-BROCADES NV A81 B04 D25 (A96 A97 D16) =BR 7804-573

Enzyme particles resistant to powdering under pressure - 06068B/04

* KRAT 06.10.77 BIZERBA-WERKE KRAUT KG D16 *DT 2744-950

Grape processing system - 29917B/16

KROF/ 24.03.76 KROFTA M D15 =GB 1544-552

Waste water clarification by dissolved air flotation - 36050Y/20

KROF/ 21.04.77 KROFCHAK D D16 L02 M11 (M25) #US 4110-212

Waste liquids and sludge treatment - 88321A/49

KRPP 04.06.71 KRUPP F GMBH D16 =DS 2127-747

Biological fermentation appts - 81473T/52

* KRUN 10.10.77 KRAFTWERK UNION AG D15 K07 *DT 2745-544

Treating radioactive effluent by evaporation - 29947B/16

* KUBI 19.08.77 KUBOTA KK D15 *J5 4033-365

Biological (de)nitrification of waste water - 30837B/16

KURE 25.02.77 KUREHA KAGAKU KOGYO D16 (D13) #DS 2708-112

Microbial food prepd. by culturing Methylomonas probus - 26299Y/15

* KURE 22.09.77 KUREHA KAGAKU KOGYO D13 E17 J01 *DT 2840-791

Ethylene adsorbent of active carbon - 29978B/16

* KURO/ 12.08.77 KUROZAKI S D13 E33 *J5 4032-647

Calcium-enriched fermented soybean prepn. - 30701B/16

* KURS 24.05.77 KURARAY KK A81 D21 G03 (A14 A96) *J5 3144-939

Dental adhesive compsn. contg. organo-phosphorus gps. - 30180B/16

KURS 30.09.77 KURARAY KK D13 (D12) =GB 2005-187

Stable, elastic, chewable fibrous milk protein meat substitute 28172B/15

* KYOK- 17.08.77 KYOKUTO SHIBOSAN KK D23 E17 *J5 4032-510

Refined fatty acid prepn. from fats and oils - 30607B/16

KYOW 21.08.75 KYOWA HAKKO KOGYO C D13 E17 (D16 E16) =GB 1544-499

Preservative used in bread and cake prodn. - 24514Y/14

* KYOW 19.08.77 KYOWA FERMENTATION KK D13 (D16) *J5 4032-644

Deodorising proteins esp. soybeans - 30699B/16

* KYOW 19.08.77 KYOWA FERMENTATION KK D13 (D16) *J5 4032-645

Deodorising proteins esp. soybeans - 30700B/16

* LANC- 28.02.77 LANCASTER COLONY CO D23 *US 4110-066

Oil lamp with floating wick - 31343B/16

LANE- 28.02.67 LAN-ELEC LTD D13 =DS 1657-218

Rotary blade food slicing machine withsharpening stones in - 41929R/

LANK 07.11.75 LANKRO CHEMICALS LTD A97 D15 E17 H03 (E14) =US 4110-213

Nonflammable, nontoxic compsn. for dispersing oil spillages 56148Y/32

* LECZ/ 00.00.76 LECZKOWSKI K D15 J08 *DT 2745-700

Helium filled system for ambient heat recovery - 29957B/16

*LEEN= 24.12.76 LENGD ENG CONS RES A88 D15 J01 *SU -610-541
Self-cleaning filtering unit for water purification - 31232B/16

*LEKR= 01.04.76 LENGD KRASNY KYBORZH D25 E11 *SU -609-755
2-Alkyl-1-aminoethyl-imidazoline hexa-fluorosilicate - 31108B/16

*LENI 23.10.75 LENGD LENSOVET TECH D18 *SU -609-766
Mineral oil-based compsn. for greasing fur pelts - 31118B/16

*LERO= 23.10.75 LENGD ROT-FRONT FUR D18 *SU -609-766
Mineral oil-based compsn. for greasing fur pelts - 31118B/16

LIGG 01.03.76 LIGGETT GROUP INC A88 D18 =US 4109-666
Filter tip cigarette - 61144Y/35

LUCO- 23.01.76 LUCO-TECHNIC GMBH C03 D13 J04 (J02) =GB 1544-304
Mixing of granular materials with treatment liquids - 36310Y/21

*MAPL/ 02.02.77 MAPLES P D D15 J01 *US 4110-219
Reverse osmosis water purifier - 31407B/16

*MARI- 16.09.77 MARINA SEAFOODS CON D12 *GB 2005-128
Transportation and storage of fresh fish - 30117B/16

*MARI/ 15.07.77 MARIEL C B04 D16 *FR 2397-457
Detection of bacteria in samples - 30092B/16

MASW 01.10.77 MASCH BUCKAU WOLF D17 =DT 2744-297
Scalding vessel for plasmolysis of sliced sugar beet - 08063B/05

*MATS/ 09.08.77 MATSUI M D15 *J5 4030-658
Treating waste water with ozone - 30200B/16

MAYM/ 12.11.71 MAY M A D15 =CA 1052-287
Filter - for water includes serially arranged - 28523U/20

MEDI- 12.07.77 MEDITSINSKA AKADEMI B04 D16 #FR 2397-458
Live attenuated mumps vaccine - 76561A/43

MEDK 11.10.77 MEDICOR MUVEK D14 (D22) #DT 2745-567
Cold chamber esp. meat store, sterilised by negative ions - 20322B/11

MERA- 29.09.77 MERAK SPA A94 D18 F01 (A17) =DT 2842-306
Olefin polymer fibre cigarette filter - 28262B/15

*MERI 28.04.75 MERCK & CO INC D16 J04 *US 4110-223
Appts. for recovering embryos from eggs - 31409B/16

MERI 01.08.77 MERCK & CO INC B04 D16 =SF 7802-204
Antigenic meningococcal polysaccharide with high mol. wt. - 82019A/45

MERK/ 16.05.74 MERKL G G D15 E36 J01 #CH -609-884
Pollutant removal from fluid streams - 73298V/42

MESP 29.07.74 MEDICAL SPECIALITIES INC A96 D22 =CA 1052-214
Protective pad for elbow or heel - 14723X/08

METG 17.10.74 DRAVO CORP D15 =CA 1052-480
Treating waste water from e.g. slaughter houses, tanneries - 34267X/19

*METG 11.10.77 METALLGESELLSCHAFT AG D23 E17 *DT 2745-672
Linear hexane free from aromatics - 29954B/16

MICA- 08.01.76 MICARNA AG D12 =US 4109-347
Meat cleaving machine to split animal carcase - 32822Y/19

MICH/ 18.12.75 MICHAELS E B D22 E16 =CA 1052-272
Antimicrobial compsn. contg. acyl-betaine and amine oxide - 19587A/10

MICH/ 18.12.75 MICHAELS E B D21 E16 #CA 1052-273
Antimicrobial active against topical bacteria, fungi and yeast - 91768Y/51

MICH/ 18.12.75 MICHAELS E B D21 E16 =CA 1052-274
Antimicrobial active against topical bacteria, fungi and yeast - 91768Y/51

MILE 15.08.77 MILES LABORATORIES INC B04 D16 J04 =J5 4032-382
Device for liq. control soln. prepn. - 14632B/08

MILE 07.10.77 MILES LABORATORIES INC D13 (D12) =DT 2840-557
Simulated bacon product formed of fat and lean layers - 14203B/08

MILE 07.10.77 MILES LABORATORIES INC D13 (D12) =GB 2005-127
Simulated bacon product formed of fat and lean layers - 14203B/08

*MITC 16.08.77 MITSUI PETROCHEM IND KK A41 D15 E17 *J5 4031-957
Treating hydroxy-acetone contg. waste water - 30448B/16

MITC/ 22.03.74 MITCHELL J H D13 =CA 1052-172
Dried processed peanut products - 65975W/40

*MITK 19.08.77 MITSUI TOATSU CHEM INC A95 D15 *J5 4033-364
Waste water treatment by coagulating solids - 30836B/16

MITN 14.01.74 MITSUBISHI GAS CHEM IND B04 C03 D16 (D13) =IT 1028-323
Yeasts prodn. by aerobically cuultivating S aganobii - 49731W/30

*MITN 10.08.77 MITSUBISHI GAS CHEM IND D16 *J5 4032-688
Yeast mycelium prodn. by incubating specific strain - 30709B/16

*MITQ 12.08.77 MITSUBISHI ELECTRIC CORP D15 *J5 4031-956
Purificn. of waste water from human waste treatment - 30447B/16

*MITQ 17.08.77 MITSUBISHI ELECTRIC CORP D15 *J5 4032-170
Sludge treatment device - 30501B/16

*MITR 10.08.77 MITSUBISHI RAYON KK D15 J01 M25 *J5 4030-659
Treating oily waste water contg. suspended solids - 30201B/16

*MITR 18.08.77 MITSUBISHI RAYON KK A97 D15 J01 *J5 4033-289
Adsorbent material for noxious substances etc. - 30820B/16

*MITU 16.08.77 MITSUBISHI CHEM IND KK A97 D15 J01 *J5 4031-960
Dewatering of organic sludge - 30450B/16

*MITU 18.08.77 MITSUBISHI CHEM IND KK A91 D15 J01 (A13) *J5 4033-286
Polystyrene type anion exchange resin regeneration - 30817B/16

*MITU 23.08.77 MITSUBISHI CHEM IND KK A91 D15 J01 *J5 4033-884
Regenerating basic anion exchange styrene resins - 30964B/16

MLCW 15.07.77 MALLINCKRODT INC A96 D21 E17 (A14 E14) =FR 2397-186
Nail varnish compsns. - 09322B/05

MNKN 30.09.77 MINAMINIHON RAKUNO KOGYO D13 (D12) =GB 2005-187
Stable, elastic, chewable fibrous milk protein meat substitute - 28172B/15

MOCH= 04.01.72 MOSC CHAMPAGNE WKS D16 =DS 2300-088
Continuous sparkling wine prodn - 44497U/32

*MOFO= 30.06.76 MOSC FOOD IND TECH D16 *SU -609-528
Flowing liquid foodstuffs heat steriliser - 31017B/16

*MOFO= 05.07.76 MOSC FOOD IND TECHN D11 *SU -610-003
Bread testing appts. - 31193B/16

MOLK- 15.07.77 MOLKEREI MULLER A D13 =FR 2397-157
Prepn. of cheese from conc. milk in single vessel - 84150A/47

*MOME= 21.12.76 MOSC MEAT DAIRY IND D12 *SU -609-526
Meat mincer with sloping screw feeder - 31015B/16

*MOMI 10.08.77 MORINAGA & CO LTD D13 *J5 4032-643
Easily-boiled unpolished rice prepn. - 30698B/16

MORG 19.07.75 MORINAGA & CO LTD D11 =US 4110-482
Continuous pastry rolling machine - 06160Y/04

MOST 03.12.75 MOSCOW STEEL ALLOYS INST A97 D15 #CA 1052-224
Coagulant prodn. for water purificn. from alunite - 34686Y/20

*MSHV/ 05.01.77 MSHVIDOBADZE G N D22 *SU -610-528
Prescriptions disinfecting cabinet - 31222B/16

*MUKH/ 21.06.76 MUKHIN A A D13 *SU -610-508
Aq. caseinate concentrate prodn. - 31216B/16

MULL/ 13.05.74 MULLER H D16 J01 =US 4110-089
Centrifugal foam separator - 55712W/34

MUNC- 03.10.77 MUNCHMEYER & CO D12 =NL 7809-802
Machine to cut open and clean stomach of chickens, etc. - 11937B/07

NAAR 02.07.75 NAARDEN INT NV C03 D22 =GB 1544-221
Solid gels for controlled release of volatile cpds. - 06104Y/04

*NAKA- 10.08.77 NAKANO SUMISE KK D13 *J5 4032-651
Food dressing based on plums - 30702B/16

*NAKA/ 11.04.77 NAKAMURA G D15 *US 4110-217
Continuous sewage sludge heat treatment appts. - 31405B/16

*NARU- 13.05.77 NARUSE FERMENTATION D13 (D16) *US 4110-477
Storage stable, non ammoniacal Natto - 31504B/16

NATR 06.09.77 NATIONAL RES DEV CORP C03 D13 =DK 7803-942
Treating fish to produce auto-immune response - 22497B/12

NEST 31.07.75 SOC PROD NESTLE SA D13 =CH -609-535
Butter substitutes and margerine type food prods. - 05602Y/04

*NIAB- 16.08.77 NIPPON ABCO KK D15 F06 *J5 4031-969
Recovering dye from dyeing waste water - 30454B/16

NICA 14.01.74 NIPPON CARBIDE KOGY KK A97 D15 =IT 1028-353
Effluent treatment with melamine resin - 49760W/30

*NIDR- 30.07.77 NIPPON DRY CHEM KK D15 E36 J01 *J5 4031-083
Treatment of waste ozone scavenger - 30311B/16

*NIDS 02.08.77 NIPPON DENSHI ZAIRY D15 E33 J01 *J5 4031-084
Regeneration of zeolite after absorption of ammoniacal nitrogen - 30312B/16

NIIG 16.07.77 NIIGATA ENG KK D12 =FR 2397-160
Heat sterilisation of blood powder - 06436B/04

NIPS 15.08.77 AGENCY OF IND SCI B05 C03 D23 E14 =J5 4032-428
Oxidn. of alkoxy-toluene cpds. to aldehyde and alcohol - 50047A/28

NIPS 15.08.77 NIPPON SODA KK B05 C03 D23 E14 =J5 4032-428
Oxidn. of alkoxy-toluene cpds. to aldehyde and alcohol - 50047A/28

*NIRA 10.08.77 UNITIKA KK A88 D16 F04 J01 (A11 A14 D14) *J5 4030-574
Filter material - 30194B/16

*NIUS 11.08.77 NIPPON SUISAN KAISHA D12 *J5 4032-665
Seasoned fish slices prepn. - 30705B/16

NMHB 29.08.77 NORDISCH MASCH R BAADER D12 =DK 7803-491
Fish filleting appts. - B/15

NMHB 08.09.77 NORDISCH MASCH R BAADER D12 =SW 7713-012
Fish position device - 22248B/12

NMHB 10.09.77 NORDISCH MASCH R BAADER D12 =SW 7713-013
Fish filleting machine - 42333A/24

NMHB 10.09.77 NORDISCH MASCH R BAADER D12 =SW 7713-014
Fish processing machine feeder - 38621A/22

*NMHB 27.01.78 NORDISCH MASCH R BAADER D12 *DS 2803-478
Fish skinning machine - 29840B/16

*NONB= 22.07.76 NON-BLACK SOIL AGRI D15 J01 *SU -610-564
Hydrocyclone battery for clarification of aq. suspensions - 31251B/16

*NOSA 17.08.77 NIPPON NOSAN IND KK D21 *J5 4032-616
Bath salts compsn. used e.g. for skin care - 30681B/16

*NOSA 18.08.77 NIPPON NOSAN IND KK D21 *J5 4032-617
Bath salts compsn. used e.g. for skin care - 30682B/16

NOVO 28.02.73 NOVO INDUSTRI A/S D16 =US 4110-163
Beta-glucanase prepns. - 63489V/36

OLIN 12.08.77 OLIN CORP A41 C04 D15 E16 (E35) =BR 7802-612
Hydrolysing urea contained in effluents - 45658A/25

OLIN 12.08.77 OLIN CORP A41 C04 D15 E16 (E35) =J5 4031-963
Hydrolysing urea contained in effluents - 45658A/25

ONTA 08.11.76 ONTARIO RES FOUND D15 =GB 1544-341
Aq. effluent purification - 38768A/22

OREA 15.10.74 L'OREAL SA D21 (D16) =CH -609-862
Cosmetic prepns. contg. superoxide-dismutase enzyme - 31861X/18

• OREA 18.05.77 L'OREAL SA D21 E19 *FR 2397-185
Non:irritant eye make/up remover - 30070B/16

OREA 12.07.77 L'OREAL SA A96 D21 =FR 2397-184
Water-in-oil emulsion used in cosmetic compsns. - 04035B/03

• OSOL 16.08.77 OSAKA AEROSOL KOGYO KK D21 G04 *J5 4032-185
Aerosol compsn. contg. water, alcohol and liquefied petroleum gas - 30515B/16

OXOI- 22.07.77 OXOID LTD D16 #DT 2832-166
Dispensing array of discs on petri dish - 08517B/06

PASE 28.06.75 PASSAVANT W MICHELBACHER D15 J01 =CH -609-574
Filter press plate with interplate buffer lug - 23977Y/14

PEAB- 13.05.75 PEABODY GALION CORP D15 J02 #CA 1052-481
Air bubble diffuser esp for sewage treatment - 37975X/20

PETR 19.07.76 VEB PETROCHEM SCHWEDT D16 H04 =GB 1544-374
Hydrocarbon oil emulsion biomass separation - 79492Y/45

PETR 16.12.76 VEB PETROCHEM SCHWEDT D16 H04 (D13) =GB 1544-569
Edible protein prodn. from fermentation of (N) paraffins - 79493Y/45

PETZ- 26.09.77 MASCH PETZHOLDT J S D13 =NL 7809-566
Continuous cocoa paste roasting process - 08081B/05

PHIG 23.04.76 PHILIPS ROXANE INC B04 C03 D16 =US 4110-433
Prodn. of attenuated equine rhinopneumonia virus - 75892Y/43

PHIM 20.10.76 PHILIP MORRIS INC D18 =GB 1544-350
Synthetic smoking material for mixing with tobacco - 31816A/17

PHIM 08.08.77 PHILIP MORRIS INC D18 =SF 7802-417
Swelling tobacco by impregnating with liquid carbon di:oxide - 87871A/49

• PIEP- 03.05.76 PIEPHO ABWASSERTECH D15 J01 *GB 1544-606
Treatment of used emulsions - 30116B/16

PIER/ 06.11.72 PIERRET C J B04 D21 =CH -609-863
Beauty treatment - 41100U/29

PLAC 24.05.76 MAX-PLANCK GES WISSENSCH B04 D16 =US 4110-320
Proteins e.g. enzymes separation and fractionation - 88395Y/50

• POLA = 21.01.77 POLAR MARINE FISHIN D12 *SU -610-503
Fish-orienter with horizontally oscillating working surface - 31211B/16

POLL- 24.07.74 POLLOCK INT LTD D16 =US 4110-480
Improved brewing worts by treating malt etc with polar org cpds - 12450X/07

• POTA = 28.12.76 POTATOE FOODS RES D13 *SU -610-510
Non-caking, dried potato granules prepn. - 31218B/16

• PRBB 15.09.76 PREBBLES MEDICAL LTD B07 D22 *GB 1544-260
Sterilisation of pharmaceuticals in flexible containers - 30102B/16

PROC 11.05.73 PROCTER & GAMBLE CO D25 =CA 1052-221
Detergent compsn contg. aluminosilicate ion exchanger - 82595V/48

PROC 11.01.74 PROCTER & GAMBLE CO A97 D25 E19 F06 =IT 1028-306
Liquid fabric softener compsn. - 49666W/30

PROC 18.01.74 PROCTER & GAMBLE EU A97 D15 E19 =IT 1028-452
Spray-dried non-ionic detergent with controlled granule density - 50937W/31

PROC 25.02.74 PROCTER & GAMBLE CO D13 =US 4110-255
Beverage carbonator - 59128W/36

PROC 29.03.74 PROCTER & GAMBLE CO A96 D22 F07 =IT 1028-453
Composite absorbent material for disposable nappy - 52379W/32

• PROC 21.05.74 PROCTER & GAMBLE CO A96 D21 *US 4110-083
Abrasive compsn. esp. for dentifrice - 31351B/16

PROC 17.07.74 PROCTER & GAMBLE CO D13 =CA 1052-171
Rapid dissolving dry beverage compsn - 03792X/02

• PROC 04.12.74 PROCTER & GAMBLE CO D13 *US 4110-485
High sheen roast and ground coffee flakes - 31509B/16

PROC 27.12.74 PROCTER & GAMBLE CO D22 =CA 1052-334
Mfg. tampons for feminine hygiene - 83610X/45

PROC 06.01.75 PROCTER & GAMBLE CO A97 D25 E19 =CA 1052-223
Detergent compsns. active against fatty deposits - 56063X/30

PROC 30.05.75 PROCTER & GAMBLE CO D22 F09 =CA 1052-158
Two ply tissue paper has plies separated in distinct zones - 92423X/50

PROC 08.03.76 PROCTER & GAMBLE CO A97 D25 E19 (A25) =US 4110-262
Builder free stable conc. liq. washing agents - 64946Y/37

• PROC 02.11.76 PROCTER & GAMBLE CO A23 D22 (A96) *US 4110-276
Pharmacologically acceptable stable resilient polyester foam - 31432B/16

PROC 01.06.77 PROCTER & GAMBLE CO D25 E37 =J5 4033-506
Detergent tablet esp. for automatic dishwashing machine - 88222A/49

• PROC 27.06.77 PROCTER & GAMBLE CO D25 E37 (E14 E17) *J5 4011-107
Laundry detergent compsn. - 30185B/16

PROC- 11.10.76 PROCESS ENG CO D16 =FR 2397-215
Foam separator at outlet of fermentation vessel - 21639A/12

• PVBA- 11.12.78 PVBA CHEMICALS D12 *BE -872-658
Preserving freshly slaughtered meat - 29769B/16

QUAK 26.09.77 QUAKER OATS CO C02 D13 E13 (C03) =NL 7808-581
Methyl-pyrid-2-yl-methyl mercaptan derivs. - 14177B/08

• REAP- 04.10.77 LAB RECH API B04 D16 *GB 2005-410
Rapid identification of Streptococcus bacteria - 30151B/16

• REFR = 22.12.76 REFRIG IND RES INST D14 *SU -609-939
Deep freezing food products - 31178B/16

REGC 23.09.77 UNIV OF CALIFORNIA B04 D16 =DT 2825-595
Purifying nucleotide sequences for insertion into microorganisms 80247A/45

RESE 31.08.72 RESEARCH CORP B04 D16 =CA 1052-268
Specific neisseria gonorrhoeae antigens - 20506V/11

RHEH 26.08.77 VKI-RHEINHOLD & MAH D15 H08 J01 =NO 7800-486
Removal of oil from contaminated surfaces - 20153B/11

RHON 01.03.74 RHONE-POULENC INDUSTRIES B04 C03 D16 =CA 1052-308
Antibacterial and anticoccidial antibiotic 30504 RP - 60824W/37

RHON 24.01.77 RHONE-POULENC INDUSTRIES A97 D13 E23 (A12 D16) =GB 1544-402
Purificn. of aq. anthocyanin solns. - 55429A/31

RHON 01.07.77 RHONE-POULENC INDUSTRIES D13 =BR 7804-189
Drying process for heat sensitive feedstuffs - 05449B/03

RHON 25.07.77 RHON-POULENC INDS D17 E34 H01 (D16) =BR 7804-257
Extraction of oil by flooding with bio:polymer solns. - 14436B/08

• RHON 07.10.77 RHONE-POULENC INDUSTRIES B03 C02 D16 *DT 2843-702
Antibiotic 37454 RP for control of coccidiosis - 30048B/16

RICT 25.08.77 RICHTER GEDEON VEGY C03 D15 (D13 D15) =NO 7802-877
Sewage sludge used to mfr. nutritious animal feed - 16007B/09

RITP 15.03.76 SYBRON CORP D15 =GB 1544-557
Sewage settling tank with floating siphon system - 97885X/52

RODI- 18.08.76 RODIGER AG D15 J01 =CH -609-573
Phase separation of watery suspensions - 16177A/09

ROHM 10.12.76 ROHM & HAAS CO A18 D22 J04 M25 (D17) =FR 2397-428
Crosslinked boron-contg. resin - 44395A/25

RUGG- 30.05.75 RUGGLI K AG D22 F04 =US 4109-354
Tampon compressing system - 94630X/51

• SAAR/ 12.09.77 SAARI R D15 J01 *DT 2747-582
Evaporation of liquids in multi-effect system - 29959B/16

• SAGA 18.08.77 SAGAMI CHEM RES CENTRE D23 E15 *J5 4032-456
Jasmonic acid ester derivs. prepn. - 30576B/16

• SAGA 18.08.77 SAGAMI CHEM RES CENTRE D23 E15 *J5 4032-457
2-Alkyl-3-hydroxy-cyclopentyl acetic acid ester prepn. - 30577B/16

• SAGA 18.08.77 SAGAMI CHEM RES CENTRE D23 E13 *J5 4032-471
8-Alkyl-3-oxo-2-oxa-bi:cyclo(3,2,1)octane - 30586B/16

SAKB 12.08.77 OTSUKA KAGAKU YAKUHIN D23 E15 =J5 4032-442
Novel 2-cyclopentenone derivs. - 14430B/08

SAKB 12.08.77 OTSUKA KAGAKU YAKUHIN D23 E15 =J5 4032-443
Novel 2-cyclopentenone derivs. - 14430B/08

SAKB 12.08.77 OTSUKA KAGAKU YAKUHIN D23 E15 =J5 4032-444
2-Cyclopentenone derivs. with jasmine smell - 14429B/08

SAKB 12.08.77 OTSUKA KAGAKU YAKUHIN D23 E15 =J5 4032-445
Cyclopentanol derivs. - 14431B/08

SAKB 12.08.77 OTSUKA KAGAKU YAKUHIN D23 E15 =J5 4032-446
Cyclopentanol derivs. - 14431B/08

• SAKB 12.08.77 OTSUKA KAGAKU YAKUHIN D23 E15 *J5 4032-447
2-Cis:2:pentenyl cyclopentanone derivs. prepn. - 30568B/16

• SAKB 12.08.77 OTSUKA KAGAKU YAKUHIN D23 E15 *J5 4032-448
2-Cis:2:pentenyl cyclopentanone derivs. prepn. - 30569B/16

• SAKB 12.08.77 OTSUKA KAGAKU YAKUHIN D23 E15 *J5 4032-449
2-n-Pentyl cyclopentanone derivs. prepn. - 30570B/16

• SAKB 12.08.77 OTSUKA KAGAKU YAKUHIN D23 E15 *J5 4032-450
2-n-Pentyl-cyclopentanone derivs. prepn. - 30571B/16

• SAKB 12.08.77 OTSUKA KAGAKU YAKUHIN D23 E15 *J5 4032-451
2-n-Pentyl-cyclopentanone derivs. prepn. - 30572B/16

SAKB 12.08.77 OTSUKA KAGAKU YAKUHIN D23 E15 =J5 4032-452
2-(2-Pentynyl)-cyclopentanol derivs. - 14432B/08

• SAKB 12.08.77 OTSUKA KAGAKU YAKUHIN D23 E15 *J5 4032-453
2-Cis:2:pentenyl cyclopentanone derivs. prepn. - 30573B/16

• SAKB 12.08.77 OTSUKA KAGAKU YAKUHIN D23 E15 *J5 4032-454
2-Cis:2:pentenyl cyclopentanone derivs. prepn. - 30574B/16

• SAKB 12.08.77 OTSUKA KAGAKU YAKUHIN D23 E15 *J5 4032-455
2-Cis:2:pentenyl cyclopentanone derivs. prepn. - 30575B/16

• SALV- 07.10.77 SALVE SA D22 *DT 2840-667
Surgical bandage pack - 29976B/16

SANK- 15.08.77 SANKO KAGAKU KOGYO B05 C03 D23 E14 =J5 40
428
Oxidn. of alkoxy-toluene cpds. to aldehyde and alcohol - 50047A/2

SANO 13.07.77 SANDOZ SA B04 C03 D16 =FR 2397-195
Isolating antigenic glyco protein from para myxovirus - 04043B/03

• SATO/ 10.08.77 SATO T D13 *J5 4032-655
Dessert comprising diced gelled agar - 30703B/16

SCHA/ 14.07.77 SCHANZE R C03 D13 =FR 2397-161
Dairy by/products, e.g. whey, conversion into animal feed - 10073

• SCHM/ 05.10.77 SCHMIDT H H D21 *DT 2744-754
Determining contact points on artificial teeth - 29907B/16

SCHR/ 26.03.75 SCHREIBER A D15 =CH -609-653
Sewage aerator tube - 76021X/41

CHW- 28.07.77 SYNTHESEWERK SCHWAR A96 D22 (A25) =SF 7802-324
Medical dressing prepd. from soft polyurethane foam - 86171A/48
E 05.03.74 SCIENCE UNION & CIE B04 D16 =CA 1052-306
Neuraminidase and haemagglutinin influenza viral proteins - 42219W/38
MZ 19.09.76 SCM CORP D13 *US 4110-484
Continuous flow prepn. of acid set imitation cheese - 31508B/16
MZ 19.08.77 SCM CORP D23 E17 #J5 4032-407
Acyclic terpene alcohols prepn. - 81132Y/45
MZ 09.09.77 SCM CORP D23 *US 4110-394
Treatment of clay used to bleach oils - 31461B/16
W- 20.04.77 SEEWER AG D11 =DS 2718-383
Dough strip winding up device - 82342A/46
RO- 27.04.76 LAB SEROBIOLOGIQUES D22 E14 =FR 2397-387
(4,4')-Bis formyl-polyhalo-diphenoxy alkanes - 77959Y/44
IO 25.08.77 SHIONOGI KK B02 C02 D22 E13 =NO 7802-886
3-Thiadiazolyl-thiomethyl-oxa-de-thia-cephem derivs. - 01945B/02
IS 30.01.76 SHISEIDO KK D23 E17 =US 4110-426
Perfume fragrance modification - 56056Y/32
OO/ 27.12.60 SHOOKHOV A I D13 *SU -610-565
Smoked cheese prodn. - 31213B/16
OU/ 17.07.75 SHOLIS KU & YU D13 *SU -610-507
Ice cream packaging metering unit - 31215B/16
OW 17.08.77 SHOWA DENKO KK D15 *J5 4032-466
Activated sludge treatment method - 30453B/16
IA= 04.01.76 SIBE DAIRY IND RES INST D13 *SU -609-527
Continuous food grade caseinate soln. prodn. - 31006B/16
R 25.03.74 SOC ITALIANA RESINE SPA D25 E34 G01 (E32) =J7 9006-
9
Combined prodn. of titanium dioxide and tripolyphosphate - 69199W/42
RY= 31.08.77 SKRYABIN HELMINTHOL B04 C03 D16 #DK 7703-881
Isolation of Trichinella larvae - 72989A/40
AM 12.07.77 SNAMPROGETTI SPA D14 =FR 2397-155
Sterilising milk and other liquid foods with hydrogen peroxide - 04334B/03
AM 14.09.77 SNAMPROGETTI SPA D15 =DT 2840-066
Multistage evapn. plant to desalinate sea-water, etc. - 18035B/10
AM 05.10.77 SNAMPROGETTI SPA C03 D16 (D13) =DT 2843-567
Novel strain of Candida valida yeast - 27860B/15
AM 05.10.77 SNAMPROGETTI SPA C03 D16 (D13) =GB 2006-301
Novel strain of Candida valida yeast - 27860B/15
AM 13.10.77 SNAMPROGETTI SPA D16 J04 *BE -871-253
Radial flow catalytic enzyme reactor for isomerisation of fructose - 29762B/16
EE- 07.10.77 LANDUSTRIE SNEEK D15 *DT 2842-661
Sewage aeration system - 30014B/16
DA- 29.07.77 SODASTREAM LTD D15 =SF 7802-353
Portable water carbonator for sparkling drinks - 84161A/47
RE- 05.03.75 SOREAT SA D13 =CH -609-840
Coating confectionery based on gum arabic - 81519W/50
AM 06.06.75 STAMICARBON BV D15 H05 J03 =GB 1544-494
Electro flotation of suspended material from effluent - 09302Y/06
AM- 22.12.77 STAMAG STADLAUER AG D11 *BE -872-743
Bakery prod. partic crisp biscuit with high bran content - 29793B/16
BR 19.04.77 STANDARD BRANDS INC A91 D16 (A18 A97 D17) =BR
02 346
Agglomerated fibrous ion-exchange cellulose - 74435A/42
BR 19.04.77 STANDARD BRANDS INC A91 D16 (A18 A97 D17) =US
10-164
Agglomerated fibrous ion-exchange cellulose - 74435A/42
EI 05.10.77 STEINECKER A MASCH GMBH D16 J02 *DT 2744-854
Cleaning system for tanks and vessels - 29914B/16
ER 06.09.77 STERLING DRUG INC B05 C03 D22 (B03 C02) =DK 7803-
8
4-Benzyl or cyclohexyl or 2-furfuryl heptane-3,5 dione derivs. - 30314B/10
ER 06.09.77 STERLING DRUG INC B05 C03 D22 (B03 C02) =SW 7809-
0
4-Benzyl or cyclohexyl or 2-furfuryl heptane-3,5 dione derivs. - 30314B/10
G/ 30.09.77 STIGEBRANDT A D15 =DT 2842-623
Mobile sludge treatment appts. - 28278B/15
W 01.09.77 STILLE WERNER AB D22 =DK 7803-814
Easy removal of tubular surgical splint from encased limb - 01976B/02
W 01.09.77 STILLE WERNER AB D22 =NO 7802-763
Easy removal of tubular surgical splint from encased limb - 01976B/02
LZ 29.09.77 GEBRUDER SULZER AG A88 D14 J01 =NL 7804-119
Press filter of moving belt type - 28267B/15
MB 22.11.74 SUMITOMO BAKELITE KK A97 D13 =J7 9005-830
Protein type moulding composition - 52873X/28
MO 28.06.72 SUMITOMO CHEMICAL KK A91 D15 J01 =CH -609-885
Heavy metal-complexing agents - 04413V/03
MO 11.07.77 SUMITOMO CHEMICAL KK B04 D16 =FR 2397-193
Potent antitumour and immunostimulating substance - 04521B/03
MQ 20.08.77 SUMITOMO METAL IND KK A88 D15 H03 J01 *J5 4033-
Sepg. oil from water - 30966B/16
NO 22.03.76 SUN OIL CO PENNSYLV D15 H05 *US 4110-215
Liq. level control in sepn. tank - 31403B/16
RO= 20.12.76 SVERD ROCMYASOMOLRE D18 *SU -609-767

SVTR- 01.12.75 SVENSKA TRAFORSKNIN D15 F09 J04 =US 4110-044
Measurements of suspended solids in flowing liq. - 40330Y/23

TAIS 09.07.74 TAISHO PHARMACEUT KK B04 D16 =CH -609-729
Culturing TH-743 strain of Bacillus - 19363X/11
•TAKA/ 12.08.77 TAKASAKI N D13 E34 (E12) *J5 4032-671
Edible salt enriched with calcium salt of organic acid - 30707B/16
TAKE 15.05.74 TAKEDA CHEMICAL INDS D15 J01 (J08) =CH -609-953
Drying and regeneration of spent active carbon - 80571W/49
TAKE 17.10.74 TAKEDA CHEMICAL IND KK D18 =US 4109-663
Tobacco products and tobacco substitutes - 32268X/18
•TAKE 18.08.77 TAKEDA CHEMICAL IND KK D15 E36 J01 *J5 4033-273
Activated carbon prodn. - 30823B/16
•TAKE/ 19.08.77 TAKESHITA S D16 *J5 4032-690
Culturing photosynthesisable fine algae - 30711B/16
TANA 12.02.73 TANABE PHARMACEUTICAL KK B05 D16 =CH -609-537
Nutritive oil in water emulsion - 52009V/29
TANA 12.07.77 TANABE SEIYAKU KK A96 B04 D16 E19 (B05) =FR 2397-422
Aminoacylase immobilised on water-insoluble tannin preparation - 08306B/05
TATL 28.05.76 TATE & LYLE LTD A11 D16 =US 4110-162
Alginate-type polysaccharides by culture of Azotobacter vinelandii - 68908Y/39
TEHE 26.12.73 TEIJIN HERCULES CHE KK A41 D15 E14 =IT 1028-051
High chem. oxygen demand of aq. solns contg org cpds reduced - 46525W/28
TEIJ 19.08.77 TEIJIN KK A97 D15 =J5 4033-363
Emulsion breaker with organic hydrophobic hydrophilic cpd. - 36934A/2
•TELN- 19.08.77 TELNITE KK A91 D15 J01 M25 *J5 4033-284
Regenerating humic acid-type heavy metal ion exchange materials - 30815B/16
•TELN- 19.08.77 TELNITE KK A91 D15 J01 M25 *J5 4033-285
Regeneration of heavy metal ion exchange material - 30816B/16
TENC 12.07.77 TENNECO CHEMICALS D22 E13 G02 =BR 7804-399
Aq. pigment dispersion contg. polyoxymethylene oxazolidine biocide - 82193A/46
TENC 12.07.77 TENNECO CHEMICALS D22 E13 H08 =FR 2397-452
Inhibiting microbial growth in functional fluid - 82191A/46
TERE- 15.08.77 TECHN RES AFFILIATE B04 D16 #J5 4032-618
Rheumatoid factor immuno-agglutination detection - 18133B/10
TEVI- 24.01.75 TEVIC INT BV A96 D22 F07 =GB 1544-434
Body fluid absorbing sheet - 60120X/32
TEXC 11.08.77 TEXACO DEV CORP A25 D25 E16 A97 =DT 2841-292
Amphoteric surfactants having good solubility at isoelectric point - 18033B/05
•THIE/ 13.07.77 THIERION G D14 *FR 2397-227
Compacting machine for vegetable prod. esp. fibrous fodder - 30076B/16
THOM/ 25.02.74 THOMAS A A96 B04 D21 (D22) =CA 1052-307
Glyco protein and mucopolysaccharides extraction - 46135W/28
TIIC- 07.01.74 TII TELECOM IND INC D15 =IT 1028-210
Tertiary treatment of waste water with ozone and ultrasonics - 34199W/21
•TOAE- 22.08.77 TOYO AEROSOL KOGYO D21 E19 G04 *J5 4033-880
Aerosol e.g. antiperspirant prepn. - 30960B/16
•TOAE- 22.08.77 TOYO AEROSOL KOGYO A96 D21 E17 G04 *J5 4033-881
Suspension of powder suitable for aerosol spray - 30961B/16
TOAG 11.12.75 TOA GOSEI CHEM IND LTD A14 D15 F06 (A82 A87 A91 F09) =J7 9006-073
High molecular weight cationic polymer - 53254Y/30
TODA- 15.07.74 TODA KOGYO CORP D15 E31 M12 (E32) =IT 1028-074
Iron oxides recovery in purifcn. of waste liquors - 09518X/06
TORA 11.07.77 TORAY INDS INC A88 D15 F07 J01 =FR 2397-214
Semipermeable membrane liq. separator - 04529B/03
•TOXN 29.07.77 TOYO BREWING KK B04 D16 *J5 4032-401
Sulphur-contg. peptide-B antibiotics - 30648B/16
•TOXN 30.07.77 TOYO BREWING KK B04 D16 *J5 4032-402
Sulphur-contg. peptide-C and -D antibiotics - 30649B/16
•TOXN 04.10.77 TOYO BREWING KK B04 D16 *DT 2842-940
Fermentative prodn. of sarcosine oxidase - 30022B/16
TOXN 04.10.77 TOYO BREWING KK B04 D16 =NL 7809-943
Fermentative prodn. of sarcosine oxidase - 30022B/16
•TOYJ 10.08.77 TOYO SODA KK B05 C04 D16 E36 *J5 4033-894
Purification of phosphoric acid contg. penta valent vanadium - 30972B/16
•TOYJ 10.08.77 TOYO SODA KK D16 *J5 4032-689
Bacterial body prepn. - 30710B/16
•TSUR 17.08.77 TSUMURA JUNTENDO KK D21 *J5 4032-616
Bath salts compsn. used e.g. for skin care - 30681B/16
•TSUR 18.08.77 TSUMURA JUNTENDO KK D21 *J5 4032-617
Bath salts compsn. used e.g. for skin care - 30682B/16

•UARB= 01.09.76 UKR URBAN ADMIN RES DES D15 J01 *SU -610-543
Suspensions dewatering filter press - 31234B/16
UBEN 12.03.74 UNCLE BENS AUSTRALIA LTD C03 D13 =CH -609-536
Animal foodstuff with moist and soft texture - 49397W/30
UGIN 29.07.77 PROD CHIM UGINE KUH D15 J01 =SF 7802-359

UNIC 21.06.74 UNION CARBIDE CORP D15 =CH -609-652
Removal of phosphates from effluent water by aeration - 01995X/02
UNIC 31.03.77 UNION CARBIDE CORP A11 D12 (A97) =US 4110-479
Dewatering collagen mouldings esp. tubular food casings - 73153A/41
UNIC 03.10.77 UNION CARBIDE CORP A14 C03 D22 L03 #NL 7710-816
Insol. poly:electrolyte hydrogel from acrylate salt and acrylamide - 18104A/10
• UNIC 13.10.77 UNION CARBIDE CORP C04 D15 *BE -871-214
Combined aerobic and anaerobic sludge digestion - 29750B/16
UNIL 23.03.70 LEVER BROTHERS CO A25 D21 (A96) =US 4110-428
Anti-perspirant aerosol powder - 65433S/41
UNIL 10.07.70 LEVER BROS CO D25 E19 =US 4110-239
High lathering, non mushing synthetic toilet bars - 86798X/46
UNIL 26.12.73 UNILEVER LTD D25 E12 =CA 1052-222
Detergent toilet bars - 46054W/28
UNIL 07.03.74 UNILEVER LTD D21 =CA 1052-219
Skin-cleansing material produced in pieces - 62576W/38
UNIL 03.03.75 UNILEVER LTD A97 D25 E11 =CA 1052-220
Detergent compsn with improved anti-greying properties - 72487X/39
UNIL 05.02.76 LEVER BROTHERS CO D25 E22 =US 4110-238
Coloured, non-staining liq. detergent compsn. - 43673X/23
UNIL 26.08.77 UNILEVER NV A96 D21 =NO 7802-832
Non-irritant, non-tacky antiperspiration compsn. - 20277B/11
UNIL 30.08.77 UNILEVER NV D13 =DK 7803-813
Iced confectionery esp. ice lollipops - 18000B/10
UNIL 05.10.77 UNILEVER NV D25 E12 (D21 E17) =DT 2751-053
Liq. soap prod. contg. specified potassium soaps - 25934B/14
UNIL 05.10.77 UNILEVER LTD D25 E12 (D21 E17) =GB 2005-297
Liq. soap prod. contg. specified potassium soaps - 25934B/14
UNIL 06.10.77 UNILEVER NV D18 E11 =DT 2843-755
Nourishing tanned leather - 27865B/15
• UNVO 16.12.76 UOP INC D15 *US 4110-174
Desalinating sea water in multistage flash evaporator - 31385B/16
• UNVO 31.01.77 UOP INC D15 *US 4110-172
Pond for collecting solar energy - 31384B/16
• URAL= 03.01.77 URALS CHEM IND RES A96 D21 *SU -610-526
Bright green aromatic mixt. for bath water - 31220B/16
• URRU/ 09.09.77 URRUTIA V B D13 *BR 7705-994
Dairy milk cooler - B/16
• USSA 01.08.77 US SEC OF THE ARMY D13 E14 *US 4110-483
Stabilisation of oil or fat contg. foods - 31507B/16

VEHN- 21.07.77 OY VEHNA AB D17 F09 G03 =SF 7702-252
Unmodified starch adhesives for corrugated cardboard - 11280B/06
VILJ/ 06.09.77 VILJANMAA A K D18 =DK 7803-800
Stretching hides in frames for drying - 04115B/03
VILJ/ 06.09.77 VILJANMAA A K D18 =SW 7809-175
Stretching hides in frames for drying - 04115B/03
VOGT 26.10.74 VOGT-WERKE KG D12 =IT 1028-030
Combination butchery conveyor for large and small carcases - 36131X/20
VORW 15.07.77 VORWERK & CO A97 D25 =FR 2397-455
Cleaning prod. contg. urea formaldehyde foam powder - 82208A/46

WACK 12.08.77 WACKER CHEMIE GMBH A96 D21 (A26) =J5 4031-995
Dental casts and casting spoons prepn. - 16163B/09
WAKP 20.11.73 WAKO PURE CHEM IND KK D15 E36 J04 (E13) =J7 9006-232
Azine derivs - 87408X/47
• WASU 17.05.76 WATER SUPPLY HYDROGEOL D15 *SU -609-971
Ultrasonic sensor for active slime level in effluent - 31187B/16
WEIS- 06.02.74 WEISS & CO D22 =CH -609-566
Destruction of odours with acid solns of oxidants - 44439W/27
WENG- 15.07.77 WENGER MFG D13 (D12) =FR 2397-159
Meat analogue formed by extruding vegetable protein - 74221A/41
• WFMF- 18.09.75 W & F MFG CO INC A97 D22 (A17 D23) *US 4110-261
Fragrance-emitting moulded articles - 31425B/16
WOLF 13.08.77 WOLFF WALSRODE AG A97 D15 F09 (A23) =J5 4032-186
Water-soluble basic polymer with polyethylene glycol units - 14411B/08
WOLF 13.08.77 WOLFF WALSRODE AG A97 D15 F09 (A23) =SF 7802-461
Water-soluble basic polymer with polyethylene glycol units - 14411B/08
• WOLV- 05.01.77 WOLVERINE CORP D13 J08 *US 4109-394
Particle treatment system for drying foodstuffs - 31280B/16
WRIL 26.09.77 WRIGLEY W JR CO D13 E17 =NL 7803-145
Chewing gum for stimulating saliva flow, esp. for athletes - 65304A/37

• YAGI/ 12.08.77 YAGI K B04 D16 *J5 4032-692
Fixed apo-enzyme of D-aminoacid oxidase prepn. - 30713B/16
YAMA/ 09.08.77 YAMAMURA Y A96 B04 D16 =SF 7802-442
Antitumour compsn. - 14567B/08
• YLEI- 27.07.77 OY YLEINEN INSINOOR D15 *SF 7702-288
Venting basins and biofilter in cleaning installations - B/16

• ZHDA= 09.04.74 ZHDANOV METAL INST D15 J01 *SU -610-534
Compression evaporator for sea-water distillation - 31225B/16

• ZHUK/ 01.04.76 ZHUKOV I N D25 E11 *SU -609-755
2-Alkyl-1-aminoethyl-imidazoline hexa-fluorosilicate - 31108B/16

1929-R D
US 3515-191 R24
DS 1657-218 B16

7106-R D
FR 1594-716 R42
DT 1817-704 S05
GB 1245-275 S35
J7 2022-270 T26
CA -902-995 T27
DS 1817-704 V11
T 1028-001 B16

5589-S DJM
DT 1958-169 S21
DS 1958-169 B16

7850-S AD
DT 1965-859 S29
DS 1965-859 B16

5433-S AD
NL 7103-689 S41
DT 2113-864 S42
FR 2083-500 T10
ZA 7101-796 T45
GB 1300-260 T51
CA -933-868 U40
BE -801-273 V01
NL -157-500 A35
US 4110-428 B16

1473-T D
DT 2127-747 T52
DS 2127-747 B16

1629-U DE
DT 2226-581 U02
FR 2140-137 U13
GB 1358-790 V27
US 3832-285 V36
CA -978-117 W49
DS 2226-581 B16

8523-U D
BE -791-236 U20
DT 2255-184 U22
ZA 7207-838 U31
FR 2159-319 U35
GB 1376-726 V50
US 3984-327 X42
CA 1052-287 B16

1106-U BD
BE -795-645 U29
DT 2309-338 V22
FR 2205-304 V36
CH -609-363 B16

3091-U D
DT 2300-786 U31
NL 7300-321 U31
FR 2173-654 U51
DL -101-632 V08
CH -564-087 W34
US 3910-172 W42
GB 1421-661 X04
CA -998-956 X46
CS 7300-247 B15
DS 2300-786 B16

4497-U D
DT 2300-088 U32
R 2167-691 U45
DL -101-696 V08
US 3916-775 W47
U -451-350 Y02
DS 2300-088 B16

413-V ADJ
DT 2332-705 V03
R 2190-494 V13
CA -972-498 W34
7 5035-917 W51
GB 1424-076 X06
US 4039-446 Y32
CH -609-885 B16

271-V DE
E -802-871 V06
NL 7310-545 V07
R 2193-784 V17
T 2337-733 V21
4 9064-258 V34
S 3900-555 W35
S 3939-072 X09
B 1442-811 X29
H -577-942 X34

CA -998-822 X46
CS 7305-419 A05
CS 7508-934 A05
DS 2337-733 B16

20506-V BD
NL 7312-082 V11+
BE -804-346 V11+
DT 2343-264 V13+
FR 2197-559 V22+
GB 1378-103 V51+
J4 9062-625 V34
J4 9092-223 V45
SW 7611-560 Y13+
CH -595-633 A12+
DK 7705-507 A13+
DK 7705-508 A13+
DK 7705-506 A13+
CH -604-720 A41+
CA 1052-268 B16+

34774-V D
DT 2249-383 V19+
US 3874-495 W15
CA -973-111 W36+
GB 1419-311 X01+
DS 2249-383 B16+

52009-V BD
BE -810-660 V29
DT 2406-621 V34
NL 7401-825 V35
FR 2216-926 V49
J4 9102-830 W08
US 3873-720 W14
GB 1413-451 W46
NL -153-085 Y24
J7 8007-492 A15
CA 1031-261 A22
DS 2406-621 B02
CH -609-537 B16

52331-V DE
DT 2363-535 V29
NL 7316-811 V30
J4 9095-910 V46
GB 1401-943 W32
GB 1401-944 W32
CH -578-490 X39
FR 2295-005 X44
US 4066-710 A03+
CH -607-989 B05+
CH -609-560 B16+
CH -609-559 B16+

63489-V D
DT 2408-237 V36
NL 7402-758 V37
BE -811-680 V38
FR 2219-227 V51
DL -110-894 W15
GB 1446-203 X34
CA 1002-893 Y04
DL -125-870 Y30
US 4110-163 B16

69830-V DE
DT 2412-262 V40
NL 7403-580 V40
BE -812-460 V41
FR 2222-377 W03
J4 9125-361 W05
US 3886-249 W23
GB 1417-813 W51
CA 1022-553 A01
IT 1020-542 A15
DS 2412-262 B16

73298-V DEJ
DT 2415-892 V42
NL 7404-469 V42
SW 7404-391 V48
FR 2223-313 W04
J5 0047-878 W26
BE -820-607 W10+
GB 1471-205 Y16+
ZA 7405-894 W42+
NO 7403-340 X20+
DK 7404-917 X26+
BR 7408-153 X30+
CA 1028-433 A14
CH -609-884 B16+

75460-V D
US 3841-102 V43
BE -824-042 W21
NL 7416-830 W29
DT 2461-640 W29

SW 7415-637 W34
NO 7404-689 W35
J5 0098-132 W40
DK 7406-687 W41
FR 2256-114 W42
ZA 7407-926 X13
GB 1462-148 Y03
CA 1030-305 A20
DS 2461-640 A22
J7 9002-022 B09
IT 1028-132 B16

77544-V AD
BE -814-037 V45+
NL 7405-457 V45+
NO 7401-411 V50+
SW 7405-442 V51+
DK 7402-176 V52+
DT 2419-887 V48
SF 7401-208 W06+
FR 2226-984 W08+
PT --61-819 W20+
ZA 7402-414 W22
J5 0042-696 W24+
OE 7601-392 Y01+
OE 7403-397 Y01+
GB 1465-897 Y09+
IL --44-696 Y12+
CH -597-858 A19+
US 4089-763 A27
DT 2419-887 V48+
US 4110-184 B16

82595-V D
BE -814-874 V48+
NL 7406-306 V48+
DT 2422-655 V49+
NO 7401-700 W01+
SW 7406-287 W01+
DK 7402-522 W03+
SF 7401-432 W06+
J5 0053-404 W28+
GB 1429-143 X13+
FR 2283-220 X24+
CH -591-557 Y41+
DT 2462-647 A03+
DT 2462-649 A03+
DT 2462-648 A03+
CH -594-729 A09+
CH -594-730 A09+
SW 7714-497 A23+
SW 7714-496 A23+
SW 7714-495 A23+
CA 1035-234 A32+
DS 2422-655 A32+
OE 7403-884 B01+
CA 1052-221 B16+

84417-V ADEG
BE -815-069 V49
NL 7306-759 V49
DT 2423-278 V50
DK 7402-632 W03
J5 0046-620 W25
FR 2245-606 W27
US 3951-945 X18
GB 1457-569 X50
IT 1019-613 A11
NL -158-165 A45
CH -609-961 B16

20877-W DE
US 3870-783 W12
BE -824-253 W30
CA -991-820 X29
NL 7500-050 X30+
DT 2500-750 X30+
SW 7500-071 X34+
J5 1080-700 X35+
BR 7500-156 X42+
FR 2297-188 X46+
GB 1466-474 Y10+
IT 1028-225 B16+

21293-W DE
DT 2441-474 W13
BE -820-043 W14
NL 7412-306 W14
FR 2243-675 W25
J5 0154-425 X04
GB 1436-306 X21
OE 7407-482 X40
CH -609-558 B16

22294-W DM
US 3871-876 W13
NL 7502-941 W40
DT 2505-934 W40

SW 7502-497 W45
J5 0125-922 W48
FR 2264-521 X02
BR 7501-521 X02
GB 1476-100 Y23
DS 2505-934 A20
CA 1039-538 A42
IT 1028-449 B16

22459-W D
BE -819-925 W14
NL 7411-466 W14
DT 2439-233 W16
NO 7403-296 W19
SW 7312-533 W19
SF 7402-641 W24
DK 7404-810 W24
FR 2243-647 W25
J5 0053-548 W28
DL -113-434 W32
ZA 7405-097 W37
AR -201-967 W46
PT --62-588 X25
GB 1479-172 Y27
US 4068-388 A05
CH -596-776 A15
SU -562-171 A37
CA 1052-170 B16

22856-W D
DT 2445-189 W14
FR 2244-452 W26
GB 1453-202 X43
CA 1052-276 B16

24244-W D
BE -822-222 W15
DT 2453-709 W22
DK 7405-667 W33
J5 0081-594 W35
FR 2251-308 W36
PT --62-932 W45
AR -202-430 X05
GB 1427-899 X11
ZA 7406-602 X26
US 4003-971 Y05
US 4069-311 A05+
US 4069-312 A05+
CA 1052-277 B16

26055-W DH
DT 2348-753 W16
BE -820-526 W16
NL 7412-535 W16
SW 7412-183 W21
NO 7403-520 W22
DK 7405-110 W27
SF 7402-807 W28
FR 2246-635 W28
J5 0063-185 W30
DL -113-927 W36
PT --62-688 X03
J5 1057-878 X27+
GB 1452-019 X41
IL --45-716 Y34
OE 7407-797 A02
ZA 7406-154 W51
SU -560-534 A30
CH -606-420 A48
DS 2348-753 B16

34199-W D
BE -821-971 W21
DT 2455-633 W29
NL 7414-774 W30
SW 7500-092 W35
FR 2256-904 W43
ZA 9807-469 X03
OE 7500-049 X40
IL --45-907 Y51
GB 1495-755 Y51
CH -593-870 A02
IT 1028-210 B16

34225-W D
BE -823-831 W21
DT 2461-032 W31
NL 7416-582 W32
SW 7415-233 W37
FR 2258-351 W45
DL -116-762 X10
OE 7400-536 X28
US 3975-469 X35
CH -579-948 X42
GB 1462-005 Y03
HU T013-376 Y29
CS 7500-473 A13
CA 1048-172 B08

IT 1028-021 B16

34522-W CD
DT 2448-831 W21
US 3898-134 W33+
US 3917-508 W47+
US 3947-327 X15+
GB 1457-334 X49
CA 1005-748 Y09
DS 2448-831 A41
J5 4033-871 B16+
J5 4033-870 B16+

35961-W AD
BE -824-117 W22
DT 2400-704 W30
FR 2256-739 W43
CH -582-497 Y02
GB 1487-791 Y40
IT 1028-217 B16

39247-W DE
BE -824-482 W24
DT 2501-341 W31
NL 7500-407 W32
J5 0106-933 W42
FR 2258-358 W45
US 3927-110 W52
GB 1435-292 X20
CH -590-806 Y36
IT 1028-426 B16

44439-W D
BE -825-452 W27
DT 2505-020 W33
NL 7501-390 W34
SW 7501-206 W39
NO 7500-370 W40
SF 7500-313 W44
J5 0115-172 W45
DK 7500-393 W46
FR 2259-621 W47
OE 7500-912 X28
GB 1449-433 X38
DS 2505-020 Y33
IT 1027-488 B06
CH -609-566 B16

46054-W DE
BE -823-727 W28+
NL 7416-894 W29+
DT 2461-139 W29+
SW 7416-270 W33+
J5 0097-605 W39+
DK 7406-699 W40+
SF 7403-726 W40+
FR 2256-240 W42+
BR 7407-538 X21+
FR 2285-452 X27+
ZA 7408-167 X35
US 4007-125 Y07
GB 1490-237 Y43+
OE 7410-285 A13+
IT 1020-786 A15+
CH -606-414 A48+
IT 1027-174 B06+
CA 1052-222 B16+

46135-W ABD
BE -825-857 W28+
NL 7502-236 W37+
DT 2508-082 W41+
SW 7502-053 W43
DK 7500-696 W48+
FR 2261-755 W50
J5 0160-413 X05+
ZA 7501-124 X13
FR 2281-130 X22
PT --63-395 X22+
FR 2300-572 X51+
GB 1503-564 A11+
US 4108-849 B11+
CH -609-356 B12+
CA 1052-307 B16+

46390-W ADE
DT 2364-634 W28
BE -823-794 W28
SW 7415-810 W33
J5 0096-497 W39
FR 2255-255 W41
US 3983-223 X41
GB 1491-225 Y45
CA 1036-792 A36
IT 1027-155 B06
CH -609-649 B16

46525-W ADE
DT 2461-092 W28
NL 7416-858 W29
FR 2256-115 W42
J5 0095-176 X02
US 3989-600 X46
IT 1028-051 B16

47482-W CD
US 3892-553 W28+
DS 2519-164 X27+
NL 7505-018 X46+
SW 7504-268 X48+
FR 2307-776 Y07+
GB 1504-031 A11+
IT 1028-415 B16+

47872-W DE
DT 2365-172 W29
BE -823-998 W29
FR 2256-279 W42
GB 1494-109 Y49
IT 1028-087 B16

47973-W DHJ
DT 2459-945 W29
FR 2256-702 W42
GB 1476-249 Y23
IT 1028-047 B16

48087-W DH
DT 2461-727 W29
BE -824-088 W29
NL 7417-001 W29
SW 7500-016 W34
NO 7404-637 W35
J5 0098-155 W40
DK 7406-879 W41
FR 2277-777 X18
ZA 7408-098 X35
OE 7410-401 X36
GB 1449-342 X38
US 4032-439 Y27
CA 1026-021 A08
J7 8022-389 A31
IT 1028-175 B16

49397-W CD
BE -826-474 W30
DT 2510-596 W39
NL 7502-958 W40
NO 7500-840 W45
SW 7502-735 W45
J5 0129-374 W50
DK 7501-003 W50
FR 2263-708 X01
GB 1497-090 A01
OE 7501-877 A18
CH -609-536 B16

49666-W ADEF
DT 2500-111 W30
BE -824-294 W30
NL 7500-297 W31
J5 0105-997 W42
FR 2257-728 W44
US 3974-076 X34
GB 1487-432 Y39
CA 1038-110 A39
IT 1028-306 B16

49731-W BCD
DT 2500-876 W30
GB 1461-234 Y02
US 4033-821 Y28
CA 1030-468 A20
DS 2500-876 A27
IT 1028-323 B16

49760-W AD
DT 2501-262 W30
FR 2257-548 W44
J5 0105-575 Y23
GB 1485-733 Y37
J7 8018-343 A27
IT 1028-353 B16

50937-W ADE
BE -824-473 W31
DT 2501-142 W31
FR 2258-375 W45
NL 7500-559 W32
GB 1485-316 Y36
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CA 1039-609 A42
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52379-W ADF
BE -824-547 W32
DT 2500-962 W41
NL 7500-610 W42
FR 2265-537 X03
IT 1028-453 B16

54226-W DE
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NL 7501-130 W34
J5 0107-127 W42
FR 2259-622 W47
GB 1489-275 Y42
DS 2405-004 B15
US 4110-430 B16
CH -609-861 B16

55712-W DJ
CH -563-793 W34
DT 2518-082 W49
FR 2270-919 X10
DL -118-118 X18
OE 7503-600 Y27
GB 1482-291 Y32
DS 2518-082 A10
CS 7502-889 A41
CA 1042-362 A48
US 4110-089 B16

55873-W D
DT 2406-516 W34
FR 2260-294 W48
DS 2406-616 Y45
IT 1028-320 B16

56041-W D
DT 2505-794 W34
FR 2260-537 W48
GB 1496-034 Y51
CA 1039-663 A42
US 4105-549 A51+
IT 1028-355 B16

59128-W D
DT 2507-442 W36+
BE -825-867 W37+
NL 7502-151 W37+
SW 7502-039 W43+
DK 7500-733 W47+
FR 2261-978 W50+
J5 0151-795 X03+
ZA 7500-969 X48
BR 7501-141 X49+
US 4007-134 Y07+
GB 1489-121 Y42+
OE 7501-407 A22+
US 4147-808 B15+
US 4110-255 B16+

60824-W BCD
DT 2508-914 W37
BE -826-170 W37
NL 7502-115 W38
SW 7502-305 W43
DK 7500-809 W49
FR 2262-510 W51
J5 0148-595 X03
ZA 7501-206 X13
PT --63-419 X22
DL -118-672 X22
OE 7501-572 X32
HU T011-931 X33
US 3989-820 X46
J5 2087-101 Y35+
GB 1486-677 Y38
DK 7705-065 A12
SW 7804-075 A33
CH -602-918 A37
IL --46-719 A45
CS 7501-380 A51
CA 1052-308 B16

62215-W BD
BE -826-275 W38
NL 7502-623 W39
DT 2508-396 W44
DK 7500-857 W49
FR 2262-962 W52
J5 0160-487 X05
ZA 7501-357 X17
GB 1469-901 Y14
CH -595-106 A09
US 4136-168 B05
CA 1052-306 B16

62576-W D
DT 2509-396 W38+
BE -826-445 W39+

NL 7502-712 W39+
SW 7502-472 W44+
NO 7500-738 W45+
J5 0122-506 W47+
DK 7500-895 W50
SF 7500-514 W51+
FR 2263-300 W52+
PT --63-451 X38+
ZA 7501-422 X48
GB 1505-493 A13+
US 4094-807 A32+
OE 7501-798 B04+
CA 1052-219 B16+

65975-W D
DT 2512-560 W40+
J5 0132-146 W51+
US 3947-599 X15
ZA 7501-830 X17
NL 7600-951 X34
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FR 2298-964 X49
US 4052-516 Y41
SF 7600-263 Y42+
GB 1509-022 A17+
CA 1052-172 B16+

69199-W DEG
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ZA 7501-442 X17
US 4005-175 Y06
GB 1473-404 Y19
CA 1036-320 A35
IT 1024-531 A39
J7 9006-039 B16

70719-W ACDE
BE -827-721 W43
NL 7505-101 W46
DT 2420-874 W48
SW 7504-927 W51
NO 7501-474 W52
J5 0149-604 X03
SF 7501-156 X07
DK 7501-856 X07
FR 2269-519 X08
ZA 7502-748 X26
OE 7503-256 Y09
IL --46-961 Y30
GB 1495-765 Y51
US 4144-260 B12
CH -609-966 B16

72840-W BCD
DT 2517-316 W44+
BE -827-926 W44+
NL 7504-621 W45+
NO 7501-407 W51+
J5 0142-591 X02+
FR 2267-778 X06+
DK 7501-672 X07+
SF 7501-133 X07+
J5 0142-789 X02+
SW 7504-541 X15+
PT --63-645 X27+
ZA 7502-492 X31+
DL -121-799 X41+
J7 7001-996 Y06+
J5 2085-189 Y35
J7 7046-957 Y51+
J5 3002-495 A08
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J5 3003-589 A08
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GB 1508-978 A17+
GB 1508-977 A17+
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SF 7800-201 A24+
OE 7702-055 A26
DL -132-297 A46+
OE 7702-054 A48
OE 7702-052 A48
DK 7802-873 B03+
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HU T015-976 B07+
OE 7702-051 B09
OE 7502-985 B09
SW 7811-200 B10+
SW 7811-201 B10+
SW 7811-202 B10+
SW 7811-203 B10+
US 4110-165 B16+

72840-W
DT 2560-074 B16+

73928-W DE
US 3914-227 W44
GB 1477-850 Y26
GB 1477-849 Y26
CA 1052-378 B16

80571-W DJ
DT 2521-667 W49
NL 7505-754 W49
FR 2271-171 X10
US 4008-994 Y09
GB 1488-725 Y41
J5 0145-391 B03
J7 8047-235 B03
CH -609-953 B16

81519-W D
BE -831-336 W50
NL 7508-691 X39
DT 2531-788 X39
BR 7505-250 X45
DK 7502-943 X48
SF 7502-062 X48
FR 2302-693 Y02
US 4010-283 Y10
OE 7505-331 Y44
GB 1516-215 A26
CH -609-840 B16

01980-X BD
BE -830-455 X02
NL 7507-390 X02
DT 2527-291 X03
NO 7502-202 X08
SW 7506-908 X08
J5 1013-793 X12
DK 7502-719 X14
FR 2275-215 X15
SF 7501-815 X15
ZA 7503-086 X24
BR 7503-782 X30
DL -121-113 X36
PT --63-932 X48
OE 7504-769 X50
HU T012-916 Y10
GB 1471-804 Y17
J5 2083-696 Y34+
PT --63-932 Y43
OE 7609-767 A22
SU -589-921 A49
IL --47-299 B08
CH -609-059 B12+
CH -609-989 B16

01995-X D
BE -830-499 X02+
NL 7507-418 X02+
DT 2527-588 X04+
NO 7502-207 X08+
SW 7507-013 X08+
J5 1014-757 X12+
DK 7502-818 X14+
FR 2275-408 X15+
SF 7501-833 X15+
ZA 7503-737 X26
BR 7503-861 X30+
GB 1512-693 A22+
IL --47-536 A33+
CH -609-652 B16+

03792-X D
US 3930-053 X02
GB 1462-168 Y03
CA 1052-171 B16

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BE -831-168 X07
SW 7410-542 X10
FR 2277-841 X18
J5 1033-185 X19
DK 7404-463 X22
J5 2085-289 Y35+
CH -592-694 A01
CH -594-695 A09
GB 1512-066 A21
CA 1052-305 B16

09518-X DEM
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J5 1010-198 X11
FR 2278-630 X19
US 3970-738 X31
IT 1029-074 B16

12450-X D
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US 4109-663 B16+

34267-X D
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36019-X DE
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NL 7514-553 X27+
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ZA 7507-783 Y35
DK 7704-418 A05+
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DS 2708-112 B16+

27151-Y D
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DK 7604-629 Y27+
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PT --65-654 Y36+
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30934-Y BD
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DK 7700-067 Y39
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34686-Y AD
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CA 1052-224 B16+

35926-Y D
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J5 2078-791 Y33
CA 1037-271 A37
GB 1544-283 B16

36050-Y D
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FR 2345-400 A03
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GB 1544-552 B16

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DK 7700-243 Y46
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GB 1544-304 B16

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PT --65-457 Y29+
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FR 2333-387 Y37
US 4110-075 B16

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SW 7709-952 B16+

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DK 7803-351 B11+
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SF 7802-353 B16+

84216-A ABD
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J5 3136-590 B02
DS 2719-912 B16

86171-A AD
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GB 2002-288 B08+
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NO 7802-507 B12+
DT 2845-686 B15+
SF 7802-324 B16+

86446-A DE
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NL 7804-912 A48+
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87861-A CDEF
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NL 7806-027 A51
SW 7806-522 B08
NO 7801-921 B05
SF 7801-770 B08
FR 2393-086 B10
DK 7702-451 B16

87871-A D
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NL 7808-268 B09
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SW 7808-443 B12
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SF 7802-417 B16

88222-A DE
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88321-A DLM
GB 1535-024 A49
US 4110-212 B16+

89700-A D
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NL 7808-435 B09
NL 7806-434 B09
DT 2834-717 B09
DT 2834-718 B09
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GB 2003-128 B10
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DK 7803-505 B13
SW 7808-559 B13
SW 7808-560 B13
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NO 7802-737 B14
SF 7802-354 B16
SF 7802-355 B16

91499-A ADE
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NL 7806-535 B02+
J5 4007-407 B09+
BR 7803-841 B15+
US 4110-263 B16

01945-B BCDE
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DT 2837-264 B10
NL 7808-802 B11
SW 7808-950 B14
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SW 7808-944 B16

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SW 7809-107 B15
DK 7803-815 B16
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GB 2003-391 B11
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DK 7803-814 B16
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NL 7806-457 B02
J5 4009-275 B09
GB 2004-864 B15
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SW 7807-554 B08
DK 7803-029 B09
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SF 7802-155 B12
FR 2397-195 B16

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NL 7807-517 B05
SW 7807-745 B08
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DK 7803-800 B16
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SW 7807-645 B08
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J5 4017-383 B11
FR 2397-214 B16

04555-B ABDE
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FR 2396-753 B15
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FR 2397-637 B16

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BE -868-661 B03
DT 2828-442 B06
SW 7807-428 B07
DK 7802-973 B08
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FR 2396-250 B14
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NL 7806-728 B06
DK 7803-234 B10
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06080-B DJ
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SW 7808-201 B11
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SF 7802-358 B16

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NL 7806-954 B05
SW 7807-852 B09
J5 4020-875 B12
FR 2397-160 B16

06438-B BD
GB 2000-968 B04
DT 2731-370 B05
FR 2397-194 B16

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NL 7809-860 B16
DT 2843-116 B16

08018-B ADE
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NL 7808-127 B08
NO 7802-627 B12
GB 2001-993 B07
DT 2833-742 B13+
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SF 7802-372 B16+

08033-B ADE
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US 4107-096 B06
DT 2841-292 B16

08063-B D
BE -870-655 B05
DT 2744-297 B16

08081-B D
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DT 2743-246 B14
NL 7809-566 B16

08149-B AD
DT 2730-158 B05
SW 7707-420 B06+
J5 4020-168 B12+
FR 2397-162 B16+

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FR 2397-222 B16

08306-B ABDE
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GB 2001-652 B06
J5 4020-193 B12
FR 2397-422 B16

08517-B D
GB 2001-432 B05+
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09317-B D
NL 7807-396 B05+
FR 2397-163 B16

09321-B BD
NL 7807-570 B05+
DT 2830-856 B06+
GB 2003-465 B11+
FR 2397-416 B16+

09322-B ADE
NL 7807-585 B05+
DT 2830-958 B06+
SW 7807-815 B09+
GB 2002-795 B09+
J5 4020-143 B12+
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NL 7809-740 B16

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DT 2841-896 B14
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NL 7809-828 B16

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FR 2397-188 B16

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DK 7803-049 B09
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J5 4020-102 B12
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10180-B D
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FR 2397-286 B16

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DK 7803-270 B11
NO 7802-544 B11
J5 4024-604 B13
SF 7802-308 B16

11280-B DFG
NL 7807-062 B06
DT 2830-397 B07
SW 7808-017 B09
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SF 7702-252 B16

11920-B D
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GB 2003-177 B10
J5 4032-687 B16

11937-B D
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DT 2744-456 B15
NL 7809-802 B16

11966-B D
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GB 2005-124 B16

11967-B D
BE -871-064 B07
DT 2843-783 B16
GB 2005-125 B15

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BE -869-783 B08
DT 2835-066 B15
GB 2004-865 B15
NL 7808-581 B16

14203-B D
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US 4141-999 B10
DT 2840-557 B16
GB 2005-127 B16

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DT 2745-538 B16

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SF 7802-461 B16

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14605-B DE
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SW 7808-620 B13
J5 4032-382 B16

16007-B CD
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GB 2003-459 B11
SW 7808-864 B14
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DK 7803-741 B15
NO 7802-877 B16

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16275-B BCD
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NL 7808-321 B09+
J5 4032-695 B16

18000-B D
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NL 7808-870 B11
DT 2837-848 B12
SW 7809-105 B15
DK 7803-813 B16

18014-B BCD
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NL 7808-946 B12
DT 2838-276 B12
GB 2004-542 B14
DK 7803-658 B16
SW 7809-350 B16

18035-B D
BE -870-215 B10
NL 7809-290 B13
GB 2004-193 B13
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18133-B BD
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DK 7703-664 B14+
BR 7705-785 B15+
J5 4032-618 B16+

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J5 4032-611 B16

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DT 2738-085 B11
DK 7803-713 B15
NO 7802-864 B16

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EP -----947 B10+
DT 2738-717 B11
DK 7803-776 B15+
NO 7802-713 B16+

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PT --67-583 B10
NL 7800-919 B11
DK 7800-182 B15
NO 7800-436 B16

20194-B D
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SW 7809-178 B15
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DK 7803-768 B15
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DT 2745-567 B16+

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SW 7808-917 B15
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SW 7713-012 B16

22280-B D
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NL 7801-692 B13
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NL 7809-036 B12
GB 2005-138 B16

22325-B BD
DT 2838-252 B12+
NL 7808-778 B12+
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22497-B CD
GB 2003-711 B12+
DK 7803-942 B16

22530-B D
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NL 7809-187 B13
DT 2839-060 B13
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GB 2005-139 B16

24225-B BDE
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NL 7809-359 B14+
GB 2005-258 B16+

25655-B DEF
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NL 7809-818 B16

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DT 2843-258 B16
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27860-B CD
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GB 2005-301 B16

27865-B DE
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28144-B DE
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NL 7809-782 B16

28172-B D
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GB 2005-187 B16

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GB 2004-729 B15
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28267-B ADJ
GB 2004-763 B15+
NL 7804-119 B16+

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29403-B D
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GB 2005-148 B16

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29759-B ADE
BE -871-243 B16+

29762-B DJ
BE -871-253 B16

29769-B D
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29773-B D
BE -872-668 B16

29781-B DJM
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29786-B DF
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29788-B D
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29793-B D
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29804-B D
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DS 2748-970 B16

29840-B D
DS 2803-478 B16

29850-B DJ
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29874-B D
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29896-B ADF
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29907-B D
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DT 2744-756 B16

29912-B D
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29914-B DJ
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29917-B D
DT 2744-950 B16

29922-B BCDE
DT 2745-083 B16

29923-B BCDE
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DT 2745-444 B16

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DT 2745-541 B16

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DT 2745-544 B16

29954-B DE
DT 2745-672 B16

29957-B DJ
DT 2745-700 B16+

29959-B DJ
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29962-B CD
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29976-B D
DT 2840-667 B16

29978-B DEJ
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29985-B D
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DT 2842-940 B16
NL 7809-943 B16

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GB 2005-123 B16

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30048-B BCD
DT 2843-702 B16

30061-B D
DT 2844-311 B16+

30065-B D
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30070-B DE
FR 2397-185 B16+

30071-B DE
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30075-B DJ
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30084-B D
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30112-B D
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GB 2005-410 B16

30180-B ADG
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BR 7804-046 B15+

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J5 4014-406 B10

30191-B D
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30195-B DJ
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30202-B D
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30448-B ADE
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30714-B BDE
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30716-B D
J5 4032-696 B16

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30816-B ADJM
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30820-B ADJ
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30823-B DEJ
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30836-B AD
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30837-B D
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30860-B DE
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30960-B DEG
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30961-B ADEG
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30964-B ADJ
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30966-B ADHJ
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30970-B DEJ
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30972-B BCDE
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31013-B AD
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31015-B D
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31017-B D
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31082-B D
SU -609-728 B1

31108-B DE
SU -609-755 B1

31115-B CD
SU -609-763 B1

31116-B D
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31117-B D
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31118-B D
SU -609-766 B1

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31217-B CD
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31218-B D
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31220-B AD
SU -610-526

31222-B D
SU -610-528

31225-B DJ
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31231-B DJ
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31232-B ADJ
SU -610-541

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31251-B DJ
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US 4109-566 B16+

31308-B AD
US 4109-664 B16+

31343-B D
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31351-B AD
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31382-B D
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31384-B D
US 4110-172 B16+

31385-B D
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31386-B DJ
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31403-B DH
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31405-B D
US 4110-217 B16

31407-B DJ
US 4110-219 B16

31409-B DJ
US 4110-223 B16+

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31432-B AD
US 4110-276 B16+

31461-B D
US 4110-356 B16

31462-B DE
US 4110-358 B16

31485-B ADE
US 4110-426 B16+

31486-B ADE
US 4110-429 B16

31488-B BCD
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31489-B BCD
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31503-B D
US 4110-476 B16

31504-B D
US 4110-477 B16

31505-B D
US 4110-478 B16+

31506-B D
US 4110-481 B16+

31507-B DE
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31508-B D
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31509-B D
US 4110-485 B16+

31516-B DEFG
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BE -871
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BE -872
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* 809 29804B D12

BR 7704
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BR 7705
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BR 7706
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BR 7800
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BR 7801
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BR 7802
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BR 7806
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BR 7807
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CA 1052
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#224 34686Y A97D15
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=287 28523U D15
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=308 60824W B04C03D16
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=378 73928W D18E13+P1
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=480 34267X D15+P4
#481 37978X D15J02
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CH -609
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CH -610
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DK 7702
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DK 7703
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DK 7803
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=890 22325B B05D16
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DS 1657
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DS 1958
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DS 1965
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DS 2127
=747 81473T D16

DS 2226
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DS 2249
=383 34774V D11+Q3

DS 2300
=088 44497U D16
=786 43091U D16+Q3

DS 2337
=733 09271V D15E36+R2

DS 2348
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DS 2412
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DS 2453
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DS 2644
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DS 2646
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DS 2708
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DS 2718
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DS 2719
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DS 2721
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DS 2748
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DS 2803
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DT 2560
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DT 2726
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DT 2742
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DT 2743
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DT 2744
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* 854 29914B D16J02P4
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DT 2745
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DT 2841
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DT 2842
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=591 28289B D15Q7
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* 855 30019B A11D17F01
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DT 2843
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=116 07600B D25E12F06
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=126 83827A D25E11F06
=127 25936B D25E19
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=142 25655B D25E19F06
=145 78106A D25E19
* 230 30031B D12
=258 27848B D13
* 322 30034B D13
* 351 30037B D16
=567 27860B C03D16
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=755 27865B D18E11
=783 11967B D13

DT 2844
* 311 30061B D16

FR 2397
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=154 08604A D11
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=156 26978A D13
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FR 2397
=159 74221A D13
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=161 10072B C03D13
#162 08149B A97D13
=163 09317B D14
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GB 1544
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=341 38768A D15
=350 31816A D18P1
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IT 1028
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J5 3144
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J5 4030
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•658 30200B D15
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•680 30204B D15J09Q7
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J5 4031
•083 30311B D15E36J01
•084 30312B D15E33J01
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•407 30343B D13
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•958 30449B D15
•960 30450B A97D15J01
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•965 30452B D15
•966 30453B D15
•969 30454B D15F06
•983 30456B A96D22P3
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J5 4032
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•179 30509B D15
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=186 14411B A97D15F09
•187 30516B D13E17
•192 30521B A85D15E36J03
•197 30524B D15E33
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•402 30549B B04D16
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•617 30682B D21
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•639 30697B D21
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•643 30698B D13
•644 30699B D13
•645 30700B D13
•647 30701B D13E33
•651 30702B D13
•655 30703B D13
•659 30704B D12
•665 30705B D12

J5 4032
•670 30706B D13
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•686 30708B D16
=687 11920B D16
•688 30709B D16
•689 30710B D16
•690 30711B D16P1
•692 30713B B04D16
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J5 4033
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•365 30837B D15
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J7 9006
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NL 7710
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NO 7800
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SF 7702
=252 11280B D17F09G03
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•288 B D15

SF 7802
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=324 86171A A96D22P3+P7

SF 7802
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SU -609
•524 31013B A96D22
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•728 31082B D15
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•763 31115B C03D16
•764 31116B D16
•765 31117B D17
•766 31118B D18
•767 31119B D18
•939 31178B D14Q7
•971 31187B D15R1

SU -610
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•505 31213B D13
•506 31214B D17
•507 31215B D13
•508 31216B D13
•509 31217B C03D13
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•534 31225B D15J01
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•564 31251B D15J01P4

SW 7709
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SW 7713
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SW 7808
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SW 7809
=175 04115B D18
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=425 22530B D13

US 4109
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=354 94630X D22F04P3+P7
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=570 36741Y D13+P2
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•664 31308B A97D18P1
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US 4110
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•066 31343B D23Q7
=074 25936B D25E19
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•083 31351B A96D21P6
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=184 77544V A96D21
=185 21559A A35D22+P3
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US 4110
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=213 56148Y A97D15E17H03
•215 31403B D15H05
•217 31405B D15Q7
•219 31407B D15J01
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=242 76011Y D25E13+P3
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=262 64946Y A97D25E19
=263 91499A A96D25E16
•276 31432B A23D22
=281 81385X A60D16
=320 88395Y B04D16
=328 30934Y B03D21
•356 31461B D23
•358 31462B D21E16
•426 31485B A96D21E12
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•429 31486B A96D21E19
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•476 31503B D13
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•478 31505B D13
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=480 12450X D16
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=482 06160Y D11
•483 31507B D13E14
•484 31508B D13
•485 31509B D13
•504 31516B D22E16F05G03
=626 56056Y D23E17

CENTRAL PATENTS INDEX

CLASSIFIED ALERTING BULLETIN

21 [illegible] 1979
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WEEK B17
14 JUNE 79
31553B - 33320B

ABSTRACTS

INDEXES

- II - PÁTENTEE
- V - BASIC NUMBER
- VII - PATENT NUMBER

Section D:

FOOD
DETERGENTS

COUNTRY	PUB. DATES	NUMBER RANGE
BELGIUM		
-Delayed	17 APR - 23 APR 79	871,273 - 871,474
-Non Delayed	17 APR 79	872,831 - 873,073
CANADA	3 APR 79	1,051,601 - 1,052,050
DENMARK	2 APR 79	7,703,979 - 7,804,895
W.GERMANY		
-DAS	19 APR 79	1,422,474 - 2,831,638
-OLS	19 APR 79	2,660,230 - 2,843,425
EUROPE	18 APR 79	01,379 - 01,544
FRANCE*	16 FEB 79 (BOPI 23 MAR 79)	2,397,777 - 2,398,437
UNITED KINGDOM	25 APR 79	1,544,611 - 1,545,010 2,005,521 - 2,005,970
ITALY	10 FEB 79	1,028,501 - 1,029,000
JAPAN		
-Unexamined	—	46,005,106 - 53,098,408
	13 MAR - 18 MAR 79	54,033,901 - 54,036,900
-Examined	29 MAR - 4 APR 79	79,006,481 - 79,007,200
NETHERLANDS	17 APR 79	159,856 - 160,144
	3 APR 79	7,710,698 - 7,809,952
	9 APR - 11 APR 79	7,710,900 - 7,810,165
NORWAY	2 APR 79	7,703,069 - 7,900,493
PORTUGAL	6 APR 79	64,689 - 68,366
RES. DISCLOSURE	APRIL 79	180,001 - 180,063
SOVIET UNION	—	142,319 - 611,218
SWEDEN	9 APR 79	7,708,464 - 7,900,389
UNITED STATES		
-Reissues	10 APR 79	Re29,957 - Re29,963
-Patents	10 APR 79	4,148,102 - 4,149,271
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Arrangement of Abstracts

See Appendix I for definition of 'Major' and 'Minor' Countries.

'MAJOR' COUNTRIES – An alerting abstract of every basic and examined equivalent document is provided except for equivalents from Canada, East Germany and Switzerland. The abstracts are arranged in CPI class order and within any one of the 135 classes are in country and patent number order.

'MINOR' COUNTRIES – Basic headings are included in sequence with the entries from the 'Major' countries.

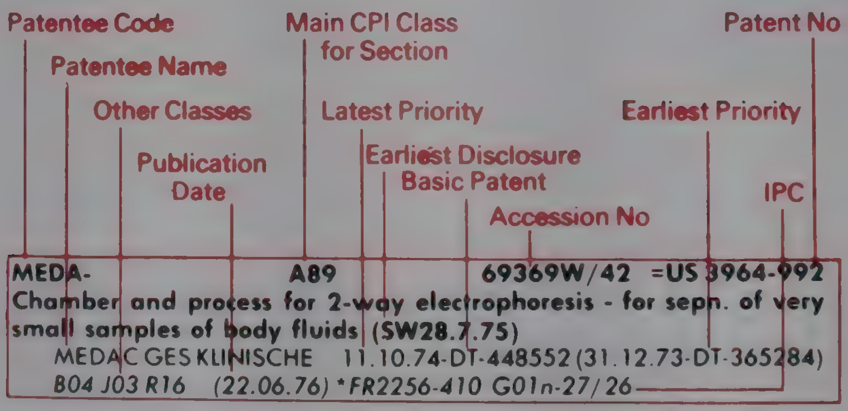
CPI Section Headings

See inside cover for further details.

A	Polymer Chemistry
A+	Polymer Applns.
AE	Polymer & General Chemistry
B	Pharmaceuticals
C	Agricultural Chemistry
D	Food, Disinfectants, Detergents
E	General Chemistry
E+	General Chemistry Applns.
F	Textiles, Paper, Cellulose
G	Printing, Coating, Photographic Chemistry
H	Petroleum
J	Chemical Engineering
K	Nucleonics, Explosives, Protection
L	Refractories, Ceramics
M	Metallurgy

Typical Abstract Heading

See CPI/WPI Instruction Manual No. 1A for explanation of the various flagged descriptors.


Patentee Code
Main CPI Class for Section
Patent No
Patentee Name
Other Classes
Latest Priority
Earliest Priority
Publication Date
Earliest Disclosure
Basic Patent
IPC
Accession No

MEDA- A89 69369W/42 =US 3964-992
Chamber and process for 2-way electrophoresis - for sepn. of very small samples of body fluids (SW28.7.75)
MEDAC GES KLINISCHE 11.10.74-DT-448552 (31.12.73-DT-365284)
*B04 J03 R16 (22.06.76) *FR2256-410 G01n-27/26*

Copies of Specifications may be ordered from our PATENTS SUPPLY DIVISION.

D1: FOOD; FERMENTATION

D11 : BAKING

HURK/ ★ D11 31576B/17 ★BE -871-403
/olumetric depositor for paste esp. edible paste - discharges excess naterial at constant pressure before delivering measured deposit
HURKMANS A 21.10.77-NL-011612
Q32 (20.04.79) A21c B65d

The depositor is of the type which comprises a supply hopper with an outlet having an exterior flat face to provide a sliding leakproof contact surface with the open end surface of a distribution cylinder. The distribution cylinder. The distribution cylinder contains a reciprocable ram and is first aligned with the hopper cutlet and charged by retracting the ram. The cylinder slides across the contact surface and reaches a delivery position where the ram is advanced to discharge the paste.

Between the charging and delivery positions the cylinder mouth is now temporarily aligned with a cylindrical overspill chamber. The overspill chamber contains a piston which is loaded, e.g. by spring pressure, towards the distribution cylinder. The ram forces a fraction of paste from the cylinder into the overspill chamber leaving a precise measure of paste in the cylinder for subsequent discharge at the delivery position.

Used for measuring out predetermined volumes of paste partic. pastry dough and other edible pastes. The measurement is precise and is made always at constant, acceptable pressure. The paste is never subjected to a sudden drop in pressure. The prod. wt. is adjustable but is constant, once set. Quality and vol. control are to a high standard. 20.10.78 as 871403 (13pp448)

ROUS ★ D11 31894B/17 ★DT 2844-992
High protein cellular diet food, e.g. wafer - contains sugar and protein consisting of casein opt. mixed with other protein sources (BE 17.4.79)
ROUSSEL UCLAF 17.10.77-FR-031163
(19.04.79) A21d-13/06 A23l-01/30

Foodstuff or dietetic material having a cellular structure contains $\geqslant 1\%$ sugar, esp. saccharose, and $\geqslant 40$ ($\geqslant 50$) esp. $\geqslant 60$, partic. $\geqslant 80\%$ protein consisting of $\geqslant 50\%$ casein. Plant protein and yeasts may also be used.

The high protein-contg. compsns. can have the appearance and taste of pastries, biscuits or confectionery, and a regular, repeatable shape, e.g. of bread, rolls, dry or filled biscuits, toast and wafers. 16.10.78 as 844992 (19pp200).

BRAS/ ★ D11 32048B/17 ★GB 2005-623
Automatic cake inverting device on hot plate conveyor - with blades on common shaft pivotable against direction of travel of conveyor
BRASH J 10.10.78-GB-039976 (12.07.77-GB-029285)
Q35 (25.04.79) A21c-15 B65g-47/24

Appts. for inverting cakes on a hot plate conveyor includes $\geqslant 1$ blade pivotable about an axis transverse to the length of the conveyor. The blades are pivoted against the direction of travel of the conveyor, pivoted through the vertical and then returned to their original position. The blades are decelerated after they have scooped up the cakes.

Machine for baking cakes, scones and pancakes. The inverting appts. is arranged to scoop cakes from the conveyor and invert them onto a stacking conveyor. The provision of two inverting devices ensures cooking of both sides of the cakes. The cakes can be inverted and left in a straight row. The stacking conveyor is moved less often than the baking conveyor so forming accurate piles of cakes. The cakes do not have to be stacked before they are packed. 10.10.78 as 039976. (5pp1044)

FOLL- ★ D11 B/17 ★IT 1028-633
Bread dough automatic fancy shaping machine

POLI- ★ D11 B/17 ★IT 1028-669
Automatic removal of food prods. from baking oven
ING POLIN E C SAS 18.06.75-IT-003451
(10.02.79) A21b

SCAS- ★ D11 B/17 ★IT 1028-749
Automatic metering hopper
OFF MECC SAN CASSIA 04.04.75-IT-008604
(10.02.79) A21c

PROC D11 42837R/24 #NL -159-861
Preparation of crisps
PROCTER & GAMBLE CO 31.07.68-GB-036542 (27.06.68-NL-009114)
*(17.04.79) *GB1195-137 A21b-05 + A23l-01/10*

Potato crisps are formed, deep fried and discharged to a conveyor in an automatic continuous belt process. The potato dough for the crisp is cut from a continuous complementary belt so that the cut out portion comes to rest on one half of a matrix carried on the continuous belt conveyor.

The other half of the matrix is brought over the first half to enclose the dough which is immersed in a deep frying bath. The crisps then pass through a cooling trajectory before the matrix opens allowing the completed crisps to fall onto a discharge conveyor to pass through further treatment and packaging.

The machine functions fully automatically and allows the crisps to be produced at a higher rate than is currently possible. 27.6.68 as 009114 (14pp1370)

ROSP= ★ D11 32776B/17 ★SU -516-390
Pastry-confectionery articles prodn. line - has mould loading-unloading mechanisms as intermittently moving conveyors, with pivoted grippers for dough blanks
ROSPISHCHEPROMAVTOM 09.01.74-SU-987592
(00.00.00) A21c-15 A21d-13/08

Production line for multilayer pastry confectionery articles such as "souvenir" spiced cakes comprises dough-mixing machine, conveyor to supply the dough, shaping machine, and conveyor for the moulds with the dough blanks. The production is completely mechanised and productivity is improved by adding mould loader and unloader, mechanisms to extract the dough blanks from the moulds, to take the moulds away from the blanks, and to clean and grease them, plus a cooling cupboard with a system of conveyors.

The device to load and unload the moulds is made as intermittently moving conveyors with bars. The mechanism for extracting the dough blanks from the moulds consists of grippers on pivots fixed so that they can periodically rotate.

Savinkov, D.I., Romanov, I.L., Kulikov, B.I. Bul. 21/5.6.76. 9.1.74. as 987592 (9pp29)

POUP/ ★ D11 33315B/17 ★WP 7900-195
Treating and deep freezing of raised dough prods. - using instantaneous hyperfrequency heating followed by deep freezing
POUPARD M 11.10.77-FR-030599
(19.04.79) A21d-08 A21d-15/02
D/S: N(US) + E(CH, DT, GB, LU, SW).

Treating and deep freezing of bakery and Viennese bread prods. made of raised dough comprises heating the dough both internally and externally at 60-275°C by introducing instantaneous heat (using a specially designed oven) into the very core of the prods. for 15 s to 20 mins. This results in faster development of a hologically blown prod. free of coloration. The prod. is then set in its shape and structure by degressive deep-freezing at -180° to -25°C.

The prod. can be stored for several months at -25 to

to form prods. having the same characteristics as those of craftsmen bakers.
10.10.78 as FR0030.(9pp950).
(F) ISR: US3876815, US3212903, DT2246214, US2549595, GB1280611, CH286842, DS806423.

See Also
D13 J5 4036305

D12 : MEAT ; FISH PROCESSING

NMHB ★ D12 31669B/17 ★DS 2810-574
Dispensing device for wooden spits - with one holder retaining penultimate spit as other releases last spit of stack
NORDISCH MASCH R BAADER 11.03.78-DT-810574
(19.04.79) A22c-07

A dispensing device for wooden spits, for use in preparing shashliks and similars dishes, consists of two pairs of holding elements for the spits which are stacked between vertical rods. One of the pair at each end is normally extended far enough to hold the stack of spits captive. If it is withdrawn, the second element of the pair presses with its front face against the last spit but one and retains it until the other element has returned under the stack.

The arrangement can deal with spits of varying dia. and is not affected by kinks or splinters which otherwise may lead to jamming. Only one spit is released at a time in a regular rhythm. 11. 3. 78 as 810574 (4pp39)

BAUE/ ★ D12 31752B/17 ★DT 2746-176
Sausage meat mincing machine - with flat nozzle injecting carbon di:oxide snow upstream of cutters and perforated discs.
BAUER W 14.10.77-DT-746176
P41 (19.04.79) A22c-11 B02c-18/30

Minced meat for sausages is prepd. by passing the fresh meat cubes through a mincing machine. Immediately ahead of the revolving cutter blades and perforated discs, carbon dioxide snow is sprayed over the meat at certain intervals.

The arrangement results in clean cuts of tendons and soft fatty particles, giving a better appearance and longer durability. The gas developed assists the mixing and filling process and enhances the taste of the sausage. 14.10.77 as 746176 (6pp39).

BETT- ★ D12 31907B/17 ★DT 2845-360
Hand-held trimming knife - with annular revolving blade and complementary adjusting ring for depth of cut
BETTCHER INDS INC 17.10.77-US-842584
P62 (19.04.79) A22b-05/16 B26b-25

A hand-held trimming knife, for cutting slivers of fat or skin from meat, bacon etc., includes a motor driven annular blade. An adjusting device for the depth of cut consists of a base part and an annular part. The latter has a shape, complementary to that of the blade and leaves a gap relative to it. Means are provided for the axial adjustment of the base part.

The depth of cut is easy to adjust. The trimming knife has an attractive appearance and gives the operator a clear view of the meat to be trimmed. 16.10.78 as 845360 (14pp39).

BAKP D12 57492Y/32 =GB 1544-910
Fibrous material e.g. meat deposition into containers - by extruding, shearing, separating and ejecting
BAKER PERKINS HOLD 15.07.75-GB-029679
*Q32 +Q31 (25.04.79) *ZA7604-136 +B65b-03*

Appts. for depositing fibrous material (e.g., meat) in predetermined amts. into containers, comprises a housing in which a portion of the material is extruded through an outlet.

A reciprocal piston ejects the portions of extruded material into the containers after the connective sinews of the extruded portions have been sheared and sepd. 15.7.75 as 029679. (7pp1363)

FRIU- ★ D12 B/17 ★IT 1028-508
Pork shoulder and back cooking in packaging
FRIULSALUMI 16.10.70-IT-083366
(10.02.79) A22c

FIMI- ★ D12 B/17 ★IT 1028-856
Appts. for producing meat products - surface roasted to varying degrees
FIMIC SRL 24.01.75-IT-012425
(10.02.79) A21b

SNOW ★ D12 32361B/17 ★J5 4035-238
Minced fish meat prodn. - giving a good quality prod. from various fish of low freshness
SNOW BRAND MILK PRODUCTS 19.08.77-JA-099986
(15.03.79) A23l-01/32

The method comprises (1) mincing fish meal to give myofibrils in sol form; (2) washing with water; (3) dehydrating (4) adding aq. salt soln. to the obtd. ppte.; (5) diluting the mixt. with water; (6) dehydrating; (7) collecting the obtd. ppte.; (8) collecting the aq. soln. contg. water soluble protein discarded from (2), (3) and (6); (9) heating the soln. to coagulate protein; and (10) mixing the recovered heat-denatured protein in the ppte. obtd. in (7).

The fish meat protein is composed mainly of 60% actomyosin and 30% water-soluble protein. Water-soluble protein can be sepd. by breaking the myofibrils physically and chemically and washing with water. The yield of minced fish meat can be increased while keeping a good texture by recovering the removed water-soluble protein, heat-denaturising it and combining it with actomyosin. The minced fish meat has better texture than that obtd. conventionally. 19. 8. 77 as 099986 (6pp5).

AJIN ★ D12 32644B/17 ★J7 9006-623
Mutton and lamb flavour improvement - by adding asparagine, glutamine, alanine or glycine to meat before cooking
AJINOMOTO KK 00.00.70-JA-091341 (26.11.66-JA-077353)
(30.03.79) A23b-04

The aminoacids can be added to the meat by any method, e.g. mixing a soln. of the aminoacid with sliced meat, immersing the meat in the soln. rubbing the aminoacid in to the meat, or adding the soln. while grinding the meat. The amt. of the aminoacid added is 0.05-5 pts. wt. per 100 pts. wt meat. Addn. of a small amt. of xylose, glucose, etc. aids improvement of flavour.

The treated meat with seasoning, spices, etc. added can be and roasted, steamed, boiled or smoked. The trea-ment kills unpleasant odours peculiar to mutton or lamb and adds flavour, without the use of spices. 26. 11. 66 as 091341/70, Div. ex. 77353/66, A23b-4/00 (30. 3. 79) AJINOMOTO KK (3pp83)

BSBE- D12 04275R/05 =NL -159-86
Cleaning of cooked shrimps one at a time
MACHINEFAB BEDRI NV (BED -) 14.03.68-NL-003635
*(17.04.79) *FR2003-934 A22c-29/02*

Machine for peeling boiled shrimps comprises a series o steps in which the individual shrimp is gripped, stretched the head is cut away and the meat is removed. The last step occurs in two stages: first, the tail is pinched so tha the meat is pushed out, then the tail is removed and the meat is pushed entirely out of the body shell.

The process enables the shrimp meat to be obtd. fully intact with no wastage due to residue left in the tail. 14.3.68 as 003635 (13pp1370)

BSBE- D12 04276R/05 =NL -159-86
Device for stopping a flow of shrimps onto a conveyor - an releasing them singly in succession
MACHINEFAB BEDRI NV 14.02.68-NL-003636
*(17.04.79) *FR2003-935 A22c-29/02*

Shrimps on a moving flat belt conveyor are spaced at inte vals to coincide with the timing of the following treatmen machine by means of a stop which is mounted on a vertical slide. The stop consists of two vertical plates inclined towards each other in the direction of motion of the belt so that the shrimps pass through a passage decreasing in width. The outlet is just sufficient to enable an undamaged single shrimp to pass through. The outlet also determines the position of the shrimp on the belt without changing its orientation.

Immediately after the stop, there is a transverse slide and pusher which sweeps across the belt in step with the movable stop. Shrimps that pass through the stop and which are thus correctly oriented and undamaged pass ahead of the sweep. Shrimps that are held up by the stop are pushed off the belt by the sweep. 14.3.68 as 003636 (7pp1370)

BSBE- D12 04277R/05 =NL-159-864

Device for turning curved shrimps into alignment on - a conveyor belt

MACHINEFAB BEDRI NV (BED -) 14.03.68-NL-003637

*(17.04.79) *FR2003-936 A22c-29/02*

Device inverts shrimps which are laid incorrectly on a horizontal conveyor belt. The belt passes over a rigid support surface, and a horizontal slide, at the end of which there are two pins, one vertical and one horizontal, moves across the belt. The shrimps lying correctly are pushed by the vertical leg across the belt and prevented from rolling by the horizontal leg.

At the side of the belt are two rails attached via levers to a pivot and counterbalance. One of the rails lies just below the level of the belt upper surface so that shrimps laid incorrectly are pushed tail first across the rail by the slide. The sideways movement continues until the shrimps are stopped by the second rail which is at body height but high enough so that the tails of shrimps laid incorrectly can pass under it. The two rails then swing upwards leaving the correctly laid shrimps as they were but rolling the others over.

The device is placed after a conventional orientating device and ensures that 100% of the shrimps are lying correctly before being fed into the next stage. 14.3.68 as 003637 (18pp1370)

KOCK/ D12 53117U/37 =NL-159-865

Automatic shrimp peeling machine - aligning straightening out and flesh from head, tailand shell

KOCKEN A (KOC /) 08.05.72-DT-222513 (23.02.72-DT-208476)

*(17.04.79) *NL7211-720 A22c-29/02*

Appts. is described for automatically peeling shrimps which have been killed in boiling water and are consequently curled up. The machine comprises a feeder which presents the shrimp, head foremost and back down onto a peeling wheel. The wheel has elliptical indentations around its perimeter which receive the shrimp back and hold the shrimp by vacuum. It then passes through an abrading device, a cutter and a device which removes the meat from the peel. Finally, the residual peel lying in the indentation is removed by compressed air.

The machine produces shrimp meat free of peel or any other undesired parts of the shrimp. 28.8.72 as 011720 (16pp1370)

JEBS/ ★ D12 B/17 ★NO 7703-078

Preservation of fish prods.

JEBSEN J W 06.09.77-NO-003078

P36 (02.04.79) A63b

NMHB ★ D12 B/17 ★PT --67-991

Fish processing and canning equipment - has baskets pivotally secured to endless conveyor and with perforated bottoms and semicircular guides

NORDISCH MASCH R BAADER 04.05.78-PT-067991

*(06.04.79) A22c-00/**

LIME= ★ D12 32928B/17 ★SU-610-728

Packing large frozen carcasses into plastic bags - using loading chute with corrugating rollers around perimeter, having pressure-controlling means

LITH MEAT DAIRY IND 10.01.77-SU-443920

sheaths, comprises sloping loading chute and mechanism to hold the ends of the sheath. Large carcases, e.g., of the order of 30-100kg can be packed by providing the loading chute with a rectangular cross-section and rounded corners. A mechanism for corrugating the sheath is mounted on guides along the chute and is capable of moving with the help of a counterweight. The mechanism consists of rollers around the perimeter of the chute mounted so that it is possible to regulate the pressing force.

Guzhas, L.P., Golubovas, A.P., Baranauskas, Z.K. Bul 22/15.6.78. 10.1.77. as 443920(2pp29)

AMOR- ★ D12 33093B/17 ★US 4148-112

Hydraulic evisceration of marine molluscs - using high velocity fluid stream which shears belly portion from clam meat

AMER CORP 28.09.77-US-837183

(10.04.79) A22c-29/04

The belly of a clam is separated from the remainder of the clam meat by introducing a whole clam body into a fluid shearing zone where a high velocity stream creates forces sufficient to shear the belly from the clam body. Appts. includes a clam introduction conduit which only allows passage of whole clam bodies in single file. A slitting device is disposed in the conduit inlet to slit the peritoneom of the bodies as they pass through the conduit. The bellies are recovered from the clam meat separately. The fluid shearing zone comprises the intersection of the clam introduction conduit and a high velocity fluid conduit.

The bellies are removed from the whole clam bodies without any structural damage to the remaining clam meat. The appts. is useful for all species fo clams including the ocean quahog. 28.9.77 as 837183 (4pp1044)

COLO/ ★ D12 33130B/17 ★US 4148-598

Foodstuff extrusion die contg. elongated passages - with common V/shaped inlet for attachment to conventional food grinder

COLOSIMO G A 06.09.77-US-830838

(10.04.79) A22c-07

An extrusion die for use in a food forming press comprises parallel extrusion passages extending through a housing. A V-shaped common inlet is formed at one end of the housing and forms angled sharp edges between the passages. The discharge ends of the passages are flush with one another. A bottom portion extends beyond the flush ends and has side walls which extend upwardly from the portion and converge slightly as they extend from an end wall of the housing.

Used e.g. for mfr. of skinless link-style sausages and artificial meat products. The extruder die can be connected directly to the discharge of a conventional food grinder The extruded foodstuff is forced down a ramp where it falls and unrolls onto an incrementally pre-marked paper that provides a continuous base for the extruded ribbons. This permits rough sizing of the extruded ribbons prior to freezing and accurate cutting to precise size and wt. 6.9.77 as 830838 (5pp1044)

BRWI ★ D12 33267B/17 ★US 4148-925

Cooking and smoking of fish - in which fish surfaces are first dried forming impervious skin, followed by cooking at gradually increasing temp.

BROWN & WILLIAMSON 12.09.77-US-832610

(10.04.79) A22c-25

Fish are (a) prepared by smoking, (b) dried at ambient temps., without cooking, till the surface is dry; (c) cooked under the following conditions:- (i) at 110°F, until the temp. at the centre of the fish is 85-105°F; (ii) at 110-130°F till the internal temp. of the fish is 100-125°F, (iii) at 130-150°F and relative humidity 14-50% until the fish internal temp. reaches 125-145°F; (iv) at 150-170°F and R.H 23-50% till the fish internal temp. is 145-165°F; (v) at 170-200°F and R.H. 7-40% till the fish internal temp. is 160-180°F. During the cooking, the fish are smoked for sufficient time to obtain the desired colour.

Moisture losses are reduced. The product is tender, moist, and has a glossy attractive appearance. The proportion of droppers is very low. 12.9.77 as 832610 (7pp)

See Also

D13: OTHER FOODSTUFFS

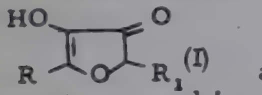
VZUI/ ★ D13 31580B/17 ★BE-871-417
Shelling cocoa pods by IR irradiation - with concurrent elimination of yeasts, moulds and enterobacteria
VAN ZUILICHEM D 21.10.77-GB-043956
(20.04.79) A23g A23n

The process comprises IR irradiation for ½-2 mins. The shell, which cracks in the treatment is easily removed without adversely affecting the grain or resulting in any loss of fats. Also yeasts, moulds and entero bacteria are totally eliminated.

The IR wavelenth is pref 2-6 μ and the treatment time is 40-100 secs. The IR is pref. from cores of ceramic material gas or electrically heated. The process is pref. carried out in an appts. described in GB 1379116. A vibrating conveyor is pref. used. The treated prods. are cooled and sepd. 20.10.78 as 871417 (8pp597)

SNAM ★ D13 31582B/17 ★BE-871-421
2,5-Di:alkyl-4-hydroxy-di:hydro:furanone prodn. - by cyclising di:hydroxy-alkane-di:one with acidic ion exchange resin catalyst
SNAMPROGETTI SPA 20.10.77-IT-028800
B07 E13 (B03) (20.04.79) C07d

Prodn. of dihydrofurans of formula (I) comprises cyclisation of dikeontes of formula RCHOH.CO.CO.CHOH.R_1 (II) in presence of an insoluble cation exchange resin as catalyst in the reaction medium.


(I)

In the formulae, R and R_1 are both CH_3, or one is CH_3 and the other C_2H_5. Reaction is pref. at 50-150°C under an inert atmos. and in aq. or aq. alcoholic soln.

(I) have organoleptic properties which make them useful in food, pharmaceuticals and perfumes. C.F. the use of dissolved acid catalysts, sepn. of catalyst for reuse, and recovery of (I) are simplified, and (I) is so pure (95%) that no further purificn. is necessary. 20.10.78 as 871421(6pp)

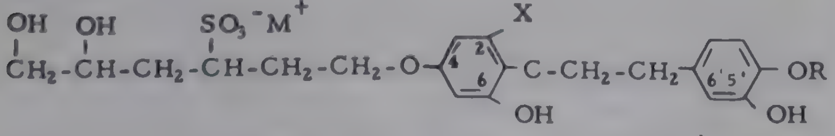
WYSS ★ D13 31622B/17 ★BE-872-899
Treating whole grain cereals to obtain better animal feed - by enzymatic decomposition of the starch to dextrose
ESCHER WYSS GMBH 21.12.77-DT-757036
C03 (17.04.79) A23k

Starch contained in the cereals is saccharified by enzymatic decompsn. to form dextrose. All the cereal substances in the grain are treated at the same time to the enzymatic decompsn. After the starch in the grain has been converted to dextrose, the prod. is dried.

Simple, inexpensive process gives a prod. with a better nutritive effect for animals, the nutrients being better used than in the case when the untreated cereal is used. 20.12.78 as 872899 (11pp597)

DYNL ★ D13 31634B/17 ★BE-872-951
4-3-Sulpho-4,5-di:hydroxy-hexyl:oxy 4'-alkoxy di:hydro-chalcone(s) - used as synthetic sweeteners and prepd. from flavonone deriv. with epoxy-sultone
DYNAPOL 22.12.77-US-863116
B05 E14 (E12) (17.04.79) A23p C07c

Dihydroxy-hexoxy-dihydro-chalcone derivs. of formula (I) are new:



In (I), R is 1-3C alkyl, X is H or hydroxy and M^+ is a physiologically acceptable cation.

Used as synthetic sweetener for foodstuffs, feeds, drinks and medicaments. The cpds. have superior sweeting effect to sucrose and are used at levels 100-1000 times less than the necessary amount of sucrose e.g. 0.2-0.005 wt % of the prod. to be sweetened. 21.12.78 as 872951 (22pp395)

FERO D13 32400F/00 =DS 1617-309
Dispersible vitamin preparations
FERROSAN 01.12.66-DK-006230
*B05 C03 (19.04.79) *NL6716-196 +A61k-31/59*

Prepn. of pharmaceutical fat soluble vitimin compsn. comprises dispersion of fat soluble and opt. other vitamins in gelatine; treatment with an inorganic acid, esp. H_2SO_4 or HCl (0.05-0.5 mole H^+/100 g gelatine), or a base esp. NaOH or NH_3 (0.05-0.5 mole OH^-/100 g gelatine), to produce pH 4.5-7.0; and mixing with a glucose syrup to form a stable emulsion.

The prods. are finely divided, freely flowing and easily dispersed in cold water. 29.11.67 as 617309 (5pp)

TAKE D13 09822U/08 =DS 1795-649
Mixed crystals of guanylic and inosinic acid disodium salts - useful as flavours and aromatics
TAKEDA CHEMICAL IND KK 07.03.63-DT-795649 (08.03.62-JA-009302)
*E13 (19.04.79) *DT1795-649 +C07h-19/20*

New mixed crystals contain the disodium salts of 5'-guanylic acid (I) and 5'-inosic acid in a wt. ratio of 2:3 to 3:1. The mixed crystals are useful to improve the flavour and smell of food and beverages. 7.3.63 as 795649 (3pp068)

UNIL D13 31445U/22 =DS 2314-607
Provolone cheese flavoured foodstuff - contng alkanoic acids
UNILEVER NV 24.03.72-LU-065039
*E17 (19.04.79) *BE-789-800 A23l-01/22*

Cheese prods. and other foodstuffs in which a cheese aroma is desired contain a flavour additive in an amt. of 100-30000 mg/kg.

The flavour additive comprises (a) 75-99 pts. wt. of a mixt. of 35-70 wt.% butyric acid (concn. of butyric acid in final prod. is ⩾500 mg/kg) 15-35 wt.% hexanoic acid, 15-30 wt.% octanoic and decanoic acid and the remainder of 100% 2-10C alkanoic acids (b) 0.01-0.2 pts. wt. alkylal-kanoates of formula $R'COOR^2$ (where the gp. R'CO contains 4-8 carbon atoms and R_2 is 1-4C alkyl) and/or (c) 0.05-0.5 pts. wt. 2-8C alkyl and dialkylamines. 23.3.73 as 314607 (4pp068)

BRIE- ★ D13 31768B/17 ★DT 2746-24
Prepn. of water-soluble non-denaturated casein from milk - b sepg. milk serum proteins from milk contg. untreated casein in soln
DENA C BRIEL GMBH 14.10.77-DT-746248
(19.04.79) A23j-01/20

Casein is prepd. by sepg. milk serum proteins from milk contg. untreated casein in soln. Process comprises keeping the milk at 50-200°C until the milk serum proteins are pptd. and sepg. the pptd. milk serum proteins, e.g. by decanting or centrifuging. Alternatively, the milk serum proteins can be sepd. by filtration, e.g. by selective molecular filtration.

Water-soluble casein is obtd. and can be used in prepn. of cheese or other milk prods.. 14.10.77 as 746248 (6pp200).

FARB ★ D13 31785B/17 ★DT 2746-47
Confectionery contg. comminuted dried beet, bran or vegetabl fibres - improves digestion and reduces sensation of hunger
BAYER AG 15.10.77-DT-746479
(19.04.79) A23g-03

Shaped confectionery e.g. bars of chocolate, assorited chocolate bonbons, contains, in addn. to conventional ingredients, 5-75 (pref. 15-39)% shredded beet, bran or vegetable fibres. Presence of these adulterants is beneficial to a consumer's health or well being. The shredde and dried beets may be used in form of finely divided pov der or a coarse granulate. 15.10.77 as 746479 (7pp267)

SIMM- ★ D13 31817B/17 ★DT 2827-9
Activated feedstuffs prepn. - by pounding and beating at the san time as grinding so that one component changes its physi chemical properties (OE 15.12.78)
SIMMERING-GRAZ-PAUK 13.10.77-OE-007340
C03 +P41 (19.04.79) A23k-01 A23n-17 B02c-07/04

The preparation of activated feedstuffs in which at least one component is in the form of cereals (grains) or is an animal or vegetable substance in small pieces hard enough for grinding comprises grinding this component with the eventual addition of feedstuff additives such as vitamins, minerals, trace elements, growth promoters, preserving agents, flavourants etc..

The comminution of at least one of the grindable components takes place under simultaneous application of mechanical energy by pounding or beating so that in addition to the comminuting and homogenising effect this component becomes activated by changing its fine structure and hence its physiocochemical properties esp. its reactivity e.g. in the formation of utilisable proteins by biochemical mechanisms.

The activation of the feedstuff gives higher protein yields in feeding. 26.6.78 as 827923 (10pp1401).

PROC ★ D13 31940B/17 ★EP ---1-460
Coffee prod. aromatisation article - comprising an aroma volatile impregnated microporous cellulosic polymer substrate in a perforated envelope
PROCTER & GAMBLE CO 30.09.77-US-838421
A97 Q34 (18.04.79) A23f-01/04 B65d-77/24
D/S: E(BE,DT,FR,GB, NL).

A microporous cellulosic polymer substrate (18) comprising interpenetrating phases pf polymer and non-solvent liq. contg. coffee aroma volatiles is encased by an envelope of sheet material (12,20) impervious to the diffusion of the volatiles, but having perforations sufficient in size and number to permit gradual passage of the volatiles through them into the surrounding atmosphere.

The prod. is useful for aromatisation of coffee materials. E.g., it can be implanted in a container of soluble coffee powder to improve its aroma over a long period. 13.9.78 as 200189 (21pp558).
(E) ISR:US1426011, FR2316882, NL6616898, DT2052267, FR2307546, FR2336946.

FOSS- ★ D13 31967B/17 ★EP ---1-513
Determining nitrogen in a sample - according to the Kjeldahl principle using an antimonate catalyst
FOSS N ELECTRIC AS 07.10.77-DK-004452
E13 J04 R16 (18.04.79) B01j-23 G01n-31
D/S: E(BE, CH, DT, FR, GB, LU, NL, SW).

The nitrogen content of a sample is determined according to the Kjeldahl principle using an antimonate catalyst, pref. potassium antimonate.

Esp. useful for the analysis of nicotinic acid.

The antimonate catalyst is less hazardous to health than the prior amt. mercuric oxide, while giving equally good results.
6.10.78 as 300467 (28pp1355).
(E) ISR: FR2220061; GB896082; NL281143; US3964869; GB904602.

LAIT- ★ D13 31980B/17 ★FR 2397-792
Food prod. based on milk protein and glucide powders - in a fat, storage stable at ambient temp.
CENT LAITIERE HAUTE 19.07.77-FR-022106
(23.03.79) A23c-23

The homogeneous solid food prod. suitable for long period storage at ambient temp. is constituted by (a) protein extracts of milk from which most of the soluble mineral salts have been removed and (b) a food substance chosen from glucides and flours. The two components are in anhydrous fine powder form such that the components cannot be tasted separately as particles. The powder mixt. is dispersed in a fatty body texturising agent.

The prod. is prepd. by sepg. the protein from skimmed milk for example by ultrafiltration or electrodialysis, then spray drying the extract. Both (a) and (b) are ground to about 25μ particle size and then mixed with a fat heated to keep it liq. The homogeneous paste is then cooled to ambient temp. to solidify the prod.

The prod. may be used to prepare a wide variety of savoury or dessert dishes. It is highly nutritive with a perfect balance of energy and proteins foods, requires 19.7.77 as 022106 (15pp597).

DAVI/ ★ D13 31981B/17 ★FR 2397-793
Moulded sticks for novelty support for ice lollies etc. - to provide colour or a motto, avoiding use of edible colourants
DAVIGNONET C 18.07.77-FR-022481
(23.03.79) A23g-03

A moulded plastic stick for supporting edible items such as ice lollies which are transparent or translucent, where the stick is coloured and/or shaped to impart colour to the food or to provide a novelty momento or toy after the food has been consumed.

The shape of the immersed portion of the stick may be optimised to secure the edible material. Avoids need for edible colourants for decorative purposes. 18.7.77 as 022481 (6pp515).

GREN/ ★ D13 32011B/17 ★FR 2398-110
Treating organic waste by anaerobic fermentation - to produce methane and dry residue for animal feed
GRENET E P 21.07.77-FR-022386
C03 P11 (D16) (23.03.79) A01c-03/02 A23j-01/18 C02c-01/14 C05f-13 C12d-03/10

Air is removed from an open fermentation receiver from the top, after charging the organic waste and filling it completely with water. The medium is then inoculated with methane-generating bacteria and also cellulolytic bacteria the waste contains cellulose; the receiver is shut and the methane evolved is collected via a conduit at the top. After evolution has stopped, the fermented waste is recovered and dried by evaporation.

A fermentation dose of methane generating anaerobic bacteria for use in the above comprises a nitrogenous culture medium placed in a pressure resistant metallic container closed by a perforated metal stopper packed with a filter of carded cotton. A similar dose of cellulolytic anaerobic bacteria comprises a medium opt. contg. a cellulose material.

Process is effected in an appts. comprising a sealed fermenter provided with a safety valve and a branched methane conduit at the top and a lid of 40-50cm. dia.

The dried fermentation waste is used in animal feeds. The process avoids either a pre-aerobic fermentation or a preheating required in previous processes. 21.7.77 as 022386 (15pp597).

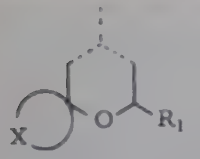
PIFF/ D13 58037Y/33 =GB 1544-654
Extracting red anthocyan dye from litmus seeds - with acids or acidified organic solvents and isolating
PIFFERI P 12.11.75-IT-003583
*B07 E24 (D21) (25.04.79) *FR2331-605 C09b-61*

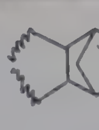
Anthrocyanins (I) are extracted from black pigmented sunflower seed husks by treating them at ambient temp. and in a nonoxidising atmos. with (a) an aq. soln. of (in)organic acid and/or (b) an organic solvent for (I) and (in)organic acid, and/or (c) an organic solvent for (I) and an aq. soln. of (in)organic acid, and/or (d) liq. organic acid. The prod. is filtered and the filtrate is conc. under vacuum at 35-40°C to obtain a red liq. contg. (I).

The treating liq. pref. comprises acetone, alcohol or polyalcohol ether. The seed husks may be pretreated with an aq. soln. of pectolytic enzymes, cellulases or proteases at pH 3.0-7.0. (I) may be used in food prods. and cosmetics. 10.11.76 as 046841. (3pp945)

INFL D13 18109Y/10 =GB 1544-701
(4)-Methyl-(1)-oxa-spiro-(5,5)-undecane - flavouring additive for foodstuffs, chewing gum, cosmetics, medicines, tobacco, detergents, soaps, etc.
INT FLAVORS & FRAGR INC 20.11.75-US-633796 (04.02.75-US-547057)
*B03 E13 +P15 (D21 D23 D25) (25.04.79) *US4010-286 A23l-01/22 +A24b-15 A61k-07/46 C11d-03/50 C11d-09/44*

The organoleptic properties of consumable material is modified by adding ⩾1 spiropyran cpd. of formula (I).


(I)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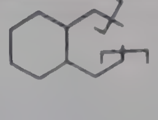
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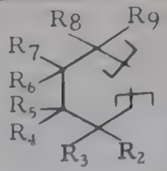

(IV)

In (I), R_1 is H or CH_3; and X is one of gps. (II)-(IV) (where one of the wavy lines is a C-C or C=C bond and the other is a C-C bond; R_{2}-9 are 1-5C alkyl; each dashed line is a C-C or C=C bond, with ≥2 being C-C bonds; and in (III), when R_1 is Me, neither dashed line represents a C=C bond).

(I) is used in foodstuffs, chewing gum, medicinal prods, perfumes, tobacco or chewing tobacco. 3.2.76 as 004119. (58pp976)

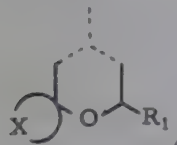
INFL D13 18109Y/10 =GB 1544-702

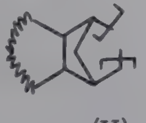
(4)-Methyl-(1)-oxa-spiro-(5,5)-undecane - flavouring additive for foodstuffs, chewing gum, cosmetics, medicines, tobacco, detergents, soaps, etc.

INT FLAVORS & FRAGR INC 20.11.75-US-633796 (04.02.75-US-547057)

*B03 E13 +P15 (D21 D23 D25) (25.04.79) *US4010-286 +C07d-309/04*

New spiropyran cpds. are of formula (I):


(I)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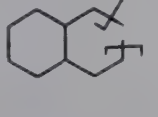
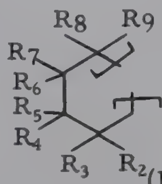

(III)


(IV)

In (I) R_1 is H or CH_3 and X is one of the gps. (II)-(IV). (where one wavy line is a C-C bond and the other is a C-C or C=C bond; R_{2-9} are H or 1-5C alkyl; each dashed line is a C-C or C=C bond, with ≥2 being C-C bonds; and in (III), when R_1 is Me; neither dashed line is C=C). (I) excludes 2,4-dimethyl-6,6-pentamethylene-5,6-dihydro-1,2-pyran and 2,4-dimethyl-6,6-(2^1, 2^1, 4^1-trimethyl-pentamethylene)-5,6-dihydro-1,2-pyran.

(I) are flavourants for foodstuffs, chewing gum, tobacco, etc. 3.2.76 as 041820. (44pp976)

ASAH- D13 40431A/23 #GB 1544-801

Soya protein food from whole beans - by soaking, heating, crushing, homogenising, coagulating and sepg.

ASAHIMATSU KORIDOFU 25.01.77-JA-007033 (27.01.78-GB-003517)

*(25.04.79) *BE-863-481 +C07g-07/02*

Soybean is processed by soaking whole soybean seeds in water; subjecting the seeds to superheated steam for ≥1 min. to raise seeds to 80-200°C; crushing treated seeds in water; reducing the particle size of broken seeds by treatment with a homogeniser until cell structure is broken down.

Protein coagulating agent is added to ppte. protein, fat and fibrin and ppte. formed sepd. Pref. coagulating agent is lactic, citric, malic or a phosphoric acid or their salts, or calcium or magnesium chloride or sulphate.

Water content of processed soybean may be reduced if necessary by freeze-drying or heating. Used as foodstuffs in agriculture, fisheries, cattle breeding and dairy farming. 27.1.78 as 003517. (3pp931)

BIOT- ★ D13 32038B/17 ★GB 1544-812

Texturised proteinaceous food prod. - made from juice from vegetable processing, by isolating protein then e.g. spinning

BIOTECHNICAL PROCES 13.08.75-GB-033689

(25.04.79) A23j-03

The prod. is made by first recovering a protein-contg. juice from the liq. or solid by prods. of ≥1 common vegetable, then prepg. a ppte., conc. or isolate from the juice.

This is either (i) spun (wet extruded), opt. with other proteins; (ii) formed into a blending soln. or protein coagulum for mixing with texturised protein, and/or (iii) made into a proteinaceous soln. for coagulation with spun protein material.

The juice is pref. derived from processing of potatoes, carrots, peas, beans, brussel sprouts or chicory, either directly from a liq. by-prod. or from a solid by crushing, forming an aq. slurry or pulp, then sepg. the juice from insoluble cell-wall material and starch grains.

Used esp. for meat and cheese analogues from low-cost waste material. The prods. are useful for human or animal consumption. 20.7.76. (4pp1251)

ABES/ D13 17548A/09 #GB 1544-843

Rice flavoured snack food based on corn starch - flavoured with rice bran, pref. from rice wine prodn.

ABE S (SHUN/) 28.04.76-US-681203 (30.04.76-GB-017841)

*(25.04.79) *US4073-958 +A23l-01/10*

Snack food is prepd. by prepg. a dough cake by kneading finely divided corn material and finely divided rice flour or rice bran with water and/or steam, then shaping, drying and swelling the cake.

Pref. finely divided corn material is admixed with the rice flour or bran and finely divided defatted soybean or defatted peanut, and heating the mixt. with water and/or steam to obtain the dough cake.

Used esp. to prepare a snack food having a rice cracker flavour. Prepn. uses inexpensive corn materials having controlled superior swelling characteristics. 30.4.76 as 017841. (4pp931)

COST/ D13 51881A/29 =GB 1544-901

Food kneading machine - with revolving annular trough kneading tool and vertically movable extraction worm conveyor

COSTA R 03.06.77-IT-068275 (11.01.77-IT-067046)

*(25.04.79) *DT2758-694 +B01f-09/16 B01f-15/02*

A food kneading machine (e.g. for making dough) comprises a stirring mechanism which operates in a rotary annular-shaped trough mounted on a substructure. A column extends upwardly above the trough and acts as a carriage for a conveyor which dips into and out of the trough as the carriage moves upwardly and downwardly.

In its lowered position the carriage conveys material out of the trough. A motor-driven screw-thread effects vertical carriage movement thereby operating the conveyor and stirring mechanism. 10.1.78 as 000956. (8pp1363)

UNIL D13 68741X/37 =GB 1544-906

Textured protein food products prepn. from protein solns - by freezing treatment followed by stabilisation of the product

UNILEVER LTD 28.02.75-GB-008639

*(25.04.79) *BE-838-907 A23j-03 +C07g-07*

Texturised food prod. is prepd. by freezing a proteinaceous material contg. > 50% of the protein in the dissolved state, into crystal layers of solvent spaced by intermediate crystal-moulded protein layers extending in one direction normal to refrigerating surface, and stabilising the formed proteinaceous structure.

Pref. an aq. solvent is used. 70-100% of the protein is present in the dissolved state. Total protein content of proteinaceous material is ≥3wt.%, esp. 10-30wt.%.

Prods. formed may contain sufficient structure alignment both in frozen state and after cooking, esp. in meat prods. 1.3.76. (5pp931)

GENO D13 52544Y/30 =GB 1544-925

Aromatic coffee constituents - produced from coffee oil distillation by condensation on removable sleeve in refrigerator chamber

GENERAL FOODS CORP 07.01.76-CA-243087

*+Q78 (25.04.79) *DT2655-187 +F28b-01*

Coffee aroma constituents are obtd. useful in the aromatisation of a foodstuff by subjecting coffee oil in a distillation chamber to distillation at sub-atmos. pressure and a mild temp. to obtain aroma constituents.

Aroma constituents are condensed onto the outer surface of a heat-conductive sleeve removably and snugly surrounding a heat-conductive container contg. a coolant. The sleeve is enclosed by a condensing chamber having ports for the passage of aroma constituents. Container has a removable cover sealing opening through which sleeve is removed and the condensate recovered.

Conc. aroma prods. obtd. are subsequently incorporated into food prods., esp. instant coffee. 6.12.76 as 050860. (6pp931)

BREG/ ★ D13 B/17 ★IT 1028-504
Olive dough
BREGOLI C 05.12.69-IT-004317
(10.02.79) A23d

RODA- ★ D13 B/17 ★IT 1028-511
Unloading of edible fruit
RODA COSTR SPA 26.09.72-IT-012911
(10.02.79) A23n

NIPA ★ D13 32088B/17 ★J5 4020-889
Fish feedstuff prepn. - by blending glycine, alanine, lysine or valine with protein from plant, animal or microorganism
NIPPON PAINT KK 12.07.77-JA-083673
C03 (16.02.79) A23k-01/18

Method comprises blending a member selected from natural or synthesised glycine, alanine, lysine and valine, with a member selected from protein originated from plant, animal or microorganism. The aminoacid may be a deriv. such as glycyl alanine, alanyl glycine, sarcosine, etc.

The natural aminoacid component may be obtd. by extn. of Lumbriconereis, e.g. Lumbriconereis is extracted twice with methanol, then extracted with water three times, and further extracted with methanol. The extractant is combined and conc., defatted with ether, and poured into acetone. The resulting pptes. are recovered and treated with ion exchange resins to give the desired aminoacid component. Amt. of the aminoacid component to be used is 50mg. to 1g. per kg. of solid components of the feedstuff.

Typically, 250mg. of glycine is dissolved in 250ml. of water and mixed with 1kg. of soybean protein, and the resultant is further mixed with vitamins and 100g. of flour to give the feedstuff. 12.7.77 as 083673 (3pp22).

ASAE ★ D13 32125B/17 ★J5 4034-305
Low m. pt., stable fat compsn. - comprises palmitic or stearic acid, mono:ene or diene acid and tri:glyceride(s)
ASAHI ELECTROCHEM IND KK : 23.08.77-JA-100976
(13.03.79) A23d-05

The fat compsns. comprises 0-0.5% S_3, 0.1-5% $S_2E + SE_2$, 0-4% E_3, 1-6% S_2U, 1-15% SEU, $\geqslant$40% ($E_2U + SU_2 + EU_2$) and $>$15% U_3 (where S is palmitic or stearic acid; E is trans-monoene acid or trans-trans-diene acid, U is cis-monoene acid or cis-cis-diene acid; S_3, S_2E, SE_2, E_3, S_2U, SEU, E_2U, SU_2, EU_2 and U_3 are triglycerides), fatty acids (unsatd. acids of polyenic acids) being contained in an amt. <8%. The compsn. can be prepd. by hydrogenating and/or fractionating naturally occurring oils and fats contg. no laurate, e.g. peanut oil, colza oil, almond oil, highly olefinic safflower oil, olive oil or processed oils, by ester interchanging or fractionating such oils and fats.

The compsns. are highly antioxidative and have high stability against heat and hydrolysis and low m.pt. 23.8.77 as 100976 (3pp59).

SUGA/ ★ D13 32278B/17 ★J5 4035-088
Mfg. fish attractant - by mixing minced fish, lobster, and blending with e.g. cement
SUGA K 12.08.77-JA-096142
A97 C03 P14 (14.03.79) A01k-97 A23k-01/18

Agent for attracting fish is prepd. by mixing minced fish flesh, lobster, shrimp, shell fish, insects, etc. with polyvinyl acetate emulsion, PVC emulsion, polyacrylic acid ester emulsion, polyacrylonitrile emulsion, polyvinyl alcohol soln. or natural or synthetic rubber latex and blending the mixt. with Portland cement, inorganic cement, clay, sand, ferric oxide powder, etc., followed by curing and shaping into suitable form.

The resultant may be further mixed with synthetic resin emulsion, natural rubber latex, synthetic rubber latex, starch, protein paste, etc. For example, 1 pts. wt. kaolin powder, 0.3 pts. wt. Portland cement powder, 1 pt. wt. minced sardine flesh and a suitable amt. of PVC emulsion are homogeneously stirred and blended and shaped into a rod (about 8mm. in dia. and 18-20mm. length), followed by curing. 12.8.77 as 096142 (3pp22).

NICH- ★ D13 32357B/17 ★J5 4035-230
Prepn. of dried gourd shavings - by first slicing intermediate pulp layer of bottle gourd fruits
NICHINAN KK 08.07.77-JA-080999
(15.03.79) A23b-07/14 A23l-01/21

Process comprises (a) slicing the intermediate pulp layer of bottle gourd fruits in thin strings with a slicer; (b) steeping the strings in aq. soln. of alkali or alkali salt; (c) drying in air; (d) smoking with S in a closed room; (e) drying again in air; and (f) preserving by packaging in synthetic resin bags opt. after restoring with water and seasoning.

Prods. are resistant to browning and attack by mould. 8.7.77 as 080999 (6pp5).

AJIN ★ D13 32358B/17 ★J5 4035-233
Packaged white mushroom prepn. - by boiling raw mushroom in aq. soln. of basic aminoacid and packaging
AJINOMOTO KK 22.08.77-JA-100247
(15.03.79) A23l-01/21

The method comprises boiling raw mushrooms in an aq. soln. of basic amino acid or its salt and packaging it as usual. As basic amino acid, lysine, arginine and their salt such as carbonate, hydrochloride, the salt with acidic amino acid, etc. can be used. Usually ascorbic acid or its salt is dissolved in an amt. of 0.05-0.2(0.07-0.15)g. in water 100ml. and basic amino acid or its salt is dissolved in an amt. of 1-20(5-15)g. in the soln.

The taste and flavour in mushroom is hardly dissolved out and delicious packaged mushroom can be prepd. By combining ascorbic acid in the aq. soln., browning of mushroom is prevented. 22.8.77 as 100247 (4pp5).

NAKA/ ★ D13 32359B/17 ★J5 4035-234
Seasoning and enriching agent - prepd. by mixing extract of Laminariales and extract of Cyanophyta or Chlorophyta
NAKAZAWA T 25.08.77-JA-102044
(15.03.79) A23l-01/30

The agent is prepd. by mixing extract of Laminariales and extract of Cyanophyta or Chlorophyta homogeneously. By combining the extracts they show synergic effect and desirable healthy and nutritive effects which cannot be expected by taking them singly.

Typically, fine sea tangle pieces 400g. and powdery Spirulina 400g. are mixed and the mixt. is extracted with 1600-2000ml. of ethanol for 50 hrs. The extract is filtered and refined water 3000-3500ml. is added to the filtrate. Then it is heated to 30-40°C for vaporising ethanol. The obtd. soln. is then treated by spontaneous vacuum cooling to obtain fine powdery prod. 25.8.77 as 102044 (3pp5).

KIBU- ★ D13 32360B/17 ★J5 4035-236
Strengthened soy bean protein dispersion gel prepn. - by adding ethanol to dispersion obtd. from soy bean protein in water and opt. edible oil mixt., to improve texture of resulting food prods.
KIBUN KK 23.08.77-JA-100119
(15.03.79) A23j-01/14 A23j-03

The method comprises (i) combining ethanol in the dispersion of soy bean protein which is obtd. by dispersing isolated soy bean protein in water or the mixt. of water and edible oil and pref. (ii) preparing pasty food from the soy bean protein dispersion obtd. by mixing paste or fine pieces of animal protein or vegetable protein with it, moulding the mixt. and heat-coagulating the mouldings.

By combining ethanol 1-10 v/v% in the paste or the emulsion of sepd. soy bean protein, the strength of the gel obtd. by heat-coagulating the paste or the emulsion of soy bean protein, can be improved. Texture of various pasty food contg. soy bean protein can be improved. 23.8.77 as 100119 (4pp5).

NISW ★ D13 32362B/17 ★J5 4035-240
Pasty food mfr. using soybean protein - opt. contg. gluten, by combining with guar gum in animal or fish meat
NISSHIN OIL MILLS KK 24.08.77-JA-100595
(15.03.79) A23l-01/32

The method comprises combining (a) soy bean protein or soy bean protein and gluten and (b) guar gum in animal or fish meat and prepg. pasty food as usual.

A pasty food of good quality can be prepd. with good workability without the problems of the prior art. The mixt. is hard enough for treating it easily without adhering to wall of the vessels and without the deformation of mouldings. Thus by the method pasty food can be prepd. inexpensively using soy bean protein without reducing the quality and the nutritive value. 24. 8. 77 as 100595 (4pp5).

NIYU- ★ D13 32363B/17 ★ J5 4035-243
Quality-improving agent for food and drink contg. lactic and bacteria - comprises low molecular peptide obtd. by decomposing skeletal muscle of Cervoidea animal
NIPPON YUKON KK 23.08.77-JA-101410
(15.03.79) A23c-09/12

Quality-improving agent (I) is composed of low molecular peptide obtd. by decomposing the skeletal muscle of the animal of Cervoidea.

(I) is (a) soluble in water and in aq. <80% ethanol soln.; (b) positive to Biuret reaction, Ninhydrin reaction and Pauly diazo reaction on its aq. 0.1% soln.; (c) negative to Ehrlich reaction and Sakaguchi reaction on its aq. 0.1% soln.; (d) has max. absorption at ~275nm and less max. absorption at ~255nm. for UV.; and (e) viscosity 7.0-7.5 cPs. (at 25°C, by Brookfield viscometer) on aq. 18% soln.

With (I) the starter of lactic acid bacteria which can form the soft curd showing high acidity, can be prepd. and can be easily mixed homogeneously with the starting subst-rate. In the major fermentation it greatly promotes the lactic acid fermentation. 23. 8. 77 as 101410 (3pp5).

CISC- ★ D13 32365B/17 ★ J5 4035-245
Crackling sugar confectionery contg. gas bubbles - is prepd. by melting the sugar, contacting with high pressure gas under stirring and cooling
CISCO KK 23.08.77-JA-100882
(15.03.79) A23g-03

The method comprises heat—melting sugar, contacting the melted sugar with gas under the pressure higher than atmospheric pressure (pref. 150-3000kg/cm^2) with stirring to enclose gas in the melted sugar and solidifying it by cooling.

As the sugar, e.g. fructose, glucose, arabinose, sucrose, lactose, maltose, etc. sugar alcohols such as sorbitol, mannitol, etc. and sugar acids such as gluconic acid, etc. can be used. As the gas, air, N_2, CO_2, etc. can be used favourably. In the melted sugar edible acid (e.g. citric acid, tartaric acid, adipic acid, fumaric acid, etc. and their salts), perfume, colourant, etc. may be combined freely.

The sugar confectioneries such as candy, which can keep enclosed gas stably in them for long time, can be prepd. and they can be easily broken in mouth with releasing enclosed gas and crackling softly. 23. 8. 77 as 100882 (3pp5).

KAOS ★ D13 32366B/17 ★ J5 4035-248
Imitation dairy food prepn. - using sorbitan fatty acid mono-ester of specific HLB as emulsifier
KAO SOAP KK 24.08.77-JA-101342
(15.03.79) A23c-09/10 A23c-11 A23c-13 A23g-09

The method comprises using the sorbitan fatty acid monoester, which has HLB value above 8 and is composed of 14-22C satd. fatty acid, as the emulsifier.

Imitation dairy foods are defined as the foods (e.g. ice cream, cream of coffee use, whipped cream, etc.) of which milk component is part or wholly replaced with analogous components such as vegetable oil and fat, skim milk, powdery skim milk, etc. In prepg. ice cream with the emulsifier (a) proper maximum overrun can be attained in a short time; (b) good form-holding property can be attained; (c) good texture and good after-taste. In prepg. whipped cream (a) proper maximum overrun and proper viscosity can be attained; (b) form-holding property appears in a short time; (c) even after 15 hrs. the form can be kept in original form.

Sorbitan fatty acid monoester is combined 0.01-3.0 (0.2-1.0) wt.% in starting material. 24. 8. 77 as 101342 (11pp5).

IDEK ★ D13 32367B/17 ★ J5 4035-249
Water-soluble yeast protein drink prodn. - is free of specific taste and odour and can be used for babies, sick people etc.
IDEMITSU INDUSTRIES KK 22.08.77-JA-099487
(15.03.79) A23l-02/38

The method comprises (1) washing crushed yeast with a mixed soln. contg. (a) oxalic acid and/or citric acid and (b) (m)ethanol at <70°C, (2) extracting it with aq. alkaline soln. contg. sodium hydroxide, potassium hydroxide and/or ammonia at 35-80°C and pH 11-13.5, (3) pptg. protein from the extract at the isoelectric pt., (4) adjusting the pH of the ppte. to neutral, (5) dissolving the obtd. yeast protein in water, (6) adding oil, fat and emulsifier to the aq. soln., (7) opt. adding sugar, colourant, perfume, etc. to the soln. and (8) homogenising the mixt.

The yeast protein drink is well balanced nutritionally and is highly soluble in water. 22. 8. 77 as 099487 (5pp5).

MITN ★ D13 32443B/17 ★ J5 4035-883
Oxygen adsorbent used in food containers etc. - comprises iron powder coated with metal halide and opt. binder and/or alkaline substance
MITSUBISHI GAS CHEM IND 26.08.77-JA-102353
E36 G04 (16.03.79) A23l-03/34 B01d-53/16

An oxygen absorbent is prepd. by coating 100 pts. wt. of iron powder with 5-10 pts. wt. of a metal halide, together with a binder and/or an alkaline substance if necessary, by using a metal halide soln. contg. binder and/or alkaline substance, and then the coated iron powder is dried until the moisture content becomes ≤1 wt.%. Metal halide is e.g. alkali(ne earth)metal halide.

The absorbent has a great oxygen absorption capability without defects, e.g. becoming wet on standing, contamination of foods, generation of hydrogen during storage, absorption of atmospheric oxygen during storage, etc. and thus exhibits its great power within a confined container for foods, etc. 26. 8. 77 as 102353 (7pp117).

NIOF ★ D13 32517B/17 ★ J5 4036-30
Highly emulsified fluid confectionery shortening - contg. (un)satd fatty acid ester of poly:hydric alcohol, and oil fluid at 0 degrees C
NIPPON OILS & FATS KK 27.08.77-JA-102186
(D11) (17.03.79) A23d-05

The shortening is obtd. by the addn. of 5-30 wt.% of satd. fatty acid (16-24C) ester of polyhydric alcohol (i.e. hard emulsifier) and 1-40 wt.% of satd. fatty acid (2-14C) este and/or unsatd. fatty acid (16-24C) ester of polyhydric alcohol (i.e. soft emulsifier) to an oil that is fluid at 0°C (e.g. corn oil, rapeseed oil, bean oil, etc).

Shortening has favourable fluidity at low temp. (e.g. at 0°C), and has favourable miscibility to cake at its making using continuous cake mixer. 27. 8. 77 as 102186 (5pp170).

IKED/ D13 04729Y/03 =J7 9006-61
Hydrogen peroxide bleaching method for foods - using condense phosphate obtd. from alkali and phosphoric acid, this reducin peroxide amt. used
IKEDA S 28.05.75-JA-064453
*E37 (30.03.79) *J51139-644 A23l-01/27*

Bleaching method is provided for foods using hydrogen pe -oxide. The amt. of hydrogen peroxide is restricted to < 0.1 g in 1 kg of food for Japanese noddles, boiled fish pa te and 'chikuwa' and < 0.03 g in 1 kg of other foods.

Soln. of hydrogen peroxide-bleaching agent is used by adding at least 0.1 w/w % (based on H_2O_2) of condensed phosphate having molar ratio of M_xO/P_2O_5 < 1.5 (M is al ali(ne earth) metal, x is 1 or 2).

The condensed phosphate can be obtd. as a glassy substance by mixing hydroxide of alkali (ne earth) metal, wit aq. < 75 w/w % phosphoric acid soln. or P_2O_5 so that the molar ratio of MxO/P_2O_5 lies in above range, heating the mixt. at 600-900°C for 10 mins. 24 hrs. for condensn. an cooling the reaction prod. rapidly.

The condensed phosphate itself is nontoxic and can pr mote the bleaching activity of H_2O_2. Thus the amt. of H_2O applied for bleaching foods, can be decreased to half or less without decreasing the bleaching effect. 28. 5. 75 as 064453, A231-1/277 (30. 3. 79) IKEDA S (5pp)(J5 1139644

KAOS D13 39540A/22 = J7 9006-619

Peeling fruit and vegetables in aq. alkali soln. - contg. nonionic surfactant, e.g. polyoxyethylene sorbitol fatty acid ester and glycerol, sorbitol mannitol, sugar, vitamin/C or urea

KAO SOAP KK (TOXO) 05.10.76-JA-119628
*A97 (30.03.79) *J53044-647 A23l-01/21*

The fruits or vegetables are immersed in aq. alkali peeling soln. contg. (a) 0.005-1.0 wt % nonionic surfactant of HLB 6-16 selected from polyoxyethylenesorbitan fatty acid ester sucrose fatty acid ester, sorbitan fatty acid ester, glycerin fatty acid ester and propyleneglycol fatty acid-ester, and (b) 0.005-1.0 wt % glycerol, sorbitol, mannitol, sugars, vitamin C or urea.

With 0.1-1(0.2-0.5) wt % dil. alkali soln. the peeling of fruits and vegetables (e.g. orange, peach, pear, apple, apricot, grape, tomato cucumber, radish, etc.) can be effected easily in a short time (ca. 30 mins) at relatively low temp. (ca 30°C) with little breakage. The peeled fruits or vegetables have excellent flavour, glossiness and hardness. Waste water from the process can be easily coagulated with calcium hydroxide and the load on the waste water treating process can be decreased greatly. As alkali caustic soda is pref. used and as sugar fructose, glucose, maltose and sucrose can be used. 5.10.76 as 119628 A231-1/21 (30.3.79) KAO SOAP KK (8pp5) (J5 3044647)

SUMI- D13 29349A/16 = J7 9006-620

Processed banana prepn. having excellent taste and flavour - by blanching peeled banana, decomposing starch with amylase, mashing and mixing

SUMISHO FOODS KK 19.08.76-JA-098868
*(30.03.79) *J53024-051 A23l-01/21*

Method comprises decomposing starch by blanching peeled banana in aq. soln. of pH 2.5-4.2 contg. acid, alum and polyphosphate adding α-amylase to blanched banana to decompose starch, followed by mashing and mixing.

Viscous pasty processed banana food excellent in preservative property is obtd. having vivid pale yellow colour which does not turn brown. Processed banana feed can be further processed to cream, jam, etc. 19.8.76 as 098868 A231-1/212 (30.3.79) SUMISHO FOODS KK (3pp) (J5 3024051)

KAOS D13 43202A/24 = J7 9006-621

Peeling of apples or apricots - by immersing in alkali soln. contg. dissolved sorbitan fatty acid ester and condensed phosphate

KAO SOAP KK (TOXO) 05.10.76-JA-119629
*E17 (E36) (30.03.79) *J53050-354 A23l-01/21*

The method comprises immersing apples or apricots in an alkali soln. in which sorbitan fatty acid ester and condensed phosphate having 2-6 P atoms are dissolved.

Apples or apricots can be peeled chemically without the fall in quality due to activity of chemicals applied and without decrease in yield. The method can be applied for processing for canned prod. bottled product, frozen product.

Sorbitan fatty acid ester prepd. from 8-18C fatty acid is combined in a concn. of 0.005-1.0 w/w % in aq. alkali soln. which contains sodium hydroxide 1-8 w/w %. Alkali metal pyrophosphate, sodium tripolyphosphate, sodium trimetaphosphate or sodium hexametaphosphate is used as condensed phosphate. The peeling is at 85°C for 2-4 mins. 5.10.76 as 119629, A231-1/21 (30.3.79) KAO SOAP KK (6pp5) (J5 3050354)

AKIZ/ D13 53234X/28 = J7 9006-622

Edible, bleached, dried seaweed - two stage bleaching is followed by salt treatment and natural drying

AKIZUK S 22.11.74-JA-134968
*(30.03.79) *J51061-662 A23l-01/27 A23l-01/33*

Dried seaweed (Graoilaria Confervoides) is washed with water, steeped for above 10 hrs. in 0.1-0.3% hypochlorite aq. soln. and then steeped in acetic acid aqs. soln. To the seaweeds, 20-30% salt are added with stirring and the seaweed is left for 30-60 mins. The more salt is added and the seaweed is dried by sunlight. The seaweeds are bleached slightly by the bleaching of two steps. By adding salt, the taste of the seaweeds is strengthened. 22.11.74 as 134968, A231-1/337 (30.3.79) AKIZUKI S (3pp)(J51061662)

SEKI/ ★ D13 32645B/17 ★ J7 9006-624

Artificial chestnut powder used for cakes - made by heating vegetable oil and flour in a hot pan and then mixing with calcium carbonate

SEKIYA Y 29.00.73-JA-000414
(30.03.79) A23g-03

Artificial chestnut is produced by heating flour with a small amount of vegetable oil in a hot pan at ca. 120°C and mixing ⩽ 5 pbw $CaCO_3$ with 100 pbw of the flour.

The product closely resembles natural chestnut in flavour, taste and feel. 29.12.72 as 000414, A23g-3/00 (30.3.79) YOSHIO SEKIYA (2pp) (J4 9092262)

YAMA- ★ D13 32646B/17 ★ J7 9006-625

Crisp rice cake prodn. - by coating dry soy-rice cake mixt. with aq. malto dextrin paste, rolling laver onto it and drying

YAMAHO KK 11.12.73-JA-141099
(30.03.79) A23g-03

The method comprises applying soy to rice cake, drying, coating with paste contg. 80 wt % malto-dextrin and 20 wt % water, rolling laver it, and allowing the paste to dry at room temp.

Rice cake of excellent flavour and cripsness is obtd. 11.12.73 as 141099 A23g-3/00 (30.3.79) YAMAHO KK (2pp83) (J5 0089573)

TAKS ★ D13 32647B/17 ★ J7 9006-627

Drink prodn. from aloe - by adding amylase to ground leaves, adding ethanol, maturing, removing solids and adding seasonings etc. to soln.

TAKASAGO PERFUMERY KK 21.04.73-JA-044664
(30.03.79) C12g-03/04

Method comprises adding amylase to ground leaves of aloe to decompose viscous substance, adding ethanol, maturing the mixt. removing solids, and adding seasonings, spices, carbonate, etc. to the soln. 21.4.73 as 044664, C12g-3/04, (30.3.79) TAKASAGO PERFUMERY KK (3pp83) (J4 9132266)

NEST D13 39972X/22 = J7 9006-628

Instantly soluble granules for drinks esp. coffee and tea - vacuum expanded from extruded paste of vegetable extract

SOC PROD NESTLE SA 17.12.74-FR-041602
*(30.03.79) *BE-835-557 A23f-01/08 A23f-03 +A23l-02/38 A61k-35/78*

Extracts of vegetable matters such as coffee, chicory, tea herbs etc. are produced in required form i.e. as grains which are instantly soluble in water and have a porous, unbroken structure, a smooth surface free from asperities and a density between 50 and 300 g/l pref. for coffee between 100 and 200 g/l and for tea between 80 and 150 g/l.

In the prodn. a vegetable extract such as spray-dried or freeze-dried coffee is formed into a paste which is extruded into a vacuum chamber where the extruded material expands to a honeycomb structure and is cut into graular fragments. The extruded paste can have up to 10% water content, pref. 2-6%, and is extruded at a pressure of 1-10 bars and temp. of 60° to 125°C into a vacuum chamber at a pressure of 0.01-0.3 bar, the internal dia. of extrusion nozzles being pref. in the range of 25-100 mm.

Method is useful for the mfr. of instant drink granules which are immediately soluble in water and thus partic. suited as ingredients in coffee and tea vending machines. The granules are instantly sol. in cold as well as in hot water and are homogeneous, stable granules of reliably consistent density, i.e. the granules are less prone to shaking down to an increased density in transit than agglomerated granules. 16.12.75 as 150091 (clg. 17.12.74-FR-041602) A23f-1/08, 3/00, A231-2/38, A61k-35/78 (30.3.79) SOC PROD NESTLE SA (6pp) (J5 1086169)

NEST D13 84974W/52 = J7 9006-635

Soluble tea extract prepn - by isolating-oxidising natural tannins in aq medium bleaching, and recovering prods

SOC PROD NESTLE SA 10.06.74-US-477601
*(30.03.79) *BE-829-950 A23f-03*

Soluble tea extract is prepd. by (a) extracting the leaves with hot water, (b) cooling the aqs. extract to precipitate the natural tarmins, (c) sepg. the tannins, (d) dispersing the tannnis in an aqs. medium at pH 7.0-9.0 (e) oxidising the medium at a temp. above 50, esp. 60-120 C for a period sufficient to make the tannins solunle in cold water, and re- duce the pH of the medium to 5.0-8.0, esp. 5.0-6.0 (f) treating the medium contg. the oxidised tannins with an agent contg. an equivalent amt. of natural tannin so that the oxidised tannins are bleached, (g) cooling the bleached aqs prod. and (h) sepg. the precipitated tannins from the soln. of bleached tannins. Oxidn. under strongly basic conditions are avoided, and thus development of undesired colours and flavours. Method also avoids special bleaching.

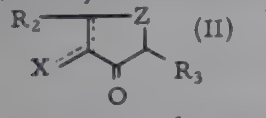
Acidification stages formerly used to obtain an accept- able prod. The extract is soluble in cold water, and its flav -our can be varied according to the taste of the consumer. The reconstituted tea has an aroma that is practically in- distinguishable from that of freshly brewed tea leaves. 6.10.75 as 070104 (clg. 10.6.74-US-477601) A23f-3/00 (30.3.79) SOC PROD. NESTLE SA (6pp) (J5 1007197)

FIRM D13 50661T/32 #J7 9006-640

Tobacco, food and beverages - aromatised by treatment with amides, esters, ketones and phenol derivs

FIRMENICH SA 00.00.72-NL-000728 (11.01.72-CH-000380)
*E19 P15 (D18) (30.03.79) *NL7200-728 A24b-03/12*

The organoleptic props. of tobacco and other prods. are improved or modified by adding (i) a cpd. of formula R-C(O)NHR$_1$ (I) (where R and R$_1$ are 1-6C alkyl or H), (ii) cycloaliphatic esters and ketones (iii) phenol derivs. (iv) heterocyclic ketones of formula (II):



(II)

with a double bond in the posn. of 1 of the dotted lines, where X is H or OH if the double bond is in the ring or O if the double bond is outside the ring, R$_2$ and R$_3$ are lower alkyl and Z is O or S (v) caryophyllene derivs. or (vi) epoxy-β-ionone, 6-methyl-hepta-3,5-diene-2-one, 3-isopropylcyclopent-2-ene-1-one, octa-3,5-diene-2-one nonane-2,5,8-trione, 2-methyl-5-(α-methyl-α-hydroxyethyl)cyclohex-2-ene-1-one or 4-methylthiobutan-2-one.

Food, fodder, drinks and pharmaceuticals may be treated, as well as tobacco. The taste of tea, coffee and lime-flower tea can be modified, the additives may be used in meat, esp. smoked meat and cocoa. 19.1.72 as 121214 (clg. 11.1.72-CH-000380) A24b-3/12 (30.3.79) FIRMENICH & CIE. (2pp) (J5 1070892)

TAKS D13 66795S/42 =NL-159-866

Expanding chocolate in thermoplastic condition - under vacuum

TAKASAGO PERFUMERY KK 31.03.70-JA-U30140
*(17.04.79) *NL7103-940 A23g-07*

Food prods. are rapidly expanded by means of a holder which is attached via a conventional quick coupling to a permanent vacuum source. The holder consists of a dish into which the feed prod. is placed over which a cover is fastened, there being a vacuum tight seal ring between the two adjoining edges.

The device is partic. suited to the rapid prepn. of single portions in restaurants. 24.3.71 as 003940 (4pp1370)

UNIL D13 09180R/06 =NL-159-867

Proteinageous substance in the mesophase which may be - incorporated into foodstuffs

UNILEVER NV 09.08.68-GB-038211
*(17.04.79) *BE-737-277 +A23j-01/14*

Vegetable protein products (I) are prepd. by coagulation of a new mesophase of a vegetable protein contg. 10-50 wt.% of heat-coagulatable, mainly non-denatured vegetable protein which is kept in soluble form by a dissolved salt in a quantity corresp. to an ionic strength of min. 0.2 at pH 4-6. In a pref. embodiment, the mesophase is coagulated by extruding into a spinning bath at >80°C.

(I) may be used in foodstuffs such as meat substitutes. Using the mesophase of the vegetable proteins obviates the use of high pH-values, giving stable products which may be frozen and thawed again. The mesophases are resistant to precipitation in the presence of organic solvents. 11.8.69 as 012222 (7pp279)

B/17 ★PI --67-985

SADR- ★ D13

Automatic olive stoning and crushing machine - has fruit metering hopper with olive transport and positioning system

SADRYM RACIONAL MEC 04.05.77-ES-458438
*(06.04.79) A23n-00/**

FATS= ★ D13 32763B/17 ★SU-507-303

Protein extn. from soya oil-cake - by grinding in caustic soda soln. contg. higher fatty acid salts

FATS RES INST 21.06.74-SU-036932
(D23) (09.08.78) A23j-01/14

Proteins are isolated from soya oil-cake by extn. with NaOH soln., acidifying the soln. to ppte. the proteins, neu- tralising the latter and drying the suspension. A better yield, coupled with less denaturing is obtd. as follows: before extn. the initial oil-cake is mixed with aq. NaOH and 12-20C fatty acids, or their alkali metal salts. During extn, additional grinding of the oil-cake in the soln. is also conducted. Soya oil-cake and NaOH soln. are used in the ratio 1:3-1:7 and fatty acids are used in quantities 0. 1-0.005 wt.%.

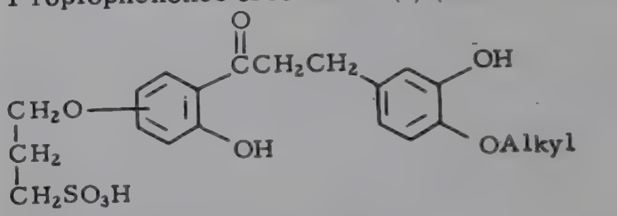
Krasil'nikov, V.N., Nedachina, N.A., Zarembo, G.V.
Bul. 11/25.3.76. 21.6.74. as 036932 (2pp835)

CHIN D13 57507W/35 =SU-584-764

(3-Sulphopropoxy)-substd. 3-(substd. phenyl)-2' hydroxy-propiophenones - prepd. e.g. by reducing corr. substd. chalcones

CHINOIN GYOGYSZER 19.02.74-HU-CI1448
*B05 E14 (20.07.78) *DT2506-356 A23l-01/23 C07c-143/06*

Propiophenones of formula (I) (where "alkyl" is 1-4C) and

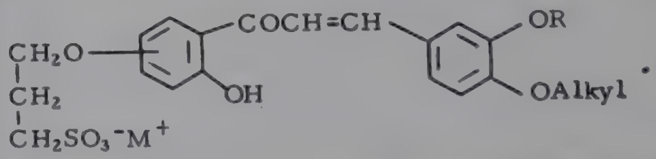


(I)

their salts have been prepd.

(I) are non-calorific sweetening agents related to the known sweetening agent hesperetin dihydrochalcone rutoside. They have the advantages of high solubility, stability to heat and acids, lack of toxicity, and high sweetening power.

(I) are prepared by reducing cpd. of formula (II):



(II)

In formula (II), R is H or a hydrogenolytically removable grp., pref. benzyl or benzyloxycarbonyl, and M$^+$ is H$^+$ or a cation.

Farkash, L., Nogradi, M., Pfligel, T. et al. Bul.
46/15.12.77. 18.2.75. as 108051 (3pp)

MEDI= ★ D13 32859B/17 ★SU-595-89

Space-sickness prophylactic treatment - includes physical exercises vacuum applications and ingestion of specified doses of water an salt

MEDICAL-BIOLOG PROB 12.11.76-SU-419912
P33 (11.09.78) A61h-09 A61k-33/14

Harmful effect of weightlessness on human body during space travel is prevented by physical training and negative pressure application to the lower part of the body. The orthostatic stability and the physical efficiency are increased if during the last stages of space flight the physical exercises are combined with gradual redn. in pressure combined with intake of small amts. of water and table salt at regular intervals. The method presents metabolic disorders and can be used in prolonged space flights.

Gazenko, O.G., Kakurin, L.I., Katkovskii, B.S. et al.
Bul. 39/25.10.78. 12.11.76. as 419912 (2pp938)

CRIN- ★ D13 B/17 ★SW 7809-600
Ruminant feedstuff - prepd. by training lignocellulose-contg. material, e.g. straw, with aq. sodium hydroxide
CRINA CENT RECH IN 13.09.77-CH-011185
C03 (09.04.79) A23k-01/12

Ruminant feedstuff is prepd. by treating lignocellulose-contg. material with aq. NaOH at >60°C. The raw matl. is straw or similar material and is cut into 0.1-5 cm pieces. It is mixed with 1-10% NaOH and 0.5-5% oxidn. catalyst to give a moisture content of 10-20%.

The blend is vigorously mixed at 60-100°C and the prod granulated. 12.9.78 as 009600 (-pp903)

FLUI- D13 94162R/51 =US 4148-334
Fluid control system with automatic carbon- - ation for beverage draw-off taps
FLUID DEVICE CORP (FLU -) 19.06.69-US-840119 (26.04.68-US-724385)
*R26 +Q66 Q75 (10.04.79) *DT2015-604 +F16k-21/18*

Liq. level sensing system includes a flow control at either the inlet or outlet of a reservoir responsive to a sensed pressure condition; and a fluid amplifier having aligned in-let, interaction and outlet zones including an inlet channel above the desired level and oriented to direct liq. flow transverse to the surface and an outlet separated from the inlet channel by the interaction zone and coupled to the fluid control.

The inlet channel impinges liq. on the reservoir outlet with a first pre-determined pressure when the level is be below the desired level and a lesser value when the liq. is above the desired level to actuate the flow control.

Parent patent claims carbonated beverage disperser using the level sensing sysgem. 3.2.77 as 765430 Div ex 4028441, 3730500 (+5.9.75-US-610846) (15pp1376)

ROLN- D13 42066Y/24 =US 4148-789
Nontoxic albumen concentrate prodn. from rape seed - obtained by thoroughly washing, grading, extracting and grinding
AKAD ROLNICZO-TECHN (ROLN-) 02.12.75-PO-185191
*(10.04.79) *DT2654-693 A23j-01/14*

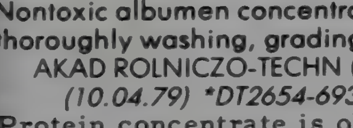
Protein concentrate is obtd. from rape seed by (a) sorting rape seeds into fractions of unified size, (b) subjecting the them to water extn. and inactivation of mirosinase in water of pH 8-9.5, (c) removing seed-leaves, (d) washing the seed-leaves and seeds with 3-10 times the wt. of water as the wt. of seeds, (e) drying to a moisture content of 7-15% (f) removing hulls and (g) deoiling the seeds and seed leaves.

The concentrate is free of the thioglycoside-type noxious and toxic matter, and is suitable for food or fodder. 2.12.76 as 746725 (6pp976)

INTM D13 00046Y/01 =US 4148-808
Zearalanol anabolic agent prepn. - by heating zearalenone in isopropanol with Raney nickel catalyst
INT MINERALS & CHEM CORP (COMM) 22.08.75-US-606856
*B02 C02 (10.04.79) *BE-845-376 C07d-313*

A zearalenone cpds. of formula (I) (X is >C=O) is reduced to a zearalanol cpd. of formula (I) (X is >CH(OH) and A is a single bond) by heating a mixt. of the zearalenone cpd. and reducing amts. of isopropyl alcohol and catalytic amts of Raney nickel under reducing conditions.

(I)



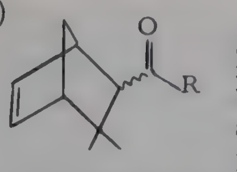
In the formula, A is a single or double bond. R and R_1 each is H, OH 1-6C alkoxy, 1-6C alkanoyloxy or 6-8C aryl-1-5C alkoxy.

Pref. reaction is at 20-200°C, esp. 100-200°C for 15 mins. to 10 hrs. The prods. have a ratio of high melting diastereoisomer to low melting diastereoisomer of 60:40 to 70:30 and pref. contain <5 or 6 wt. % starting cpd. 22.8.75 as 606856 (7pp992)

INFL D13 21476A/11 =US 4148-826
Alpha-substd.-3,3-di:methyl-2-norbornane-methanol cpds. - used for enhancing drug and food flavours etc.
INT FLAVORS & FRAGR INC 04.02.77-US-765847
*B05 E15 +P15 (B07) (10.04.79) *US4076-853 C07c-45 C07c-49/54*

Norbornane derivs. of formula (I) are new. In (I) R is 3-5C alkenyl or 3-5C alkylidene. Prepn. of (I) is also claimed.

(I)



(I) are used in foodstuffs, chewing gum, toothpaste and medicinal prods. as flavour and aroma agent and also as tobacco flavour and aroma agent and for augmenting perfume aroma. Parent patent describes the use of cpds. (I). 13.12.77 as 860140 Div ex 4076853 (79pp918)

KONN D13 05872X/04 =US 4148-891
Fungicidal compsn contg a polyene antibiotic - dissolved in an alkanol-carboxylic acid mixt esp for preservation of citrus fruit
GIST-BROCADES NV 14.02.75-GB-006450 (03.07.74-GB-029503)
*B05 C02 (10.04.79) *DT2529-532 A01n-09 +A61k-35/74*

An antifungal compsn. for use on agricultural products comprises 0.05-0.5 wt. % of a polyene antibiotic selected from natamycin, aureofungin, lucensomycin, thier alkali metal and alkaline earth metal salts, and their lower alkyl esters, to prevent or inhibit mould growth on the products, dissolved in a mixt. of 10-99 wt. % of a lower alkanol (esp. ethanol) and 0.05-5 wt. % of a lower alkanoic acid (esp. acetic acid).

The compsn. may be used as a bath for submerging the agricultural products, short immersion periods of pref. 1-10 (1.5-3) mins. being adequate to impart to the products a lasting protection against mould growth. 6.3.78 as 883681 (+25.6.75, 17.11.76-US-590045, 742659) (6pp990)

STAU ★ D13 33268B/17 ★US 4148-926
Delaying ripening of picked fruit, vegetables, etc. - by treatment with acrylated di:alkyl-ethylene di:amine
STAUFFER CHEMICAL CO 04.10.77-US-839482
E19 (10.04.79) A23l-03/34 C07c-103/44 C07d-307/68

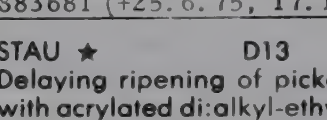
The ripening of picked fruit, vegetables and other plant material is retarded by treatment with an amide of formula $RCO.NH.CH_2CH_2NR_1R_2$ (I) or its chloride, bromide, acetate sulphate or phosphate salt. In (I) R is 1-12C alkyl, phenoxy-methyl, furanyl, norbornenyl, phenethyl or 1-4C hydroxy-alkyl; R_1 and R_2 are each 1-4C alkyl. Pref. (I) have R= 4-10C alkyl, phenoxymethyl, 2-furanyl, 5-norbornen-2-yl, phenethyl or 2-hydroxypropyl, and R_1 and R_2 both CH_3 or C_2H_5; esp. R is n-decyl, $R_1=R_2$ is C_2H_5.

The first, etc. can now be picked and transported at a later stage of ripeness. (I) also delay sprouting of tubers in store. 4.10.77 as 839482 (4pp1251)

STAU ★ D13 33269B/17 ★US 4148-927
N-Cyclohexenyl-N-di:alkylamino-ethyl amide derivs. - used for delaying ripening of fruit, vegetables etc.
STAUFFER CHEMICAL CO 04.10.77-US-839470
E19 (10.04.79) A23l-03/34 C07c-103/44 C07d-307/68

Amides of formula (I) and their chloride, bromide, acetate sulphate and phosphate salts are new. In (I) R is 1-12C alkyl, furanyl, phenyl or isopropenyl. R_1 and R_2 are 1-4C alkyl. Pref. cpds. have R_1 and R_2 both ethyl and R is 4-10C alkyl, 2-furanyl, phenyl or isopropenyl, specifically isopropenyl or n-decyl.

(I)



$RCO\text{-}N(C_6H_9)\text{-}CH_2CH_2NR_1R_2$

(I) retard ripening of picked fruit, vegetables, or other plant material (e.g. sprouting of tubers) so that they can be picked and transported at a later stage of ripeness. 4.10.77 as 839470 (4pp1251)

SNAM ★ D13 33270B/17 ★US 4148-928
Removal of glucoside(s) from vegetable matter - by treatment with organic solvent contg. polar gp s). and an aq. soln. of acidic electrolyte
SNAMPROGETTI SPA 02.07.76-IT-024985
C03 (10.04.79) A23l-01/20

Glucosidic components are extracted from seeds and seed flours by treatment with an organic solvent contg. ≥1 polar gp. together with an aq. soln. of an acidic electrolyte which is an organic or inorganic acid or its salt (e.g. formic acid). The process is esp. applicable to removal of simmondsin from jojoba flour.

After removal of toxic glucosides, the prods. are suitable for animal or human consumption. 1.6.77 as 802567 (3pp955)

USSA ★ D13 33271B/17 ★US 4148-929
Stabilised frozen potato salad - contg. gelatin and dry vinegar to prevent sepn. of oil
US SEC OF THE ARMY 27.12.77-US-864692
(10.04.79) A23l-01/21

Frozen potato salad is prepd. by thoroughly mixing an aq. soln. of gelatin (pref. 7-10 wt. %) and dry vinegar (pref. 6-9 wt. %) with mayonnaise or salad dressing, then adding cooked potato pieces and freezing.

No separation of oil occurs, the thawed prod. having the same appearance as it had before freezing. The frozen potato salad may be kept for long periods without bacterial spoilage. 27.12.77 as 864892 (3pp955)

UNIL D13 23360A/13 =US 4148-930
Water-in-oil margarine contg. proteose-peptone - causes less spattering when used for frying
LEVER BROTHERS CO 24.09.76-GB-039815
*(10.04.79) *BE-859-019 A23d-03*

An improved margarine is prepd. bf the type contg. a water-in-oil emulsion. Aq. phase of emulsion contains a dairy protein material having a wt. ratio of protease-prp-tone protein to pH 4-6 isoelectric pt. proteinaceous material of $\geq 0.5:1$.

Dairy protein is present at level to provide ≥ 0.005wt. % of protease-peptone protein w. r. t. margarine. Pref. dairy protein is derived from cow's milk or cheese whey. Wt. ratio of protein material is 0.8-1.2.

Compsn. gives improved frying properties giving reduced spattering. 22.9.77 as 835624 (5pp931)

See Also

D16 US 4148882
D23 J7 9006615
D17 J7 9006526
D23 NL 159951
D23 GB 2005713

D14: FOODSTUFF MACHINERY

JAGN ★ D14 31645B/17 ★BE -873-023
Automatic dispenser of tiny doses of liq. - esp. hydrogen peroxide, to sterilise plastic coated milk cartons before filling
JAGENBERG WERKE AG 24.12.77-DT-757897
Q39 R13 (17.04.79) A23p B67d G01f

A dosing machine injects tiny quantities of liq., of the order of 0.1-1.0 cm^3, into containers to be sterilised. The dose is measured by a pulse counter, one pulse per shot delivered from a measuring chamber. The measuring chamber is replenished from a reservoir in response to signals from high and low level detecotrs in the measuring chamber.

In this addn. at a low level signal a pump delivers from the reservoir to the measuring chamber a vol. of liq. sufficient to take the surface level above the high level detector i. e. a recharge batch vol. The pump is submerged in the liq. in the reservoir and comprises an inner pipe leading to the measuring chamber. The inner pipe has an open bottom which is enclosed in an intake bell leading up to a compressed gas pipe coaxially surrounding the inner pipe. The intake bell has a non-return value through which it is filled by the liq. from the reservoir. The vol. of the bell is slightly more than that of the measuring chamber between the level detectors. The detectors actuate gas supply to the pump.

Very simple, compact, inexpensive pump operates by gas, pref. air, displacement. 22.12.78 as 873023 Add to 864242 (16pp448)

HENK ★ D14 31662B/17 ★DS 1532-533
Preventing scale-deposition in bottle-washing - by transferring bottles from alkaline detergent soln. to acidic detergent soln. without rinsing
HENKEL KG AUF AKTIEN 01.10.66-DT-532533
Q39 (19.04.79) B67c-01

Bottles are first washed with an alkaline detergent soln. and then with an acidic detergent soln. Process novelty comprises transferring the bottles from the alkaline detergent soln. to the acidic detergent soln. without intermediate rinsing. The acidic detergent bath is prepd. and replenished so that bath pH 6, esp. 4, is not exceeded.

Process is used for automatic bottle washing using 2 or more separate soln. zones. Scale deposition in bottle-washing plant is suppressed completely and safely. No water-softening is required, even on working with hard water. Cheap detergent compsns. are used to achieve a high cleansing effect. Bottles contg. alkali-insoluble contaminants can be cleaned. 1.10.66 as 532533 (3pp200)

DCAF ★ D14 31850B/17 ★DT 2843-547
Continuous treatment oven for food - with uniformly distributed saturated steam superheated by heating element (NL 9.4.79)
DCA FOODS INDS INC 05.10.77-US-839616
P28 (19.04.79) A21b-01/24 A23b-04/10 A23l-01/31 A47j-27/16

A continuous treatment oven for food such as roast chicken with a sprinkling of bread crumbs or a liquid coating, includes a belt conveyor and chambers for the uniform introduction of saturated steam. Electrical heating elements are added to superheat the steam fed into the treatment chambers.

Provides a quick treatment for a reliable adhesion of the coating to the food during transport and to control the moisture content. The energy consumption has been kept to a min. All oven parts are easily accessible for cleaning. 5.10.78 as 843547 (50pp39).

LEWI- ★ D14 31961B/17 ★EP ---1-507
Freezer for food prods. in trays - having a conveyor over which the trays move supported by freezing air
LEWIS REFRIGERATION 06.10.77-US-840011
Q31 Q35 +Q75 (18.04.79) A23l-03/36 B65b-35/48 B65b-63/0
B65g-49 B65g-51/02 F25d-13/06
D/S: E(BE, CH, DT, FR, GB, NL, SW).

A device for freezing food products whilst they are in trays, of e.g. cardboard, includes a conveying surface over which the trays are propelled. The surface has apertures through which streams of freezing air are directed onto the undersurface of the trays. The streams not only freeze the articles by blowing over the base and up the sides of the trays, but also support the trays just clear of the surface for easy movement.

The appts. enables trayed products to be frozen economically and takes up only a small amount of space. 5.10.78. as 300460 (26pp525).
(E) ISR: US3475058; FR1558059; FR1483406; GB13537
GB1132177; DS1136635; DT2544923; OE284607;
FR2291128.

FEMI- ★ D14 31997B/17 ★FR 2398-0
Discharge trap for channel or vibratory feeder - partic. for gradi conveyed food prod. such as peas
FEMIA SOC FRANCO-EU 20.07.77-FR-022266
Q35 (23.03.79) A23n-15 B65g-47/47

The trap is of the type in which a discharge aperture is formed through the channel base. During conveying, the aperture is covered with a flush panel which is removab for discharging through the aperture as required.

The panel is now fixed to an arm parallel to the side wall of the channel. The arm is movable and can be lock in a raised position, so that the trap aperture is open fo discharge or in a lowered position so that the panel clos the aperture. Arm movement is pref. by pivoting or ver ical displacement.

Used as a discharge trap for vibratory channel conve or, partic. for instant opening or closure in grading bul foodstuffs, e.g. peas.

Simplicity, cheapness and rapid effective operation a achieved. Maintenance requirements are negligible. 20.7.77 as 022266 (13pp448).

SEBS- D14 50438Y/29 =GB 1544-777

Automatic stop device for ice-pail - with give-way blades to reduce resistance as mixt. hardens on freezing

SEB SA 26.02.76-FR-005369

*R26 +P28 Q75 R53 (25.04.79) *BE-850-498 B01f-07/16 F25c-01/04*

A domestic ice-cream mixer for fitting in the freezing compartment of a refrigerator comprises a support carrying arm on which are carried two stirring blades for stirring respective layered zones of the ice cream mix.

An automatic stopping device is provided so that, as the mix hardens during the freezing process the blades are moved upwardly by a pivotal action to a horizontal position of withdrawal.

A switch for controlling the drive motor of the mixer is opened when movable actuating levers of the mixer and in a stop position. 8.2.77 as 005216. (—pp1363)

DSOL/ ★ D14 B/17 ★IT 1028-502

Animal vegetable or mineral flour prodn. appts.

DIEZ DE SOLLANO C 20.01.67-IT-006737

(10.02.79) A23j

VINC/ ★ D14 B/17 ★IT 1028-571

Plate press for food materials

VINCI A 28.05.75-IT-002113

(10.02.79) A23n

SEKP ★ D14 32108B/17 ★J5 4034-164

Cooling medium for storage of fish, vegetables or fruit - comprises porous foamed resin impregnated with water and frozen

SEKISUI PLASTICS KK 23.08.77-JA-101372

A97 (13.03.79) C09k-05/06

30-70 Wt.% of polyolefin resin (e.g. polyethylene or polypropylene) is mixed with 70-30 wt.% of a synthetic resin free from compatible solubility to the polyolefin resin (e.g polystyrene, polymethyl-methacrylate, polycarbonate or nylon together with a small amt. of foaming agent and the resulting mixt. is extruded from multi-slit nozzles of an extrusion machine and a large number of fine filaments extruded are arranged as a rectangular bundle having foamed porosity and further it is impregnated with 30-90 vol.% of water and then frozen in a refrigerating machine. 23.8.77 as 101372 (3pp15).

BEZR/ D14 32452V/17 =SU -282-050

Autoclave pressure regulating system - using a radiation link to trans-mit pressure signals through the autoclave walls

BEZRODNYI K N 29.08.68-SU-266706

*(05.09.78) *US3804-591 +A23l-03/10*

The autoclave has a system for monitoring the pressure difference inside and outside cans which comprises a displacement pick-up located above a control can, with an adjusting device and measuring rod contacting the can lid. To create identical conditions for the can and the batch to be sterilised and to improve sensitivity and accuracy, the system is located on the inner wall of the autoclave and the pickup is a radioisotope unit with the radioactive source secured to the rod top and placed in a container with a collimating orifice.

Bezrodnyi, K.N., Voit, V.N. Bul. 36/30.9.78. 29.8.68. as 266706 (2pp1358)

SHEF/ ★ D14 32862B/17 ★SU -597-106

Fish heat-treatment appts. - with multistage horizontal conveyor and infrared heaters combined into heating zones of prearranged configuration

SHEFER I A 08.12.75-SU-197319

P28 (D12) (31.08.78) A47j-37/06

Device for thermal treatment of proteinaceous food prods. e.g. fish, comprises an open frame, to which a horizontal conveyor is connected plus infrared heaters above and below it to provide two treatment zones along its length. Product quality is improved by combining the heaters in each zone into several blocks mounted so that the longitudinal axes of the outermost in each block are arranged in a single line.

are displaced relative to the centre heaters of the other zone in the horizontal plane. Hygiene of the conveyor is guaranteed by forming the belt from individual removable plates. The conveyor is made on several levels.

Shefer, I.A. Bul. 39/25.10.78, 8.12.75. as 197319 (4p 29)

LEWI/ ★ D14 33104B/17 ★US 4148-252

Fruit and vegetable peeler - with projections on sleeve in rotary drum carried by three rollers in casing

LEWIS J T 22.05.78-US-908216

P28 (10.04.79) A23n-07/02 A47j-17/18

A peeler comprises a casing with a cover hinged to a base and holding a pair of spaced parallel rotatable rollers in the base with one roller driven by an electric motor. A drum is carried on the rollers and has a cylindrical interior and an open end with a removable cover.

A third roller rotatable in the casing cover abuts the drum speed parallel and opposed to the first two rollers when the casing is closed. A coaxial sleeve is removably mounted in the drum for rotation with it and has sharp cutting projections on its inner surface to carry out the peeling. 22.5.78 as 908216 (3pp1358)

SCHU/ D14 10670A/06 =US 4148-596

Press for high speed feedstuffs pelleting - has rotating die drum with large main roller and secondary rollers (NL 31.1.78)

SCHULTZ R 28.07.76-IT-085581

*P71 (10.04.79) *DT2733-062 +B29f-03/**

Feed pellets are produced in a mill which has a perforated ring die with two rollers oppositely mounted inside the die. The rollers driven to compress material between the rollers and die. The rollers have different dias. and include a large roller to provide a more progressive pressing action and ≥1 auxiliary roller mounted to provide a compensating action.

Pref. two auxiliary rollers are symmetrically mounted w.r.t. the common diametral of the large roller and die. The large roller and die axes are pref. inclined to the vertical.

Pellet output is increased. 26.7.77 as 819088 (4pp1376

HOWA/ ★ D14 33185B/17 ★US 4148-729

Storing and handling used cooking oils - by passing oil along heated pipe from dump to storage to await drainage to disposal unit

HOWARD G A 25.08.76-US-717472

(10.04.79) B01d-35/02

Appts. for storing used cooking oils in a restaurant facilit having a kitchen area comprises a used oil dump receptable having an inlet screen connected to a storage container distant fromthe kitchen area via a heated pipe coupling A heating tube passes through the connecting pipe and communicates with a coil extending through the storage container.

A pump removes used oil from the storage container and is deenergised when a sensor senses removal of most of the oil from the container. A temp. sensor is provided for the oil in the appts.

The dump station can be mounted in a wall of the kitche area and the storage container is located away from the area, e.g. below ground level. The temp. sensor permits monitoring so as to maintain the liquidity of the cooking oi from the drainage point and during storage. 25.8.76 as 717472 (6pp1044)

GAMB/ ★ D14 33188B/17 ★US 4148-73

Frame support for centrifugal honey extractor - having slotted uppe plate and apertured lower plate on rotatable shaft for receivin combs

GAMBLE B R 21.02.78-US-879199

(10.04.79) B01d-17

The extractor comprises a honeycomb frame having an ex-ension on one end of a top bar, a honeycomb frame support structure and an outer container which receives the support. The support includes a central supporting shaft and a lower retaining plate having apertures for the extensions on the honeycomb frames. An upper retaining plate has a series of radially extending slots arcuately spaced around the shaft. The slots are shaped and dimensioned to receive the honeycomb frames when they are seated in the lower retaining plate.

When the support is rotated the honey inside the comb is extracted by centrifugal force, and thrown across the spaced between the retaining plates for collection from the side walls of the container.

Used as a small capacity centrifugal honey extractor, designed for the hobbyist or home operator. The frame support has few movable parts and is easy to manipulate. The extractor effects rapid and max. extn. of honey from the combs. 21.2.78 as 879199 (5pp1044)

BISC- D14 52423X/28 =US 4148-734
Filter material based on cross-linked elastomeric polyurethanes - esp. suitable for coffee and other liquids
CHEM BISCHOFSHEIM (REUT-) 21.12.74-DT-460764.
*A88 J01 (10.04.79) *DT2460-764 +C08j-03/10 C08j-05/04 C08j-07*

Porous polyurethane resin filter material prodn. comprises (a) providing a soln. (I) contg. 60-80wt.% of an NCO-preadduct having 1.5-5% free isocyanate gps. in a highly polar organic solvent; (b) providing a soln. (II) contg. a highly polar organic solvent and $\geq$1 of hydrazine hydrate, carbodihydrazide, piperazine, and 1,4-diaminopiperazine, in an amt. of 0.02-0.05 mol % in the soln.; (c) mixing (I) into (II) over extended period to give a highly viscous reaction prod. and continuing until the addn. of a minute amt. of (I) would have resulted in instantaneous gellation, at which point addn. is stopped; obtd. mixt. contains 15-35wt.% solids, (d) forming soln. into sheet; (e) passing sheet into coagulation bath to give microporous sheet structure having 2 external non-porous skin stratum and a central stratum having pore channels aligned perpendicularly to sheet surfaces; (f) drying and (g) abrading one or both sides of the sheet to obtain the filter.

Filter permits efficient clearing (including steam sterilisation). Useful in air purificn; expelling gas from high viscosity solns, as partially permeable packaging, and for breaking emulsions. 15.8.77 as 824696 (+12.12.75-US-640333) (10pp963)

INDA- D14 18148A/10 =US 4148-933
Food sterilisation and preservation - by steam injection, cooling and closure under maintained aseptic conditions (BE 28.2.78)
IN DA TE AG 31.08.76-GB-035988
*(10.04.79) *DT2738-953 A23b-07 +A23l-02/16 A23p-01*

Food is preserved by placing the food in a capped container which is placed in a sealed chamber, admitting steam in the chamber to create sterile conditions, feeding a hot fluid through a tube through the container cap into the food to effect sterilisation, cooling, retaining a predetermined amt. of liq. in contact with the food, withdrawing the tube and container cap, and sealing the container.

The food is pref. cooled by exhausting the hot fluid. Used for fruit, vegetables or meat pieces in large containers without impairing quality. 30.8.77 as 829104 (12pp1376)

See Also

D22 US 4148905

D15: WATER TREATMENT

LAND- ★ D15 31567B/17 ★BE -871-368
Aerator with vertically adjustable drive mechanism - using hydraulics to provide independent control of separate agitators
LANDUSTRIE SNEEK 19.10.77-NL-011505
(19.04.79) B01f C02c

Mechanical aerator consists of a paddle whose function is to beat air into a fluid such as effluent in a biological treatment, a drive motor and transmission and a support device which permits the vertical position of the agitator to be adjusted in accordance with the oxygen demand of the fluid. The vertical adjustment is pref. achieved by mounting the agitator drive shaft in bearings within a vertical cylinder.

The cylinder is equipped with external rings fitted between it and an outer fixed cylinder. Hydraulic fluid may be introduced into the annular space so formed either above or below the rings enabling the mounting cylinder to be raised or lowered. To prevent the motor and drive from freely rotating about the shaft, an arm protruding from the motor is equipped with a roller which moves against a vertical guide stop fixed rigidly to the beam supporting the agitator assembly. The vertical guide is preferably marked in such a manner that the elevation of the agitator can be read.

The device enables a number of separate agitators to be independently adjusted and lends itself readily to either automatic or manual control. 19.10.78 as 871368 (9pp1370)

BOLI ★ D15 31595B/17 ★BE -871-458
Purificn. of water with magnetic sepn. of pptd. sludge - using aluminium and/or ferrous sulphate-contg. magnetic material as pptn. agent
BOLIDEN AB 24.10.77-SW-011948
(23.04.79) C02c

The process uses a crystalline pptn. agent based on $Al_2(SO_4)_3$ and/or $FeSO_4$ together with a magnetic material. The magnetic material is added to the $Al_2(SO_4)_3$ or $FeSO_4$ when it is in soln. form, or a molten mass prior to crystallisation. The pptn. agent prepd. with the Al or Fe cpd. is also novel.

Incorporating the magnetic material in this way, enables a uniform distribution of it in the pptn. compsn. based on the $Al_2(SO_4)_3$ and/or $FeSO_4$.

The pref. magnetic material is magnetite or other magnetic iron oxide such as is obtd. during roasting of pyrites to obtain magnetite. The material is pref. $< 8\,\mu$ esp $< 3\,\mu$, in particle size. The amt. of magnetic material in the compsn. is pref. 1-50 (2-30)% esp. 3-10%. The pptn. agent compsn. pref. also contains active carbon. 23.10.78 as 871458 (21pp597)

BREV ★ D15 31612B/17 ★BE -872-867
Flexible stratified mass transfer element - comprises upper and lower layers enclosing active material and held together by fibres distributed densely over whole surface
BREVE TEAM SA 23.11.78-CH-012022 (24.12.77-CH-015944)
C03 J04 K07 P73 (D22 J01) (17.04.79) B01j B32b

Stratified flexible surface element for treating a gas or a liq. brought into contact with it consists of a fibrous or granular active material contained between an underlying layer and a covering layer contg. fibres, permeable to the gas or liq. The underlying layer and the covering layer are held together by fibres passing through them individually or in tufts at places distributed densely over the whole surface and anchored in the underlying layer as well as the covering layer.

The active material can operate by emission, sorption or catalysis. The particles can transfer e.g. fertilisers or plant protection materials to water in circulation. The active material can be an absorption or adsorption agent, e.g. active carbon, vermiculite, in the form of grains or fibres, for suppressing odours, or an ion exchanger for water softening, or a catalyst foe petroleum treatment or it can emit perfumes or bactericides into the air.

The element overcomes disadvantages associated with variations in permeability at different parts. The holding fibres have an open structure and the outer and inner pts. are freely accessible at all places, to the medium being treated. The thickness is uniform so that the layers are parallel. The element can be cleaned or regenerated easily e.g. by washing or blowing. 19.12.78 as 872867 (20pp)

SMHL ★ D15 31643B/17 ★BE -873-021

Two-zone activated sludge tank to purify waste water - offers high efficiency treatment by repeated inter-zone transfer for intermittent aeration

SIMON HARTLEY LTD 22.12.78-BE-873021

(17.04.79) B01f C02c

The tank is of the type in which the water is agitated by an aerator, e.g. a rotary impeller, The aerator is surrounded by a partition enclosing an inner zone of liq. and an annular outer zone of liq. is held between the partition and the outer wall of the tank. A passage is formed through the partition at or near surface level and another passage at or near tank base level. The aerator creates a flow of liq. through a passage from the inner zone to the outer zone. The transferred liq. circulates around the outer zone before finding its way back to the inner zone via a different passage.

The passages are pref. formed and positioned and related to the direction of rotation of the aerator so that flow is outwards from the inner zone via upper passages and inwards from the outer zone via lower passages. The tank is pref. of vertical cylindrical form with a coaxial, vertical cylindrical partition around a central aerator.

The treated effluent can be equal to that delivered from the conventional 3-stage process, i.e. free of ammonia and probably nitrates too. For such effective treatment the new plant is very compact and inexpensive. 22.12.78 as 873021 (10pp448)

CRAN D15 17757S/10 =DS 1692-958

Steam turbine power plant waterpurification - process

CRANE CO 03.04.67-US-627818

*(19.04.79) *GB1225-273 C02b-01/70*

A condensate purificn. system for steam turbine power stations, using a mixed resin bed, separates the bed for regeneration into lower layer of cation exchanger resins of higher desity, and an upper layer of anion exchanger resins. The anion resin is regenerated with alkali, and the cation resin with acid, followed by washing and ammonisation. The regenerated anion exchanger, with any entrained cation resin, is treated with ammonia soln. while being in a separate tank from the lower layer.

Anion exchanger resin contg. the ammoniated resin can be mixed with the bulk of the cation exchanger resin to produce the mixed bed for purificn. 7.3.68 as 692958 (7pp39)

TEXC D15 26451T/17 #DS 2130-476

Sewage and municipal refuse treatment - by coking together in liq phase

TEXACO DEV CORP 15.06.70-US-046059 (19.06.71-DT-130476)

*(19.04.79) *US3652-405 C10b-53*

Refuse and waste water from households and industry is processed by first treating to form activated sludge. The refuse comminuted and mixed in a closed system with water from the subsequent coking stage to form a suspension contg. 1 pt. wt. refuse per 4-50 (6-25) pts. wt. water.

This suspension is treated with gas to separate the nonoxidisable material. The suspension contg. oxidisable material is mixed with the waste water suspension and the mixt. is coked in a reactor at a pressure hindering the evaporation of water. The process can be easily automated. 19.6.71 as 130476 (5pp068)

KANE D15 70958U/47 =DS 2320-912

Removing colouring cpds from effluents - using sulphur -contg coagulants

KANEBO KK 08.05.72-JA-045228 (25.04.72-JA-041613)

*E14 F06 (19.04.79) *DT2320-912 +C02b-05/02*

Non-anionic, colouring cpds. are removed from waste water (I) using organic condensn. prods. (II) and inorganic flocculating agents (III).

(I) is treated at pH 6-8 with a flocculating agent which contains, in addn. to usual agents (III), > 1 of (a) H_2O-soluble (II) from sulphonated 4, 4^1, 2, 4^1 and/or dihydroxy -diphenyl (IV) and lower aliphatic aldehydes (V), (b) H_2O-soluble sulphonated (II) from 4, 4^1, 2, 4^1- and/or 2, 2^1 (VI) and (V); (c) H_2O-soluble (II) from sulphonated 4, 4^1, (d) water soluble, suphonated (II) from 4, 4^1, 2, 4^1 and/or 2, 2^1 (VI) and (V), and/or (e) alkali- and/or ammonium salts of these cpds.

Pref. 10-200% of flocculating agent is added, based on the wt. of colouring cpd. in the coloured (I). 25.4.73 as 320912 (5pp481)

FARB D15 05885Y/04 =DS 2529-647

Purifying waste waters of hydrazine prodn. - by chlorination or hypochlorination and pref. electrolysis of waste waters contg. sodium chloride BE030176)

BAYER AG 03.07.75-DT-529647

*E36 (19.04.79) *DT2529-647 C02c-05/04*

Purifier of water from hydrazine prepn. is described. The hydrazine is prepd. by oxidising ammonia or amines in the presence of aldehydes or ketones. The waste water is treated with chlorine or hypochlorite and stirred intensively at pH 5-10 at 10-110°C intil a redox potential with platinum based on Ag/Ag Cl of -400 mV to +800mV is obtd.

The process destroys any hydrazine or its derivs present quickly and economically. 3.7.75 as 529647 (7pp068)

FIAT D15 61829X/33 =DS 2556-674

Waste water purifier and recycler for automatic car washer - of compact construction and allowing easy installation

FIAT SPA 31.01.75-IT-067248

*Q17 (19.04.79) *DT2556-674 B60s-03/04*

The waste water from automatic washing plants contains oil, detergents and suspended solid particles so that it requires purification. The water treatment tank above the reservoir for the treated water is sepd. by an inclined partition into a smaller and a larger compartment. The waste water is passed into the smaller compartment, together with chemical reagents from containers with metering pumps. The larger compartment has an overflow trunk channel, leading to the reservoir. The bottom of the water treatment is a funnel with a changeover valve for the two alternate outlets to two filters. These gravity filters separate the deposited sludge from the water.

The water in the reservoir can be re-used for car washing so that large savings are made in water consumption. 16.12.75 as 556674 (6pp39)

NIFI- D15 92875X/50 =DS 2623-277

Recovery of heavy metals and water from effluent - by use of ion exchange for sepn. of heavy metal ions and subsequent extraction for recovery by electrolysis

NIHON FILTER CO LTD 24.05.75-JA-062060

*M28 (19.04.79) *DT2623-277 +C02c-05/12*

Waste water contg. heavy metals is treated to recover the metals and to allow their reuse in electrolysis cells. The waste water is lead through an ionexchanger. Electrolytic soln. from the electrolysis cells is used to reganerate the ion exchanger and eluate is recycled to the electrolytic process.

Waste water from plating, e.g. nickel plating can be treated without introducing extra chemicals. 24.5.76 as 623277 (7pp068)

SULZ D15 67084A/38 =DS 2712-933

Electron beam irradiation plant for fertiliser prodn. from sludge - using pressurised sealing fluid to support sludge distributor on treatment drum

GEBRUDER SULZER AG 18.03.77-CH-003406

*C04 +P34 R45 (19.04.79) *BE-865-018 B01j-01/10 C02c-03*

A device for the irradiation of fluid material, such as sewage sludge, by an electron beam applies the fluid to a revolving drum through a distributor box. A distributor roll revolves at the discharge end of the box in the direction opposite to the drum and leaves a small gap for the fluid discharge into the irradiation zone.

The contact area of the distributor box apart from the gap are represented by a sealing groove which is connected to a souce for a sealing liq. The side faces of the distributor roll also carry a spring-loaded ring in a groove with a connection to a source of a sealing liq. This reduces both leakage and wear to a min. 24.3.77 as 712933 (5pp39)

RENN/ ★ D15 31677B/17 ★DT 2741-142
Domestic sewage treatment - in two biological stages with self-induced sludge recycling
RENNER H 13.09.77-DT-741142
(19.04.79) C02c-01/06

A domestic sewage treatment plant consists of a pre-clarification tank and two biological stages, each consisting of an aeration section and a reclarification section. The turbulence produced by aeration is utilised to convey activated sludge against the general flow direction from the second stage back to the first stage.

This saves the necessity for any recycling pumps and the power consumption for their drive. The reflux takes place during periods of little main flow. The risk of sludge being washed out by impact loads is greatly reduced. 13.9.77 as 741142 (15pp39).

LINM ★ D15 31718B/17 ★DT 2745-860
Sewage aeration system - with aerator revolving in circle on tank bottom
LINDE AG 12.10.77-DT-745860
J02 (19.04.79) B01f-03/04 C02c-01/06

A system for the introduction of a gas into a liquid uses a mechanism which describes a translational motion in the liquid. The motion pref. is a circular one in the horizontal plane.

Aeration of sewage in biological treatment. This system is universally applicable. It ensures a uniform aeration and is very economical. 12.10.77 as 745860 (14pp).

FARB ★ D15 31754B/17 ★DT 2746-179
Measuring state of charge of suspensions - by measuring potential between electrodes disposed in cell with sample exposed to ultrasonic field
BAYER AG 14.10.77-DT-746179
F09 R16 (19.04.79) D21d-03 G01n-13 G01n-29/02 G01n-33/34

State of charge of suspensions is measured by exposing a portion of the suspension to the action of an ultrazonic field in a measuring cell, in which are located two electrodes whose spacing corresp. to an odd multiple of half-wave length of the ultra-sonic wave. Potential between the electrodes is used for controlling additives.

Used for measuring electro-kinetic potential of paper-stock suspension for the purpose of controlling the process of adding flocculating means, fillers, pigments, retention agents or sizes. The method is also useful in treating waste liquor. Method provides a continuous, simple and rapid measurement of electro-kinetic potential of solids in the suspension. 14.10.77 as 746179 (18pp536).

OTSU- ★ D15 31849B/17 ★DT 2843-535
Deoxidising gas with soln. contg. hydrazine, quinone and hydroquinon - and deoxidising water, e.g. boiler water, by contact with deoxidised gas
OTSUKA CHEMICAL CO 14.03.78-JA-029568 (05.10.77-JA-120280)
J04 (19.04.79) B01j-01 C02b-01/08

Gases inert w.r.t hydrazine are deoxidised by contacting with a soln. contg. (a) $\geq$1 hydrazine (I) and, as catalyst, (b) $\geq$ 1 (i) quinone, (II-i) having a 1st half-wave potential 650 mv against a satd. calomel electrode at 25°C in MeCN, usikng 0.1 N $NEt_4Cl/_4$ as indicator electrolyte and (ii) $\geq$1 hydroquinone, (II-ii), corresponding to the reduced form of the quinone, and opt. also (c) alkali in a solvent, which may be water and/or 1-5C alcohol

Water deoxidation comprises (1) deoxidising an O_2-contg. gas which is inert w.r.t. hydrazine and water by contacting the gas with a soln. contg. (a) $\geq$ 1 (I), (b) (IIi) and 1 (II-ii) and (c) alkali, (2) contacting the opt. purified deoxidised gas with water contg. dissolved O_2 to remove most of the dissolved O_2, and (3) removing the smaller quantity of residual O_2 in treatment water by adding a non-volatile deoxidising agent to the water. Deoxidising agent quantity corresponds to residual O_2 quantity.

The gases may be air, N_2, NH_3, H_2, CH_4, C_2H_6, C_3H8, n-butane, A, He, Ne, Kr, Xe or 'Freons' (RTM). The water is esp. boiled water. O_2 can be removed efficiently, at low cost. The process may take place continuously, without collection of non-volatile materials. The deoxidised water is free from toxic or corrosive, volatile materials, and from non-volatile scale-forming materials. 5.10.78 as 843535 (45pp200)

BUHL ★ D15 31856B/17 ★DT 2843-785
Refuse and sludge conversion to compost - by rotting in layers of specified maximum thickness
BUHLER GEBR AG 07.10.77-CH-012286
(19.04.79) C05f-07 C05f-09 C05f-13

A mixt. of refuse and sewage sludge is converted to uncompacted compost by rotting in the open air. The clamps are arranged with adequate clearances to produce layers which do not exceed the depth of penetration of the aerobic fungi. Adequate space is left between the layers for a continuous gas exchange throughout the process.

This ensures a thorough rotting process of the complete mixture which results in a considerable redn. of the rotting time required. Only simple procedures are required and the available floor space is utilised to the best advantage. 6.10.78 as 843785 (23pp39).

LECZ/ ★ D15 31916B/17 ★EP ---1-382
Water desalination system using natural heat source - uses adiabatic expansion of gas at temperature between atmospheric and absolute zero
LECZKOWSKI K 30.05.78-DT-823447 (11.10.77-DT-745700)
J08 Q51 Q55 Q75 (18.04.79) F01k-25/10 F03g-07 F25b-07 F25b-09 F25b-27
D/S: E(BE, CH, FR, GB,NL,SW).

The system uses a thermodynamic circuit, and the working gas undergoes an adiabatic change at a temperature between atmospheric temperature and absolute zero. Alternatively the change may be isothermic and polytropic. The cooled and expanded gas is reheated to the starting temperature under pressure.

Particularly useful for desalination of sea water, using freezing.

Sources of heat obtained from the earth can be the earth's interior or surface, sea or other water. Other sources can be fuel, the atmosphere, the sun's radiation, nuclear fuel or stored heat.
1.6.78. as 100054 (55pp349).
(G) ISR: —

FARI/ ★ D15 31922B/17 ★EP ---1-418
Floatation separation of paper pulp stock - which flows over vane rotating in stock liquid
FARINONE P 26.09.77-IT-083635
F09 P41 (18.04.79) B03b-05/58 B03d-01/14 C02c-05
D/S: E(DT, FR).

Paper pulp stock is recovered by flotation in an annular tank (1) with the floating stock (4) being separated by a vane (7) rotating in the tank and causing a stock wave (h) to flow over the top of the vane to a central annular space (21). The vane (7) rotates on arm (3) mounted on a hollow column (38). Annular walls (2',22) are also mounted on th the rotating arm (3) to form a clarified liquid collecting chamber (2). The stock flows into the tank through the inlet column (38) duct (31) and through the descending duct (71) attached to the vane through the annular walls (2',22) to the central space (21). A scraper (50) collects sediments in bottom duct (5).

The rotating vane effects efficient separation of the pulp stock from the liquid and is easily adjusted to provide different stock separation wave heights (h).

21.9.78 as 100947 (16pp1320).
(E) ISR: IT704314; FR2296464; FR651286; DT288462; US2888139.

BADI ★ D15 31930B/17 ★EP ---1-436
Poly:alkylene poly:amine prepn. - by prim. or sec. amine poly:amino: alkylation by reaction with aminoethyl sulphate or halide and base
BASF AG 06.10.77-DT-744982
A26 E16 H07 +P42 (A97 D22) (18.04.79) B05d-03/10 C07c-85/02 C07c-87/20 C08g-73/02 C25d-03/02 D21h-01/10
D/S: E(BE, CH, DT, FR, GB, NL, SW).

A process for the prepn. of polyalkylene polyamines (I) comprises (i) reacting prim. or sec. amines with cpds. (II) of the formula $HR^1N-CHR^2-CH_2-X$ (where X is -Cl

$-Br$ or $-OSO_3H$; R^1, R^2 = H or 1-4 C alkyl) and with at least stoichiometric quantities (w.r.t. II) of 15-45% aq. solns. of alkali- or alkaline earth hydroxides, at 60-200°C., esp. at reaction mixt. b.pt. ; (ii) cooling the reaction mixt. to a temp. at which phases are formed and (iii) separating the top, (I)-contg. phase.

Space-time yields are improved. The reaction mixt. is easily worked up.

28.09.78. as 101017 (22pp200).
(G) ISR: GB1418302; FR2313415.

NAAR ★ D15 31944B/17 ★EP ---1-470
Treatment of waste water from wheat starch prodn. plant - by heating water and by using enzymes
NAARDEN INT NV 12.10.77-NL-011211
C03 (D13 D17) (18.04.79) A23j-01/16 A23k-01 C02c-05/10
D/S: E(BE, DT, FR, GB, NL)

Waste water from a plant used in the prodn. of wheat starch is purified by appln. of the following treatments (a) a heat treatment followed by sepn. of solid and (b) treatment with α- amylase and/or cellulase and/or hemicellulase and opt. glucoamylase and/or β-glucanase.

Treated water has a low B.O.D. and can be drained into surface water without further treatment or can be recirculated as process water. The solid by-prod. has a high protein content and can be added to the wheat bran obtd. as a by-prod. in the starch prodn., or it can be dried for use in animal fodder.

9.10.78 as 200234 (14pp1248).
(E) ISR: FR2242037; GB1244288; 1 Journal Reference.

SMHL ★ D15 31988B/17 ★FR 2397-862
Overflows and edges for sludge decantation tanks - to control discharge of water and any floating material
SIMON HARTLEY LTD 20.07.77-GB-030424
(23.03.79) B01d-17/02 B01d-21

The overflow weirs are constructed to eliminate the necessity for junction plates between the adjacent plates of which the weirs are composed. They consist of long plates fixed together end to end, $\geqslant$1 end of each plate being stepped to receive an end of the adjacent plate in a way such that the two ends overlap. Holes are provided in the ends of the plates so that when they are overlapped, the holes coincide allowing screws to pass through, thus both fixing the plates relative to each other and to the wall of the tank. 20. 7. 78 as 021557 (8pp1330).

ITDE- ★ D15 31999B/17 ★FR 2398-023
High thermal efficiency solar energy desalination process - used to produce drinking water from sea water, etc.
SOC INT DESSALEMENT 22.07.77-FR-022659
(23.03.79) C02b-01/06

High pressure steam raised in a solar energy boiler is expanded directly into a turbine driving a vapour compressor. Exhaust steam from the turbine is passed into a desalinator circuit to transfer heat indirectly to raw water which is thus converted to vapour while the exhaust steam is condensed.

The vapour is piped to the intake of the compressor which delivers compressed vapour to the inlet end of the desalinator circuit. The desalinator circuit discharges condensate which is partly drained off as drinking water and partly recycled to the solar energy boiler to produce high pressure steam.

Solar energy alone is required to power this process which operates at a high thermal efficiency. 22. 7. 77 as 022659 (9pp448).

CARB- ★ D15 32000B/17 ★FR 2398-024
Transportable oxygenator to purify water in lakes - has oxygen cylinder on float which supports immersed diffuser
CARBOXYQUE FRANCAIS 19.07.77-FR-022107
(23.03.79) C02b-01/34

The oxygenator comprises a float which supports a cylinder of compressed oxygen with its outlet valve above the surface and within a protective, pref. transparent, cover. The cover also houses a reducing valve and pressure regulator as well as pressure gauge(s) as required.

connectors, pref. chains, support an immersed sparge pipe with nozzles to diffuse oxygen supplied by a flexible delivery tube from the pressure regulator.

Used for purificn. of water in lakes by injection of oxygen. The equipment is inexpensive, simple to use and to maintain, and is readily transportable. Ideal for temporary use in a number of scattered pools. 19. 7. 77 as 022107 (6pp448).

SAEM- ★ D15 32001B/17 ★FR 2398-026
Powered reciprocating rake to clear waste water screening grill - has compact and robust twin chain transmission
SAEMI SARL 19.07.77-FR-022996
(23.03.79) C02c-01/22

The rake is of the type which is driven via a geared transmission with a hollow output shaft. A toothed rake plate is reciprocated by drive arms linked to a cross bar carried transversely between a pair of parallel, endless conveyor chains. The conveyor chains are driven on duplex sprockets which themselves are chain driven from the hollow output shaft. The rake drive arms are joined by a transverse stiffener which is extended to run in crosshead guide channels.

Used for automatic cleaning and unblocking of straining grills used to screen waste water prior to purificn. The construction is robust, compact and operates efficiently with little servicing. 19. 7. 77 as 022996 (10pp448).

ENVI D15 81581X/44 =GB 1544-823
Calcium recovery from sludge contg. phosphate - for renewed use in water- and waste water treatment systems
ENVIROTECH CORP 11.04.75-US-567327
*E33 (25.04.79) *DT2615-400 C02c-03*

Ca values are reclaimed from Ca and phosphate-bearing sludge obtd. from sewage treatment plant or lime treatment of turbid water.

The process comprises (i) calcining the sludge in a first zone to release combustion gases and to produce dried solid particulate mixt. including CaO solids, Ca phosphate solids and ash, (ii) classifying the mixt. in a second zone into a first stream contg. Ca, and a second stream contg. smaller Ca particles with higher Ca concn., (iii) mixing the large particles with water in a third zone, (iv) conveying the resulting aq. soln. into a fourth zone comprising a quiescent body of liq. whose solids settle to form sediment, and (v) decanting the aq. soln. and returning it to the second classified stream. 30. 3. 76 as 012711. (6pp924)

PINC/ D15 48994Y/28 =GB 1544-827
Ozone prodn. - for the purification of water equipment
PINCON A J 30.12.75-US-645363
*E36 J03 K08 +R45 (D22) (25.04.79) *DT2635-576 C01b-13/10 +H01j-61/02*

Ozone is prepd. by introducing O_2 into a casing, bombarding the O_2 with radiant energy to convert the O_2 into ozone. The radiant energy may be supplied by an electric lamp or a radioactive source.

The appts. may be used for treating water with the ozone produced. 14.4.76 as 015174. (6pp1363)

PINC/ D15 48994Y/28 =GB 1544-828
Ozone prodn. - for the purification of water equipment
PINCON A J 30.12.75-US-645363
*E36 J03 K08 +R45 (D22) (25.04.79) *DT2635-576 C02b-01/38*

Appts. for treating water with O_3 includes introducing ozone into a water supply pipe and rotating the water by means of a spiral mixer as it traverses the pipe.

A fixed magnetic field is applied w. r. t. pipe to maintain the ozone in a generally fixed attitude as the water is caused to rotate, or swirl, due to the action of the spiral mixer. 14. 4. 76 as 048049. Div. ex 1544827. (3pp1363)

STOP- D15 61449Y/35 =GB 1544-882
Detoxication of residue obtd. in working chrome ores - using wet treatment with sulphur to form insoluble chromic oxide
STOPPANI SPA 24.02.76-IT-020516
*E34 M25 P35 (25.04.79) *DT2704-775 C01b-17/64 C01a-37/02*

Residue of water leaching of a roasted Cr mineral contg. water-soluble hexavalent chromium cpds. is treated by wet grinding the residue and classifying until a granulometric distribution is obtd. where $\not>$ 10% of particles have a size > 0.4 mm., and 40-60% have size < 0.075 mm.

Treated residue is then subjected to wet treatment with sulphur with vigorous stirring in a reactor at 100°C in an aq. emulsion of alkali(ne earth) metal sulphide for 1-4 hrs. Percentage of solids in the reactor is 1-60wt.%. Resultant slurry contg. a thiosulphate and chromic oxide is then thickened and filtered to provide decontaminated earth and an effluent also contg. sulphide ions which is partly recycled to the grinding step or reactor. 11.2.77 as 005741. (6pp931)

ARBE D15 38546A/22 =GB 1544-903

Treating waste water to remove phenol - by passing through lignite coke which is then at least partly combusted

ACIERIES REUNIES BU 21.01.77-LU-076626

*E14 (25.04.79) *BE-862-990 C02c-05/02*

An effluent contg. phenol is purified in which the effluent is passed through a filter bed of lignite coke, and the spent lignite coke with adsorbed phenol is subjected to an at least partial thermal decompsn.

Pref. effluent is treated without prior extensive sepn. of tarry and oily accompanying prods. The thermal decompsn. involves coking the spent lignite coke in a coking installation in an admixt. with conventional coking feed material.

Used esp. to purify phenolic effluents discharged as industrial waste from coking plants and chemical works producing and processing phenols. 20.1.78 as 002438. (2pp931)

GESS/ ★ D15 B/17 ★IT 1028-653

Bioactive material for biological purificn. of organic effluents

GESSI G 23.05.75-IT-003423

(10.02.79) C02c

BIAN/ ★ D15 B/17 ★IT 1028-851

Aq. effluent purification

BIANCHI D 20.01.75-IT-012414

(10.02.79) C02c

BONA/ ★ D15 B/17 ★IT 1028-892

Industrial and domestic sewage biological purificn.

BONAMINI G 19.02.75-IT-012473

(10.02.79) C02c

BONA/ ★ D15 B/17 ★IT 1028-893

Aq. effluents biological purificn. system

BONAMINI G 19.02.75-IT-012474

(10.02.79) C02c

BIAN/ ★ D15 B/17 ★IT 1028-901

Soft and potable water prodn.

BIANCHI D 27.02.75-IT-012487

(10.02.79) C02b

VEND- ★ D15 32083B/17 ★J5 4017-381

Device for sepg. ions from aq. soln. - comprises polyethylene, polypropylene, polysulphone or PTFE fibrous material in cylindrical casing

VENDO RES INC 27.03.78-US-890149 (20.06.77-US-808138)

A88 J01 M25 (08.02.79) B01d-13 C02b-01/82

Device consists of a cylindrical casing sealed with terminal plugs and a supporting membrane system, consisting of a slender fibrous material extending from one plug to the other. The internal cavity of the fibrous material is connected with spaces through the plugs. There is an inlet and outlet for the soln. to be treated.

The cylindrical casing is tightly sealed with caps. The soln. is recurrently fluidised inside the device.

Device is used to remove copper ions, uranium ions, quat. ammonium ions, chromium ions, iron ions or organic phosphate ions from an aq. soln. 16.6.78 as 073138 (21pp15).

JAOR ★ D15 32237B/17 ★J5 4034-545

High purity water prodn. suitable for medicines - involves passing heated pure water through prodn. appts. to destroy and remove microorganisms

JAPAN ORGANO KK 22.08.77-JA-099482

(14.03.79) C02b-01 C02b-03/04

In producing pure water by combining a coagulation turbidity removing appts., a filtration appts., an ion-exchange appts., a minute filtration appts. and UV rays sterilising appts. etc., the improvement comprises passing pure water heated at >80°C through a pure water-producing passage for >3 min. when the purity of the pure water is lowered by the generation of microorganisms or spores of microorganisms in the inner part of a pure water-producing appts. and its conduits to destroy and remove the microorganisms and the spores followed by carrying-out the prodn. of pure water, so that water having high purity is obtd.

The pure water is suitable for use in the prodn. of medicines having high quality and medical supplies. 22. 8. 77 as 099482 (3pp34).

HITA ★ D15 32238B/17 ★J5 4034-549

Electrolysis of domestic waste-water - first in cell with aluminium anode and cathode to coagulate solids, then in cell contg. granular activated charcoal

HITACHI KK 22.08.77-JA-099567

J03 (14.03.79) C02c-05/12

Organic matter-contg. domestic waste water is electrolysed so it can be reused as washing water for e.g. a flush toilet. The water is introduced into an electrolysing vessel equipped with Al cathodes and subject to electrolysis to remove suspended solids by coagulation flotation with Al^{3+} and H_2 generated at Al anodes. The water, sepd. from the coagulated flocs is then introduced into an electrolysing vessel filled with electroconductive granules, i.e. granular activated charcoal, to rapidly and effectively lower TOD by electrolytic oxidn.

The pH of the water is gradually lowered as the electrolysis proceeds, and so the decay of organic matter is accelerated.

The appts. comprises an Al electrolysing part and under it and sepd. by a wire net filter, an activated charcoal-filled electrolysing part. The top cell comprises an anode with Al pieces packed around an insol. electrode, a peripheral cathode and means for removing coagulated suspended matters. The lower cell comprises a centre anode, a peripheral cathode and granular activated charcoal between them. 22. 8. 77 as 099567 (6pp34).

HAYA- ★ D15 32239B/17 ★J5 4034-550

Continuously purifying polluted water - using a tank with corrugated plates, the top surfaces holding aerobic bacteria and the bottom surfaces anaerobic bacteria

HAYASHIDA GIKEN KK 20.08.77-JA-099870

(14.03.79) C02c-01/02

Polluted water, e.g. industrial and domestic waste water, is biologically purified by passing air to saturate it with oxygen and continuously and downwardly feeding the water into a tank in which a large number of plastic or concrete corrugated plates are inclined so as to alternately form summits and valleys. Aerobic bacteria is formed on the upper surfaces (directly contacting the water) of the corrugated plates and anaerobic bacteria is simultaneously formed on the lower surfaces of the plates, so that organic matter in the polluted water is initially decomposed aerophilically and then anaerobically.

Sludge is hardly formed so that the vol. of the tank is reduced and prodn. of malodorous cpds. e.g. ammonia, H_2S, mercaptans, etc. is reduced. The clarity of the treated water is very high. 20. 8. 77 as 099870 (4pp34).

FUSE ★ D15 32240B/17 ★J5 4034-554

Treating agent for polluted water - comprising carbonaceous material, activated diatomaceous earth and zeolite

FUKUI KAGAKU KOGYO 23.08.77-JA-101455

(14.03.79) B01d-15 C02c-05/02

An effluent polluted with a large amt. of contaminants having comparatively low concn. e.g. cations, anions and non-ions, etc. is easily and effectively purified by adsorption by treating it with a treating agent comprising carbonaceous matters, activated diatomaceous earth and zeolite.

In an example, carbonaceous matters obtd. by treating e.g. organic cpd. soln. having high concn. e.g. pulp mill effluent, etc., zeolite, H_2SO_4, $Al(OH)_3$ and diatomaceous earth (activated at high temp.) are mixed together in almost equal amt. to give a composite material, after which

0%-NaCl soln. is added to one portion of the composite naterial in amt. of 50 wt.% whilst 4N-HCl-EtOH (1:1) oln. is added to another portion of the composite mater-al in amt. of 20 wt.%. Each of the mixts. are mixed together and made alkali (pH 9-10) after thoroughly kneading ogether, followed by adding coagulant and dewatering to give a treating agent. 23. 8. 77 as 101455 (3pp34).

KOBM ★ D15 32318B/17 ★J5 4035-168
Fresh water prodn. from sea water - using a multistage flash evaporator which can be used for long periods without corroding the titanium (alloy) heat conduction pipes
KOBE STEEL KK 24.08.77-JA-101902
(15.03.79) B01d-03/06

The process comprises operating the appts. by feeding oxidative gas into an evaporating chamber for the sea water with a built-in thermal conduction pipe of Ti (alloy).

The appts. may be operated for long periods without corroding the highly expensive thermal conduction pipe. 24. 8. 77 as 101902 (5pp96).

KUBI ★ D15 32322B/17 ★J5 4035-175
Pretreatment for reverse osmosis process - using adsorptive substance e.g. activated carbon opt. with diatomaceous earth as precoat filter aid
KUBOTA KK 24.08.77-JA-102462
J01 (15.03.79) B01d-13

Pretreatment for reverse osmosis comprises using adsorptive substance such as activated carbon and activated alumina respectively in single or in combination with diatomaceous earth as filter aid of precoat filter which is pretreatment of reverse osmosis treatment.

Since this filter layer is composed of substances having different adsorptive capacity and different characteristic of filtration, this may be widely used according to the properties of waste water. 24. 8. 77 as 102462 (3pp96).

GADE- ★ D15 32436B/17 ★J5 4035-873
Vacuum evaporator - for fresh water prodn. from brine
GADELIUS KK 26.08.77-JA-101718
(16.03.79) B01d-03/10

A vacuum evaporator for producing fresh water from brine, comprises a cylindrical casing incorporating a number of axially spaced partition walls for dividing the interior space of the casing into isolated compartments, each compartment including a condensation chamber surrounded by a U-shaped wall and contg. a bundle of cooling tubes, and a pair of restricted nozzle passages formed on the opposite sides of the condenser.

A hot brine is introduced into the nozzles in the first compartment so that a portion of the brine becomes vaporised as the brine falls as an atomised spray into the brine collectors from which the thickened brine passes into the next compartment. 26. 8. 77 as 101718 (4pp47).

KUBI ★ D15 32439B/17 ★J5 4035-877
Absorption appts. for heavy metal and organic(s) removal from liq. - has liq. spray nozzle assembly, liq. collector, a second spray nozzle assembly and an outlet
KUBOTA KK 27.08.77-JA-102810
J01 (16.03.79) B01d-15 B01j-01/06 C02c-05/02

A packed tower used for removing heavy metal or organic impurities from a liq., comprises a liq. spray nozzle assembly in an upper portion of the tower and directed toward the top of the packed bed, a liq. collector in the bottom of the packed bed, a second spray nozzle assembly comprising perforated tubes having perforations smaller than the particle size of the packed material, the second nozzle assembly being immediately below the top of the packed bed, and an outlet pipe having an open end located at a level intermediate between the first nozzle assembly and the top of the packed bed.

A cleaning water is introduced through the second nozzle assembly and discharged through the outlet tube with the impurities-carrying particles. 27. 8. 77 as 102810 (4pp17).

JAGA ★ D15 32447B/17 ★J5 4035-889
Recovery of clay present in a waste liq. - esp. from a waste paper treatment plant, enabling its reuse in paper mfr.
JGC CORP 26.08.77-JA-102276
F09 G01 (16.03.79) C02c-05 D21f-01/66

The clay entrained in a waste liq. discharged from a waste paper treating plant is recovered and reclaimed by adding a coagulant to the waste liq. mixing the liq. mixt. to cause the clay components in the liquid to coagulate, sepg. the coagulated material, treating the sepd. material with a hydrochloric acid to remove iron and calcium components, sepg. the treated solid from the liq., shaping and drying the clay, and baking it at 600-860°C for > 30 min.

The acid treated solid may be rinsed before the shaping. The baked clay product is crushed into particles of the appropriate size for use in paper making. 26. 8. 77 as 102276 (4pp47).

ASAG ★ D15 32458B/17 ★J5 4036-061
Removing ammonia etc. from waste water - using an appts. comprising a carbonate layer, a microorganism layer and an aeration portion
ASAHI GLASS KK (KOBA-) 25.08.77-JA-101109
(16.03.79) C02c-01/02

Ammonia, BOD components, and COD components are removed from waste water using an appts. which comprises a carbonate layer, consisting of lime stone, oyster shell, dolomite and magnesite, in which nitric acid formed by oxidn. of ammonia content is neutralised, a microorganism layer, having a microorganism supporters of a network structure, 0.005-0.3cm^2 in bore area and 140/cm^2 of net surface area in bore number, in which ammonia content and BOD and COD components are removed, and an aeration portion in which the treated waste water is aerated and then recycled to the carbonate layer and the microorganism layer by means of an air lifting action occurring upon aeration at a recycling rate of 10-150m/h.

The method ensures a higher waste water treatment efficiency because the strong adhesion of microorganism onto supporters is assured, and because the flow rate of liquor can be increased to approx. 2-5 times as fast as the conventional methods and thus sufficient dissolved oxygen can be supplied. 25. 8. 77 as 101109 (5pp117).

ASAH ★ D15 32459B/17 ★J5 4036-075
Burning components of waste water from ammoxidation processes - by distilling the water and atomising the vapour in an incinerator
ASAHI CHEMICAL IND KK 26.08.77-JA-101665
A41 E19 J09 Q73 (E35) (16.03.79) F23g-07/04

Waste water contains Na_2SO_4, ammonium sulphate and organic matters from an ammoxidation process. The vapour contains volatile matter, distilled off in the concn. of waste water, is used as atomised vapour for an incinerator to completely burn volatile and nonvolatile matter present.

This method is capable not only of making harmful substances harmless, but also of greatly reducing the amt. of vapour used, and is applicable for treatment of waste water from the mfr. of (meth)acrylic esters, etc. contg. ammonium sulphate and organic substances, in addn. to waste water from ammoxidation. 26. 8. 77 as 101665 (3pp117).

SUME ★ D15 32582B/17 ★J5 4036-388
Water-insoluble polysaccharide porous materials - used to mfr. membranes for ultrafiltration, reverse osmosis etc., ion exchangers, carriers, artificial kidneys, etc.
SUMITOMO ELEC IND KK 26.08.77-JA-102892
A11 B07 J01 (A88 A96 A97 J04) (17.03.79) B01d-13 B01j-01/04 C08b-37

Polysaccharide porous materials having micropores, in which the acid and/or hydroxyl gps. in the polysaccharide having $\geqslant$ 1 acid gp. in the constituent unit are crosslinked and/or modified at least to such a degree that the polysaccharide becomes water-insoluble, are new.

The acidic polysaccharide is pref. made insoluble in water by using a crosslinking agent which is a polyvalent metal ion or organic crosslinking agent, or by esterification or etherification of hydroxyl gps. or by esterification of acid gps.

The polysaccharides are e.g. pectin, alginic acid, agar, hyaluronic acid, chondroitin sulphuric acid, heparin etc., as well as CMC, cellulose sulphate, cellulose phosphate, etc. The polyvalent metal ion can be applied as the salt, hydroxide or oxide of an at least divalent metal. Examples of crosslinking agents are aldehydes, dicarboxylic
acids and their anhydrides and halides, diisocyanate est-
26. 8. 77 as 102892
ers, diisothiocyanate esters, etc.
(5pp119).

MATU ★ D15 32611B/17 ★J5 4036-786

Reagent for quality control of pure water - comprises mixt. of erichrome black T (RTM) and anhydrous alkali salt airtightly packed

MATSUSHITA ELEC IND KK 26.08.77-JA-102973

E24 J04 R16 (17.03.79) G01n-31/22 G01n-33/18

Reagent is prepd. by mixing Eriochrome Black T with anhydrous alkali salt ($NaHCO_3$, Na_2CO_3, etc.) to form a powder and packing the powder air-tightly to prevent oxidative deterioration.

The pH of the reagent can be maintained at 9-10 and the effective life of the reagent can be extended to >2 years in contrast with the 3-6 months of the previous reagent. The reagent is useful for testing the quality of water extracted from a pure water-making vessel using ion-exchange resin. 26. 8. 77 as 102973 (2pp50).

OHTA/ D15 60473T/38 =J7 9006-498

Oil-water mixture sepn - by filtration through a fibrous filter of hydrophilic cellulose

OHTA M (OHT /) 12.12.69-JA-099381

*A88 F03 H04 (29.03.79) *US3689-406 +B01d-39/02 C02c-01/02*

The filter selectively passes water in oil/water mixt. of both O/W and W/O emulsion. Method may be used for treatment of industrial waste water, removal of water from cooling medium etc.

The filter is prepd. by forming regenerated cellulose fibres, made by either the cuprammonium or viscose process, into paper or woven fabric, For example, wood pulp is treated with alkali and then CS_2 and dissolved in Na-OH soln. the viscose obtained as spun into fibres, cut into staples and woven in usual manner. Alternatively, cellulose fibre is regenerated in acid or alkali bath from soln. of linter in Schweitzer's reagent, and woven into fabric. 12. 12. 69 as 099381, B01d-39/02, C02c-1/02 (29. 3. 79) OTA M (2pp83)

MISK D15 39159A/22 =J7 9006-499

Organic waste liq. treatment - by simultaneous biological decomposition and chemical decomposition of organic material under aerobic and alkaline conditions

MITSUBISHI KAKOKI KAISHA 30.09.76-JA-116601

*(29.03.79) *J53043-078 C02c-05/10 +C02c-01/02*

Method comprises chemically decomposing organic substances in a waste liq. under aerobic and alkaline conditions and at the same time carrying out biological decompsn. using microorganisms. Pref. an alkali regulating tank and alkaline culture tank(s) are used.

When waste liq. of COD ≥ 28000-45000 ppm is treated, water of COD < 700 ppm. can be easily obtd. The microorganism having high activity in alkaline region is e.g. Alkaligenes sp. Pseudomonas sp. etc. Denaturation of the waste liq. is prevented under alkaline conditions, hardly decomposable cpds. are chemically decomposed to solubilise them or to convert them into low molecular substances and the resulting liq. is then treated with the microorganism. 30. 9. 76 as 116601 C02c-5/10, 1/02 (29. 3. 79) MITSUBISHI KAKOKI KAISHA (7pp) (J5 3043078)

MANW- D15 58205R/33 =J7 9006-501

Liquid treatment by ion exchange

MAN WARME & LUFTTEC (GHH -) 29.04.67-DT-M73793 (27.07.66-DT-M70370)

*J01 (29.03.79) *GB1202-718*

SEKI D15 56741Y/32 =J7 9006-507

Semipermeable membrane formed from cellulose deriv. - suitable for reverse osmosis and ultrafiltration

SEKISUI CHEMI IND KK 24.12.75-JA-155703

*A88 E19 J01 (A11) (29.03.79) *J52077-885 B01d-13*

Process comprises flowing and spreading a liq. consisting of (a) 100 pts. wt. cellulose deriv.
consisting of water sol. urea or its deriv. water sol. organ
-ic carboxylic acid and water, being in a ratio of 2:1-1:2
wrt wt. of urea or its deriv. and the organic carboxylic acid
being present in amts. of 8-200 pts. wt. per 100 pts. wt. total
compsn. The liq. for mfg. the membrane consists of 100-
1000 pts. wt. organic soln. A part of the organic solvent is
vapourised, and then the compsn. is contacted with water.

The permeability efficiency is excellent and it is not
necessary to ensure strict temp. control in mfr. the mem-
brane. The semipermeable membrane obtd. is adequate us-
ing as a membrane for reverse osmosis or ultrafiltration.
24. 12. 75 as 155703, B01d-13/00 (29. 3. 79) SEKISUI CHEM KK (4pp) (J5 2077885)

HOOK D15 63712Z/00 =J7 9006-516

Continuous production of chlorine dioxide - from alkali metal chlorate, alkali metal chloride and sulphuric acid in the presence of vanadium pentoxide catalyst

HOOKER CHEM & PLAS CORP 05.03.68-US-710648

*E36 F09 (29.03.79) *BE-729-357*

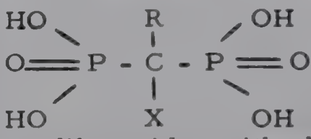
HENK D15 25409T/16 =J7 9006-533

Prepn of 1-amino alkane-1,1-diphosphonic acids - used as water softeners and dye fixers

HENKEL KG AUF AKTIEN 06.10.70-DT-048912

*E11 (29.03.79) *BE-773-507 C07f-09/38*

1-Aminoalkane-1, 1-diphosphonic acids of structure (I):



(I)

where R is H, 1-12C alkylene or phenyl, X is NH_2, piperidine, morpholine or NR_1R_2, and R_1 and R_2 are 1-4C alkyl are prepd. by reacting carboxamide dichlorides or dibromides with phosphorous acid in a mole ratio of 1:2-1:0. 5, pref. 1:1. Cpds. (I) are used as water softeners in the washing of bottles, and as additives in dyeing baths to fix metal ions on dyed articles. 6. 10. 71 as 078611, (clg. 6. 10. 70-DT-048912) C07f-9/38 (29. 3. 79) HENKEL & CIE GMBH (3pp) (J4 7008161)

MIKI/ D15 56190W/34 =J7 9007-149

Ammonical nitrogen removal from water or sewage - by passing through porous zeolite and/or crushed zeolite layers

MIKI K 01.05.73-JA-048687

*(04.04.79) *J49135-447 +C02b-01/44 C02c-05/08*

NH_4-N-contg. water treated by coagulation pptn. and sand filtration, or sewage treated with activated sludge is passed through pellet-like porous zeolite and/or crushed zeolite layers, a regenerating soln. is passed through the zeolite layer for desorption of NH_4-N, and the used regenerated by passing through active Al_2O_3-zeolite composite pellet lyaers, which are regenerated by heating.

In an example porous zeolite pellets (dia. 5 mm) and crushed zeolite (8-20 mesh) were packed into a column (dia 4. 5 x 180 cm high) in layer thicknesses of 80 and 50 cm resp. Then water contg. 16 ppm NH_4-N was passed through the column to remove < 95% NH_4-N. For regeneration of the zeolite 0. 7 N. NaCl was used. 1. 5. 73 as 048687, C02b-1/44, C02c-5/08 (4. 4. 79) MIKI K (5pp) (J4 9135447)

KANP D15 65405X/35 =J7 9007-151

Treating waste water with ozone - while exposing to UV light

KANAGAWA PREFECTURE 27.08.73-JA-095113

*E36 (04.04.79) *J50044-648 +C02c-05/04*

Waste waters are treated with O_3 while being exposed to UV light in an appts. equipped with a Hg lamp in the centre of quartz glass cylinder allowing gases such as O_3 and Cl to pass through the space between the lamp and cylinder to treat the waste water which is circulating outside the cylinder.

In an example, a waste water (COD 40. 2, dispersion due 110 ppm) was treated with O_3 while being exposed to UV light at 2100-3500 A°. The treated water had a COD of 2. 8 ppm. When the waste water was treated with O_3 only, the treated water had a COD of 37. 3 ppm. 27. 8. 73 as 095113 C02c-5/04 (4. 4. 79) KANAGAWA PREFECTURE (4pp) (J5 0044648)

GREE- D15 40732R/23 =NL-159-938
Flocculators and clarifiers for sewage and effluent - treatment
GREENING N & SONS (CRU /) 19.03.66-GB-012195
*(17.04 79) *GB1194-831 + B01d 29/04 C02c-01/22*

Sewage or industrial effluent contg. suspended solids is cleared by passing it upwards through a perforated plate in a treatment basin. Prior to the plate, a coagulant is added to help the particles to coagulate. The suspended particles pass through the perforations in the plate but the turbulence created, aided by the coagulant, causes the particles to coalesce and precipitate.

The process can also be used for effluents contg. gelatinous materials. 17.3.67 as 004052 (5pp1370)

VLKR D15 24715Q/00 =NL-159-939
Thickening sludge using polyelectrolytes or cellulose
KONIN VOLKER A NV 17.10.67-NL-014110
*A97 (17.04.79) *NL6714-110 + C02b-01/20 C02c-01/40*

Silt is dredged up from salt waterways and transported for dumping where it is not immediately accessible to the tides, in skips. The mud, etc. dredged or sucked up has coagulants such as carboxymethyl cellulose, potato starch, etc., added to it, as it runs into the holds where the solid matter is pptd. quickly. The excess water is allowed to drain away without taking back the particles with it, and transport of the coagulated silt is effected without the added expense of carrying large quantities of water.
17.10.67 as 014110 (2pp1014)

PLAN- ★ D15 B/17 ★NO 7703-110
System for removing gas during a process
PLAN-TEK A/S 08.09.77-NO-003110
(02.04.79) C02c

DREI/ ★ D15 B/17 ★PT --67-979
Accelerated dispersal of oil layers on water - by blowing air from perforated pipes below the surface
DOS REIS M G 02.05.78-PT-067979
*H03 Q42 (06.04.79) E02b-00/**

TERE- ★ D15 B/17 ★PT --68-053
Purification of domestic and industrial waste water - using precipitation, coagulation and sedimentation, lime admixture and biological filter
TECNICAS REUNIDAS 20.05.77-ES-458985
*(06.04.79) C02c-00/**

LEZH ★ D15 32767B/17 ★SU -509-287
Inorganic cation exchanger prepn. - from antimony, phosphorus and silicon cpds. for high capacity and selectivity
LENINGRAD ZHDANOV UNIV 19.07.74-SU-047423
J01 (00.00.00) B01j-01/22

Inorganic cation exchanger having increased ion exchange capacity toward 1,2 and 3-charged ions contains Sb 3.5-3.7 mg-atm/gm. P 1.3-1.7, Si 2.0-2.2. It is used in chemical, metallurgical nuclear branches of industry and in medicine and biology for e.g. soln. concentration, desalination etc.
Belinskaya, F.A., Militsina, E.A., Grigorova, N.S. Bul 13/5.4.76. 19.7.74. as 047423 (2pp1347)

TSVO= ★ D15 32849B/17 ★SU -590-263
Treatment of active sludge from urban sewage - by controlled heating in an air-feed before aerobic stabilisation and disinfection
TASHK VODOKANAL 10.11.76-SU-424214
(01.02.78) C02c-03

Active sludge from town sewage is treated by consolidation, aerobic stabilisation and dewatering. To accelerate the process of aerobic stabilisation and simultaneous disinfection the sludge is consolidated to a dry matter content of 10-15 g/l. Before aerobic stabilisation, the material is heated to 50-55°C for 2-2.5 hrs. in an air feed. Aerobic stabilisation is conducted until filtration resistance is $10\text{-}40 \times 10^{10}$ cm/g.
Frandetti, L.D., Khodzhaev, M.I., Makhlin, M.P. et al Bul. 4/30.1.78. 10.11.76. as 424214 (3pp835)

URKI ★ D15 32938B/17 ★SU -610-796
Photometric determn. of nickel in natural water etc. - using phenyl oxy:phenyl benzothiazolyl formazan, to improve selectivity
URALS KIROV POLY (SVPH=) 27.10.76-SU-414387
E13 J04 R16 (E31) (17.05.78) C01g-53 G01n-21/24

Nickel is determined in water with increased selectivity by formation of a complex with 1-phenyl-3-oxyphenyl-5-(benzothiazolyl-2/ formazan in aq. acetone soln. The reagent soln. is stable to light for several months, and the formazan is not difficult to synthesise. The analytical method is simple and takes only 3 min., and the sensitivity of the process is 0.5-10.0 mg./l. The only interference is from Zn, and this can be eliminated by working at pH 3.5-5.0.
Dubinnina L.F., Datsun L.B., Lipunova G.N., et al. Bul 22/15.6.78 27.10.76 as 414387 (3pp815)

MEDI= ★ D15 32939B/17 ★SU -610-797
Sterile water for long-term storage - is obtd. by heating with hydrogen peroxide in a hf electromagnetic field
MEDICAL BIOL PROBL 01.08.76-SU-391207
(17.05.78) C02b-03

Potable or sterile water required for long term storage, is sterilised at elevated temp. in a high frequency electromagnetic field. The process is accelerated at lower temps. as follows: prior to treatment, H_2O_2 is added to the water at 40-41°C to provide 0.005-0.015% concn.
Zablotskii, L.L., Lobanov, A.G., Popov, V.V. et al. Bul. 22/15.6.78. 1.8.76. as 391207 (2pp835)

KAZM= ★ D15 32977B/17 ★SU -610-835
Cation exchange resin selective for Gp/V and Gp/VI metals - is prepd. by precondensation of tri:acetoxy benzene with formaldehyde, followed by three/dimensional polycondensation
KAZMEKHANOBR NONFER 16.08.76-SU-395684
A91 J01 M25 (12.05.78) C08g-08/20

Cation-exchange resin, esp. selective with respect to metals of V and VI gps. is prepd. by subjecting 1,2,4-triacetoxybenzene to precondensation with formaldehyde at a molar ratio of 1:2 to 1:4 in an aqueous-alcoholic medium (33-50% ethanol) in presence of H_2SO_4 (concn. 0.7-1.8 mol/l.) with stirring, at 50-80°C for 1-4h. This is followed by a three-dimensional polycondensation under static conditions at 70-90°C for 30-70 h. Fluorane structure, promoting complex formation with metals of V and VI gps. is obtd. These cation-exchange resins can be used in hydrometallurgy, purification of aq. effluents, analytical chemistry, etc.
Lyubman, N.Ya., Chistyakova, O.N. and Imangazieva, G K. Bul. 22/15.6.78: 16.8.76. as 395684 (3pp70)

UKRV= ★ D15 33046B/17 ★SU -610-908
Water well mud cleaning pump - has tube vibrator connected by radial ties to mud receiving chamber
UKRVODOKANALPROEKT 27.12.76-SU-434397
Q42 (23.05.78) C02c-01/36 E02b-08/02

The pump used for cleaning of water well from the settlement has a vibrator made from the tube with projections and radial connections to the receiving chamber. A water lift tube with the nozzle is mounted inside the box which also contains a mud pulp lift with an insert and a receiving chamber which is mounted on the springs. Radial ties connect the tube to the chamber. The tube has projections.
Piloysh, M.V. Bul. 22/15.6.78. 27.12.76. as 434397 (2pp121)

WATE= ★ D15 33084B/17 ★SU -611-143
Detection of organic bodies in effluent by concentration - by solution in solvents, simultaneously freezing the water
WATER CONSERVATION 09.03.76-SU-330428
R16 (16.05.78) C02c-05 G01n-25/14

Concentration of organic impurities in water, e.g. effluent includes freezing the soln. Increased concn. is effected by adding 1-10 vol. % of a solvent e.g., heptane or hexane, to the water, which is immersed in the freezing agent at a rate 20-35 mm/hour.
Sobina, N.A., Bondarenko, V.F., Sleptsov, G.V. et al Bul. 22/15.6.78. 9.3.76. as 330428 (2pp835)

MOEN/ ★ D15 B/17 ★SW 7807-612
Toilet for biological decomposition - has air extractor and optional heater including layers of liq.-absorbing material
MOEN C 12.09.77-NO-003141
(09.04.79) B01f-03/04 B01f-07/24 C02c-05/10

The closed toilet for biological decompsn. has an upper opening with a seat, a lower air extractor, and an air outlet. An optional heater includes superimposed containers with perforated bottoms. The containers contain layers of liquid-absorbent material. 6. 7. 78 as 007612 (-pp958)

CLAR/ ★ D15 33137B/17 ★US 4148-617
Recovering water from ambient air - by mixing heated and cooled pressurised air to condense moisture
CLARK J F 29.11.77-US-855615
Q75 (10.04.79) B01d-53 F25j-03/04

Appts. comprises two insulating chambers positioned one above the other. In the lower chamber a pressurised air stream is heated and in the upper chamber a pressurised air stream is cooled. Each chamber has a pressure regulator for maintaining the air pressure above 20psi and in the upper chamber an exhaust valve ensures that the air pressure is less than in the lower chamber. The heated air stream is mixed with the cooled air in the upper chamber whereupon the moisture in the heated air stream condenses and is recovered.

System is capable of operating on any scale and recovering large amts. of water from ambient air. 29. 11. 77 as 855615 (4pp67)

WILL/ ★ D15 33168B/17 ★US 4148-693
Horizontal and compact cylindrical distn. appts. - for water purificn. and solute concn.
WILLIAMSON W R 17.02.77-US-769695 (26.02.75-US-553114)
J01 (10.04.79) C02b-01/06

Flash evapn. appts. comprises a housing formed by a central vapour housing disposed between opposed shells with a wall preventing communication between the shells through the vapour housing. A unitary liq. flash and separator device is disposed in each chamber defined by the wall in the housing. An apertured plate is disposed within each chamber and defines with each shell a flash chamber.

Heated solute-laden liq. is introduced into each flash chamber and the vapour moves upwardly through the aperture with some suspended droplets. A mesh is supported between vapour passages to provide a circuitous path and trap liq. droplets on the mesh. Hoods are provided within each flash chamber affixed to the outside of the plate and a conduit joins the chambers together for conducting relatively more conc. effluent through a liq. flash and separator device.

Used for the recovery of pure water from sea water or contaminated water. The appts. is compact and exposes both top and bottom water surfaces to evapn. in the flash device. The size of the mesh separator is reduced by interposing reversals of flow in order to separate water droplets from the vapour. 17. 2. 77 as 769695 (7pp1044)

BABW D15 82185A/46 =US 4148-708
Electrodialysis and ion-exchange treatment of ionised soln. - partic. water from prim. cooling circuit of nuclear reactor
BABCOCK & WILCOX CO 22.07.77-US-817952
*E36 J01 K05 (10.04.79) *BE-868-885 B01d-13/02*

Cell structure for sepg. an ionised soln. into streams of conc. acid, conc. alkali and deionised fluid comprises (a) a bed (I) of mixed anion and cation resin; (b) an anion membrane forming a partition for a side of (I); (c) a cation me membrane forming a partition for another side of (I); (d) an anion resin bed adjacent to (b); (e) a cation membrane forming a partition for a different side of (d);

Structure further comprises (f) an anode spaced from (d) and (c); (g) a cation resin bed adjacent to (e) that forms a partition for another side of (I); (h) an anion membrane forming a partition for a different side of (g); and (i) a cathode spaced from (g) and (b) that partitions (g). 22. 7. 77 as 817952 (8pp936)

SMIT/ D15 52431V/29 =US 4148-726
Oxygen treatment of sewage - prevents formation of hydrogen sulphide by automatically controlled oxygen injection
SMITH K C (BRTO) 01.03.73-GB-010080 (08.01.73-GB-001028)
*(10.04.79) *DT2400-602 +C02c-01/12*

Sewage is treated while flowing through a gravity sewer by withdrawing and pressurising 0. 5-10% of the sewage flow, introducing O_2 or O_2 contg. gas into the withdrawn portion to a min. level necessary to prevent the conc. of dissolved O_2 in all the sewage falling to a level at which bacterial reduction of O_2 and S-contg. cpds. would occur, and injecting the portion under pressure of 1. 5-10 bars downstream of the withdrawal point.

Bacterial formation of H_2S in prevented and any H_2S in the sewage is oxidised to S. Creation of a potentially explosive atmos. in head space above the sewer is prevented. 22. 6. 76 as 698757 (+2. 1. 74-US-429744) (4pp1376)

HAEG- D15 26592X/15 =US 4148-727
Liquid purification plant - for removal of finely divided solids or dissolved solids from e.g. water in two chamber column
HAEGER & ELSAESSER (HAGE-) 16.08.74-DT-439303
*J01 (10.04.79) *DT2439-303 B01d-15/06*

Impurities are separated from a liq. by propelling the liq. through two chambers in tandem contg. different contaminant-removing substances, the chambers being defined by partitioned upper and lower portions of a common tank and the liq. being propelled vertically upward.

The partition is liq. permeable. The lower chamber is charged by removing spent substance using a transport liq., renewing the spent substance and re-circulating the substance to the lower chamber. The substance in the second chamber is renewed by rinsing downwardly. Purified liq. is removed from the upper chamber.

Space saving and inexpensive operation, are provided. 18. 8. 75 as 605599 (5pp1376)

BRIG/ ★ D15 33186B/17 ★US 4148-731
Gravity separator for removing solid particles from water - has settling tanks, each with pre-treatment conduit surrounded by electromagnetic winding, and contg. screw impeller
BRIGANTE M F 27.12.77-US-864810
J01 P41 (10.04.79) B03c-01/30

The appts. comprises a no. of series sonnected settling tanks, in which the solid particles settle under gravity. A filter pre-treatment unit connected to the inlet of each tank comprises a pre-treatment conduit surrounded by an electromagnetic Al wire winding fed by 24±4V dc.

The conduit contains a helical screw impeller, having $2\frac{1}{2}$ turns spaced at $^1/_{16}$ in. from the inner wall of the conduit, which is rotated by the water flow through the conduits.

The impeller has a very close tolerance with the wall of the pre-treatment conduit and sweeps the wall free of particles which tend to deposit on it. The electromagnetic winding induces a magnetic field which effectively suspends the particles in the conduit. Used for sepg. suspended minerals, e. g. iron oxide, fromraw water, and for purificn. of sewage. 27. 12. 77 as 864810 (7pp67)

D16: FERMENTATION INDUSTRY

LCW ★ D16 31618B/17 ★BE -872-879
abilised, insolubilised biochemical products - covalently bonded o a silica hetero-condensate which is fixed to a mechanically oherent support
BYK-MALLINCKRODT (FRAU) 28.12.77-DT-758507
A96 B04 (A26) (17.04.79) C12b

tabilised and unsolubilised biochemical products comprise iochemicals, such as antigens, antibodies, hormones, minoacids, haptens, proteins, enzymes, etc. fixed by covalent bonds to a silica heterocondensate layer which is it-self applied to a mechanically coherent support.

Pref. the silica heteropolycondensate layer is a copolyner of a) at least one substd. silane of formula $SiR_nR''_{(4-n)}$ (I) (where R = H, halo, alkoxy or $-NR'_2$, R' = H nd/or alkyl, R'' = alkyl, alkenyl, aryl or aralkyl and n = -3) b) at least one functional silane of formula $SiR_n(R'''Y)_{4-n}$ (II) (where R''' = alkylene, phenylene, alkylphenylene or alkylenephenylene, y = halo, opt. substd. amino opt. substd. anilino, formyl, keto, carboxy, hydroxy, mercapto, cyano, hydroxy-phenyl, diazo, carbalkoxy, $-SO_3H$ or $-PO_3H_2$ and n = 1-3, c) opt. one or more hydrolysable silica derivs. of formula SiR_4 (III) (with the condition that not all R gps. may be H).

Stabilised and insolubilised biochemicals which have prolonged activity, are more resistant to charges of pH and temp. and are readily removed from the reaction medium by filtration, centrifugation, decantantation etc. They are used as reagents e.g. sepn. reagents, adsorbants etc. and in immunochemical processes e.g. radio immunological tests. 19.12.78 as 872879 (22pp395)

PIND/ ★ D16 31659B/17 ★CA 1051-804
Separate fermentation containers enclosed in single outer container - for isolation from external environment while permitting transfer of materials between containers
PINDER J A 05.02.76-CA-245128
(03.04.79) C12b-01

Fermentation appts. comprises an outer supporting container which receives at least two separate expandable and collapsible containers arranged so that the contents of the containers may be combined without contact between the contents and the environment surrounding the outer container. Gases are conducted into and from the containers via conduits which can be isolated from the exterior environment. A releasable cover encloses those members of the appts. not enclosed within the outer container.

Used for prepn. of alcoholic beverages and fermentation prods. The appts. is compact to permit fermentations to occur in reduced space and in the absence of external water supply and washing facilities. The fermenting substance is isolated from the external environment and fermentation is carried out under sterile conditions. 5.2.76 as 245128 (20pp1044)

BRPE D16 05775H/00 =DS 1642-598
Continuous process for culture of symbiotic mixtures of
BRITISH PETROLEUM LTD 15.02.67-GB-007181
*B04 C03 H04 (19.04.79) *FR1554-353 +C12b-01/08*

A mixt. of bacteria using methane as carbon source is grown under aerobic conditions in an aq. nutrient medium contg. methane. At least one of the bacterial species is smaller in size than the other bacteria present and is subsequently at least partly sepd. by centrifuging. At least part of the fraction rich in the smaller bacteria is recycled, with or without further treatment.

Symbiotic culture of Pseudomonas methanicum and Mycobacterium methanicum is described. 9.2.68 as 642598 (3pp068)

BAXT D16 76112R/41 =DS 2016-274
Separation of leucocytes from whole blood
BAXTER TRAVENOL LAB 10.04.69-US-815234
*B04 +P31 (19.04.79) *BE-748-701 +A01n-01/02 A61k-35/14*

Sepn. of leucocytes from blood without agglutination of erythrocytes comprises thoroughly mixing defibrinated [illegible] nella foenum graecum seeds; the sediment is allowed to settle and the supernatant liquor contg. the leucocytes is sepd.

Pref. the seeds are ground to a fine powder and then suspended in physiological NaCl soln., (1.0 mole/dm^3, about 2-20 vol). 6.4.70 as 016274 (5pp047)

SCHZ D16 29598T/19 =DS 2152-620
Mutanase enzyme - which breaks down mutans and is useful eg for removing dental tartar or plaque
SCHWEIZER FERMENT AG 26.10.70-GB-050712
*B04 (D17 D21) (19.04.79) *DT2152-620 A61k-07/16 C07g-07/02 C12d-13/10*

Mutanase comprises an α-1,3-glucanase prepn. capable of removing mutane deposits. Mutane is isolated from culture media in which certain Streptococcus species are propogated, pref. Streptococcus mutans CBS 350.71. Process for prepn. of mutanase comprises oxidn. and redn. of mutane to remove the α-1,1-6-links; microorganisms such as Trichoderma harzianun, Penicillium lilacinium, P. funiculosum, P. melinii and P. janthinellum are propagated in the presence of this degraded mutane, and mutanase is isolated from the culture medium.

Prod. is used in oral dental prepns. for the removal of mutane deposits. 22.10.71 as 152620 (4pp047)

MOSU D16 47902W/29 =DS 2400-511
Continuous propagation of micro-organisms in a closed circuit - with accurately controlled process parameters and unifrmity in operation
MOSCOW LOMONOSOV UNIV 07.01.74-DT-400511
*(19.04.79) *DT2400-511 C12b-01/06*

A plant for the continuous growth of microoganisms includes a closed loop with a pump and a block unit to measure the process parameters. The nutrient medium is stored in a container, linked by a feed pipe to the loop ring main. Downstream of the measuring block unit, two stop valves are arranged. A feed pipe and drain pipe are coupled to the space between these stop valves in such a way that the vol. of the nutrient medium to be introduced in the recycling loop and the vol. of the suspension of microorganisms to be extracted from the loop are equal.

This prevent erroneous readings and untimely admission of medium of extn. of suspension. 7.1.74 as 400511 (5pp39)

STME- D16 86970X/47 =DS 2543-307
Fermentation process for mfr. of citric acid - from molasses in development and fermentation stages with separate air system for each
STAND-MESSO DUISBUR 27.09.75-DT-543307
*B05 E17 (19.04.79) *BE-843-769 C12d-01/04*

Fermentation of substrates contg. carbohydrate molasses (esp. molasses used in the prodn. of citric acid), comprises controlled sterile aeration at constant temp. in a regulated fermentation chamber. The substrates are first sterilised at 120°C. Two independent aeration systems are employed, one for temp. control and the other for supplying O_2 after the removal of spore traces. Slight excess pressures are used, (5-50mm H_2O). 27.9.75 as 543307 (5pp047)

DRES/ ★ D16 31713B/17 ★DT 2745-763
Measurement of gas e.g. carbon di:oxide in liquids e.g. beer - by conductivity measurement using tube of membrane permeable to the gas with a chemically active liq. on the outside
DRESCHER H P 12.10.77-DT-745763
A89 E36 J04 R16 (19.04.79) G01n-27/04

Quantity of gas e.g. CO_2, H_2S, SO_2 or NH_3 in a liq. is measured by passing it through a tube section formed from a material permeable to the gas. The tube is surrounded by an annular passage in which a reagent flows with which the gas will react.

The liquid is fed through by metering pumps as in the reagent. Changes in compsn. of the reagent are measured by conductivity cells. The permeable tube is generally a flexible material e.g. -Si-rubber.

Used for measurement of sol. gas contacts in liquids. Avoids the use of a purge gas and allows continuous operation. 12.10.77 as 745763 (12pp1053).

KUNZ- ★ D16 31773B/17 ★DT 2746-314
Malt-house kiln - with worm conveyor above malt-floor for discharging, and another at higher level for charging
KUNZEL W MUHLENBAU 14.10.77-DT-746314
(19.04.79) C12c-01/10

A malthouse tank, for use in steeping, germinating or kiln drying of barley, is fitted with a worm conveyor which remains through the whole operation close above the maltfloor and is used exclusively for discharging the malt. This conveyor is not adjustable at right angles to the maltfloor.

This simplifies the malt discharge and saves the power required to lower a conveyor through the green malt. 14.10.77 as 746314 (22pp39).

UPJO ★ D16 31828B/17 ★DT 2841-361
Antibiotic CC-1065 - disinfectant, oil preserving agent and for protecting silk worms from infection from Bacillus subtilis, prepd. from Streptomyces zelensis
UPJOHN CO 17.10.77-US-842914
B04 C03 H07 (19.04.79) C07g-11 C12d-09/16

The antibiotic CC-1065, which is effective against gram positive and gram negative bacteria and against L1210, P388 and B16 cells in vivo in mice has the following characteristics, in its essentially pure form: (a) mol. wt. ca 700; (b) C 61.06%; H 4.92%; N 13.17%; (c) is soluble in DMSO, DMF, acetone, CH_2Cl_2, ethylacetate and dioxan; and (d) in the form of a slurry in mineral oil, has a characteristic IR, nmr and proton spectrum as shown in the specification.

The antibiotic is suitable for use as an oil preserving agent to inhibit the bacteria which cause oil impurities. The antibiotic can also be used as a component of washing solns. for sanitary purposes. Because the antibiotic is also effective against Bacillus subtilis, it can also be used in the breeding places of silkworms to reduce infections caused by this bacterium.

The antibiotic is prepd. by culturing Streptomyces zelensis DSM 1341 (nov. sp.) in an aq. culture medium and under aerobic conditions. 22.9.78 as 841361 (30pp).

ENFO/ ★ D16 31979B/17 ★EP ---1-540
Microbiological modification of hardwood - by aerobic microorganisms or enzymes, with control of moisture content of wood, temp. and oxygen and carbon di:oxide levels
ENFORS S O 04.10.77-SW-011089
F09 P63 (18.04.79) B27k-05
D/S: E(BE, CH, DT, FR, GB, LU, NL).

Hardwoods are modified by implanting on or in the surface an (enzymatically active prepn. of an)aerobic microorganism which is specific for the wood. The temp., moisture content of the wood, O_2 and CO_2 contents are adjusted in relation to the organism (or prepn.), and the process discontinued in a suitable manner.

Partic. used for modification of beech, alder or birch, to give a light, porous prod. useful in prodn. of e.g. pencils, wooden moulds for glass mfr., furniture etc. Microorganisms used may be those producing a pigment which stain the wood selectively.

3.10.78 as 850014 (8pp949).
(E) ISR: DT946845; DT524103; US2671751; FR1031036.

INSF ★ D16 32004B/17 ★FR 2398-046
Prepn. of L-carnitine - by treatment of 3-dehydro:carnitine with carnitine dehydrogenase, a coenzyme, and a reducing agent
INST FRANCAIS DU PETROLE 18.07.77-FR-022183
B05 E16 (23.03.79) C07c-101/30

L-Carnitine $(CH_3)_3N^{+}CH_2CHOH\text{-}COO$ (I) is prepd. from 3-dehydrocarnitine $(CH_3)_3N^{+}CH_2COCOO^{-}$ (II) or one of its salts according to the following reaction, by simultaneous treatment, in an aq. medium, with (a) carnitine dehydrogenase, (b) a coenzyme which is used by the carnitine dehydrogenase for the reduction of dehydrocarnitine and (c) a reducing agent for the coenzyme.

The carnitine dehydrogenase may be isolated from Pseudomonas cultures, esp. P. fluorescens. The coenzyme is pref. nicotinamide adenine dinucleotide in oxidised or reduced form. The reducing agent may be chemical, such as an alkali metal dithionite or hydrogen and a noble metal catalyst, or it may be enzymic such as glucose/glucose dehydrogenase, a formate/formate dehydrogenase or ethanol)alcohol dehydrogenase.

Normal methods of synthesising carnitine give a racemic mixt. The biological activity is present only in the L-isomer. 18.7.77 as 022183 (12pp520).

ALFA D16 23856Y/14 =GB 1544-689
Centrifugal clarifier with liquid seal - which prevents air entrainment in clarified liquid
ALFA-LAVAL AB 17.09.75-SW-010386
*J01 P41 (25.04.79) *DT2640-030 B04b-15/04*

A centrifugal separator has a rotor having a central inlet and outlets at the periphery of a sepg. chamber. A paring chamber, communicating with the sepg. chamber near the axis of the rotor, contains a stationary paring disc for removing the sepd. liq.

Air is prevented from passing into the paring disc during discharge of a sepd. heavy component. An annular partition is connected to the rotor to permit flow of liq. from the sepg. chamber into the paring chamber when the separation is completed.

A stationary annular disc co-axial with the rotor extends into the paring chamber to form a liq. seal between the sepg. chamber and the paring disc. A second stationary annular disc is arranged to form a liq. seal between the atmosphere and the paring disc. 20.8.76 as 034888. (—pp1363)

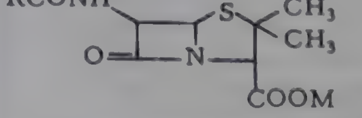
GENE D16 84521Y/47 =GB 1544-760
Rapid, convenient cellulose decrystallisation - by mixing with phosphoric acid, extracting with aq. tetrahydrofuran and recovering the reagents
GENERAL ELECTRIC CO 30.08.76-US-718756
*A11 (25.04.79) *US4058-411 +D21c-03/04*

Cellulose in natural cellulosic material is decrystallised by mixing the material with 80-85wt.% concn. phosphoric acid at ambient temp. to produce a gel mixt. in which the crystalline regions of cellulose are converted to amorphous form. Aq. THF soln. comprising ≥1 pt. wt. water per 100 pts. wt. THF is mixed with the gel mixt. at ambient temp. to extract phosphoric acid and form a soln. of phosphoric acid and a ppte. of amorphous cellulose. The THF and phosphoric acid are then recovered.

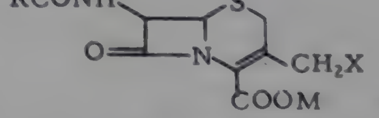
The aq. THF soln. pref. contains ≥1 pt. wt. THF for each pt. wt. phosphoric acid to be extd. Suitably 85-100% of both the THF and phosphoric acid initially used is recovered. The method is fast and inexpensive. 18.8.77 as 034627. (7pp945)

SHIO D16 90987X/49 =GB 1544-84
Penicillins and cephalosporins prodn. - by acylating 6-APA etc. with amino acid esters in presence of specific microorganisms or extract NL161176)
SHIONOGI KK 14.05.75-JA-057844
*B02 (25.04.79) *DT2621-618 A61k-31/43 C07d-499/44 C07d 501/20 C12d-09*

Penicillin or cephalosporin antibiotics of formulae (I) or (II) are prepd. by subjecting an amino cpd. selected from 6-APA, 7-ACA or 7-aminodeacetoxycephalosporanic acid or their salts, to enzymatic acylation with an ester $R \cdot CO \cdot O \cdot R_1$.



(I)



(II

In the formulae, X is H or $O \cdot CO \cdot CH_3$; RCO is an acyl gp. derived from an α-amino acid, an N-ammonium salt of an α-amino acid or an N-(1-10C)acylamino acid; M is H or a salt-forming cation; R_1 is 1-10C alkyl.

The acylation is in the presence of Aphanocladium aranearum or Cephalosporium coremioides or a penicillin amidase- or cephalosporin amidase-active prepn. derived from these. 14.5.76 as 020087. (10pp974)

INMR D16 09303Y/06 =GB 1544-867

Cationic material for reversibly fixing proteins - consists of a mineral support coated with an amino polysaccharide polymer

INST MERIEUX 29.07.75-LU-073094

*A96 B04 J01 +P73 (A11) (25.04.79) *BE-844-657 C01b-33/12 C01f-05/02 C01f-07/02 C01g-23/04 C08b-31 C08b-37/02*

Cationic material capable of reversibly fixing biological macromolecules, comprises a porous inorganic carrier coated with a polysaccharide contg. amino gps. The inorganic carrier has an internal surface area not exceeding 100 m^2/g., and is pref. silica, alumina, magnesia, Ti oxide, glass, silicate or kaolin.

The material has excellent mechanical, physical, chemical and biological properties and is suitable for chromatographic sepn. of proteins and nucleic acids. 28.7.76 as 031492. (10pp924)

CHEM- D16 06114Y/04 =GB 1544-908

Beta glycoside derivs. for coupling to carriers - to produce antigens and immunoadsorbents(NL110177)

CHEMBIOMED LTD (CANA) 08.07.75-GB-028729

*B04 R16 (25.04.79) *DT2630-596 C07d-309/10 C08b-37*

A β-glycoside, useful as a carbohydrate antigenic determinant having a reactive gp. suitable for attachment of the determinant to a carrier molecule, is prepd. by reacting a glycosyl halide, a 1,2-orthoacyl ester deriv. of a sugar or a 1,2-oxazoline deriv. of a sugar with a protected monohydroxy carboxylic acid of formula (I) $HO-R-COOR^1$ to form a β-glycoside of formula (II) $\text{Sugar}\xrightarrow{\beta}O\text{-}R\text{-}COOR^1$ which is then recovered.

In the formulae, R is 3-17C aliphatic gp.; R^1 is alkyl. 7.7.76. (20pp910)

OXOI- D16 53794A/30 =GB 1544-995

Appts. for forming non-toxic atmospheres - suitable for anaerobically culturing microorganisms, is a container with suitable reactants which react when a sepg. membrane is ruptured

OXOID LTD 11.01.77-GB-000967

*(25.04.79) *DT2800-437 C12b-01 +B01j-07/02*

A device for providing a nontoxic atmos. for use in culturing anaerobic microorganisms comprises a closed envelope of inert material having a frangible portion which may be ruptured to allow the ingress of liq.

Envelope contains a closed sachet, part or all of which is formed of a gas and liq.-permeable membrane. Material is disposed within the sachet adjacent the membrane for reacting with liq. to generate the gaseous atmos. Surface area and permeability of the membrane is chosen to control rate of liq. ingress and rate of gas generation.

Esp. used in the culture of microorganisms such as gonococcus, meningococcus and brucella, which require higher concns. of CO_2 than ordinary microorganisms. 30.12.77. (4pp931)

NATR ★ D16 32082B/17 ★J5 4017-184

Hydrocarbon oxidn. in culture medium - by oxidising alkane, alkene or organic cyclic cpd. using methane oxidising bacteria

NATIONAL RES DEV CORP 04.07.77-GB-027886

A41 E19 (08.02.79) C12d-13

A hydrocarbon is oxidised by oxidising an alkane, alkene or organic cyclic cpd. using a culture medium contg. methane oxidising bacteria or its extract material contg. the methane oxidising system as an oxidising agent.

Pref. the alkane has 3-9C and the hydrocarbon is ethylene, propene and butene, and the organic cyclic cpd. cyclohexane and benzene. The methane oxidising bacteria is pref. methylomonas methanica, Methylococcus capsulatus, Methylomonas albus, Methylomonas agile, Methylocystis parvum and Methylosinus trichosporium.

The process is able to produce cyclohexanol by oxidn. of cyclohexane, phenol by oxidn. of benzene, and styrene-epoxide by oxidn. of styrene. 3.7.78 as 081391 (9pp15).

TOXN ★ D16 32123B/17 ★J5 4034-293

Electrochemical determn. of cephalosporin cpd. - subjected to enzymatic reaction with cephalosporinase-producing bacterium

TOYO BREWING KK 23.08.77-JA-100182

B02 J04 R16 (B04) (13.03.79) G01n-27/46 G01n-31/14

Process comprises subjecting a system contg. cephalosporinase-producing bacterium and a sample system contg.

and determining electrically the change of proton in the sample system caused by the enzymatic reaction by a potentiometer.

The content of cephalosporin in sample can be determined in very short time with high accuracy of some γ/ml. By fixing the bacterium on high polymer film of plain form, etc. to form a reactor, the reactor can be repeatedly (> 10 times) used as cephalosporinase reactor.

Cephalosporinase-producing bacterium is e.g. bacteria belonging to Citrobacter genuas or Pseudomonas genuas. Cephalosporin cpd. can be electrochemically determined by a censor consisting of the reactor and glass electrode. 23.8.77 as 100182 (7pp50).

CHUG ★ D16 32270B/17 ★J5 4035-050

Cultivating edible mushrooms - by incubating and growing the microorganism in pores in wood, the pores being covered by porous water-retaining plugs

CHUGOKU KAKO KK (JAPC) 22.08.77-JA-099547

A97 P13 (14.03.79) A01g-01/04 C12k-01

In cultivation of edible mushroom by making pore in medium wood, incubating the microorganism and growing it, the pore is covered after incubation with a plug made of porous material having water-hold capacity of >10% and the plug is allowed to contain water of 10-100%. In this way, the water-content of the wood medium can be maintained at the suitable level without damage of the microorganism itself and further harmful microorganism can be inhibited to grow.

The porous material includes porous plastics, porous non-woven fabric, cotton, cloth, paper, activated carbon, porous fibre, and the like, among which plastics are pref. e.g. foamed phenol resin, foamed polyurethane resin, and the like. 22.8.77 as 099547 (6pp22).

NISS ★ D16 32347B/17 ★J5 4035-214

Antidiarrhoeal agent for calves - comprises bifido:bacterium microorganism

NISSHIN FLOUR MILL KK 26.08.77-JA-102020

B04 C03 (15.03.79) A23k-01 A61k-35/74

Prevention and treatment of diarhoea in a calf comprises oral admin. of a Bifidobacterium bacteria. The bacteria is nontoxic and is e.g. Bifidobacterium adresentes, Bifidobacterium thermofilm, etc. The admin. period is from immediately after the birth to 3 months after the birth. For prevention there is used daily $>10^7$ per calf, and for treatment there is used daily $>10^8$ per calf. The bacteria can be administered in any form, e.g. dried formulation, liquid formulation. It is possible to mix the bacteria with feedstuff or milk. Since the bacteria is anaerobic, there is needed the special consideration to the resistance to oxygen. 26.8.77 as 102020 (3pp108).

AJIN ★ D16 32368B/17 ★J5 4035-280

Yeast body prepn. from Saccharomyces strain - by culturing mated haploid strain in nutrient medium and collecting obtd. yeast body

AJINOMOTO KK 24.08.77-JA-101405

(15.03.79) C12c-11/08 C12k-01/02

The method comprises culturing the mated strain showing high multiplying activity which is obtd. by mating the haploid strain of the yeast belonging to Saccharomyces, in nutritive medium and collecting yeast body from the cultured medium. The mated yeast strain of Saccharomyces shows stable multiplying activity 1.2-1.9 times as high as that of the parent strain, and the multiplying activity is maintained for >10 generations.

Yeast strain is Saccharomyces cerevisiae, S. karisbengensis, S. ruxii, S. sake, etc. and the mated strain can be obtd. by mating the haploids having different parent strains. 24.8.77 as 101405 (8pp5).

MITP ★ D16 32369B/17 ★J5 4035-282

Synthetic resin membrane contg. enzyme, microbe etc. - prepd. by spreading synthetic resin soln. contg. enzyme etc. on a base plate, and steeping in solvent which does not dissolve the resin

MITSUBISHI PETROCH KK 20.08.77-JA-099106

A97 J04 (15.03.79) C07g-07/02

The method comprises spreading the synthetic resin soln. (A) contg. >1 biological catalyst selected from enzymes, microbes and organelias, on a base plate and steeping it in the solvent (B) which does not dissolve the synthetic resin.

When polyalkyleneglycol is combined in the soln. (A) and the solvent (B) which can dissolve polyalkyleneglycol, a porous membrane showing good permeability can be prepd. easily. As synthetic resin, PVC and its copolymers can be used. As the solvent, DMF, dimethylacetamide, n-methylpyrrolidone, THF, etc. can be used.

The synthetic resin membrane shows high permeability and having membrane form, it shows higher diffusion velocity than conventional granular fixed enzyme. 20. 8. 77 as 099106 (4pp5).

AJIN ★ D16 32370B/17 ★J5 4035-283

Proteolytic enzyme prepn. - culturing yellow koji mould in nutritive medium contg. vegetable oil and sucrose fatty acid ester

AJINOMOTO KK 22.08.77-JA-100246

(15.03.79) C07g-07/02 C12b-03/12 C12d-13/10

Proteolytic enzyme, partic. endopeptidase, is prepd. by culturing yellow 'koji' mould (e.g. Aspergillus oryzae, A. soyae, etc.). Process is improved by combining the vegetable oil and the sucrose fatty acid ester which contain 14-20C fatty acid as the structuring unit, in nutritive medium.

Endopeptidase obtd. shows an activity 2-6 x as high as the peptidase obtd. by conventional methods. Thus proteins can be hydrolysed almost completely. Fine global mycellium (pellet form) of 50-500μ can be obtd. 22. 8. 77 as 100246 (8pp5).

TANI/ ★ D16 32371B/17 ★J5 4035-284

Choline oxidase prepn. - by cultivating Cylindrocarpow, fusarium or Gibberella microorganisms

TANI Y 23.08.77-JA-100991

(15.03.79) C07g-07/02 C12d-13/10

Prepn. of choline oxidase comprising culturing a microorganism belonging to the genus Cylindrocarpon, Fusarium or Gibberella and capable of producing choline oxidase.

Choline oxidase is produced in high yield. In an example, in 500ml. of medium aerobic cultivation is carried out at 28°C for 48 hrs. using FERM-P 4168 in a 2 l. flask. The same cultivation is carried out using 40 2l. flasks. After cultivation is over, the culture liquids are combined. After-treatment of the culture liquid gives 5ml. of the enzyme liquid. 23. 8. 77 as 100991 (6pp108).

AJIN ★ D16 32372B/17 ★J5 4035-285

Fermentative L-threonine prepn. - by culturing highly resistant mutant strain of brevibacterium

AJINOMOTO KK 22.08.77-JA-100243

(15.03.79) C12d-13/06

Prepn. of L-threonine comprises culturing a mutant strain belonging to the genus of Brevibacterium, having the resistance to α-amino-β-hydroxyvaleric acid (AHV), α-caprolactam (CCL), γ-methyllysine (ML) or γ-carbobenzoxylysine (CBL) and which can produce L-threonine, and recovering L-threonine from the medium.

Examples of the mutant strains used are Brevibacterium lactofermentum AJ 11178 (FERM-P 4180, AHV-resistance, ML-resistance), Brevibacterium lactofermentum AJ 11179 (FERM-P 4181, AHV-resistance, CBL-resistance), Brevibacterium flavum AJ 11176 (FERM-P 4178, AHV-resistance, CCL-resistance), Brevibacterium flavum AJ 11177 (FERM-P 4179, AHV-resistance, L-isoleucine requiring, CCl-resistance). 22. 8. 77 as 100243 (3pp108).

AJIN ★ D16 32373B/17 ★J5 4035-286

LThreonine fermentation prepn. - by culturing a mutant strain of Brevibacterium having alpha-amino-beta-hydroxy valeric acid

AJINOMOTO KK 22.08.77-JA-100244

(15.03.79) C12d-13/06

Prepn. of L-threonine comprises culturing a mutant strain belonging to the genus Brevibacteriym and having α-amino-β-hydroxyvaleric acid (AHV) resistance and L-alanine assimilating property and recovering L-threonine accumulated in the medium.

In an example, 20ml. of medium is placed in an agitated 500ml. flask and sterilised at 110°C for 10 mins. One platinum loopful of AJ 11180 (FERM-P 4183) is inoculated and cultivation is carried out at 31.5°C for 72 hrs. with shaking, 11mg/ml. of L-threonine is obtd. 22. 8. 77 as 100244 (3pp108).

AJIN ★ D16 32374B/17 ★J5 4035-287

L-Isoleucine prepn. by fermentation - comprises culturing mutant strain of Brevibacterium

AJINOMOTO KK 22.08.77-JA-100245

B05 E16 (15.03.79) C12d-13/06

Prepn. of L-isoleucine comprises culturing a mutant strain belonging to Brevibacterium, having the resistance to α-amino-β-hydroxyvaleric acid (AHV) and to trichloroalanine and capable of producing L-isoleucine, and recovering L-isoleucine accumulated in the medium.

In an example, 20ml. of medium is placed in a 500ml. shaking flask, and sterilised for 10 mins. at 110°C. One platinum loopful of AJ 11192 (FERM-P 4194) is inoculated in the medium and cultivation is carried out at 31.5°C for 72 hrs. There is obtd. 12mg/ml. of L-isoleucine. 22. 8. 77 as 100245 (3pp108).

AJIN ★ D16 32375B/17 ★J5 4035-288

L-threoning prepn. by fermentation - of mutant strain of the genus Brevibacterium

AJINOMOTO KK 23.08.77-JA-100788

B05 E16 (15.03.79) C12d-13/06

Prepn. of L-threonine comprises culturing a mutant strain belonging to the genus Brevibacterium, having resistance to α-amino-hydroxyvaleric acid (AHV), S-methylcysteinesulphoxide (S-MCS), S-methylglycinesulphoxide (S-MGS), carbobenzoxy-valine (CBV), carbobenzoxythreonine (CBT) or N-benzoylallothreonine and capable of producing L-threonine.

The yield of L-threonine can be increased by using a mutant strain which has further L-isoleucine, L-leucine or L-alanine utilising property. Examples of the mutant strains are Brevibacterium lactofermentum AJ 11182 (FERM-P 4184, AHV-resistance, S-MCS-resistance), Brevibacterium lactofermentum AJ 11188 (FERM-P 4190, AHV-resistance, L-isoleucine requiring, L-leucine requiring, S-MCS-resistance), etc. Mutation induction is carried out using N-methyl-N'-nitro-N-nitrosoguanidine. The medium contains carbon source, nitrogen source, inorganic ion and if desired, other organic minor nutrient. Carbon source includes e.g. glucose, sucrose, acetic acid, propionic acid, ethanol etc. Cultivation is carried out at pH 5-9 and at 24-37°C under aerobic conditions. Th desired cpd. is recovered using an ion exchange resin. 23. 8. 77 as 100788 (3pp108).

KYOW ★ D16 32376B/17 ★J5 4035-289

N-Acetyl-L-glutamic acid prepn. - by culturing Corynebacterium glutamicum KY 9390 Ferm-P 4113

KYOWA FERMENTATION KK 23.08.77-JA-100961

B05 E16 (15.03.79) C12d-13/06

The cultivation of microorganism is carried out in a nutrient medium contg. carbon sources, nitrogen sources anc minerals at 20-40°C over 1-5 days under aerobic conditions. 23. 8. 77 as 100961 (3pp16).

KYOW ★ D16 32377B/17 ★J5 4035-290

N-Alpha-acetyl-L-ornithine prepn. - by fermentation of corynebacterium microorganism

KYOWA FERMENTATION KK 23.08.77-JA-100962

B05 E16 (15.03.79) C12d-13/06

Prepn. of N-α-L-ornithine (I) comprises culturing a microorganism belonging to the genus of Corynebacterium.

For example, one platinum loopful of Corynebacterium glutamicum KY 10700 (FERM-P 4114) is inoculated to 5ml. of seed culture and cultured for 24 hrs. under shaking at 30°C. Then, the seed culture is transplanted in an amt. of 10% (v/v) to 20ml. of medium, and cultivation is carried out 96 hrs. at 30°C. 11.0g. of (I) is obtd. 23. 8. 77 as 100962 (3pp108).

MERI ★ D16 B/17 ★J5 4035-291

Refining of biotics

MERCK & CO INC 02.06.77-US-802710

B05 C03 (15.03.79)

2. 6. 78 as 065856

TOKU/ ★ D16 32378B/17 ★J5 4035-295

Caramel colour, viscous syoyu prepn. - by adding molasses, syoyu moromi, raw syoyu lees etc. to aminoacid soln. obtd. by hydrolysing protein, fermenting etc.

TOKUTOMI K 23.08.77-JA-101204
(15.03.79) A23l-01/23

Prepn. of 'syoyu' having excellent caramel colour, moderate sweetness and specific good taste and flavour of 'syoyu moromi' comprises (a) adding molasses, 'syoyu moromi', raw 'syoyu' less, etc. in aminoacid soln. obtd. by hydrolysing protein material, (b) fermenting the mixt. at 20-40°C for 10-20 days for deodorising and maturing, (c) pressing and (d) pasteurising.

By using molasses expensive sugar, viscosity-increasing agent such as millet jelly and colourant such as caramel are unnecessary. Excellent 'syoyu' can be prepd. from those inexpensive materials. Thick aminoacid soln. having nitrogen content 2.4-3% which cannot be fermented by conventional method, can be fermented easily and valuable thick 'syoyu' ('tamari-syoyu') can be prepd. 23. 8. 77 as 101204 (4pp5).

ZAID ★ D16 32477B/17 ★J5 4036-202

De:chromone-carcinostatin - prepd. by culturing Streptomyces carcinostaticus

ZH BISEIBUTSU KAGAKU KEN (KANF) 25.08.77-JA-102324
B04 (16.03.79) A61k-37/02 C07g-11 C12d-09/14 C12d-13/06

An antibiotic, dechromoneocarzinostatin, is a white powdery substance active against Staphylococcus aureus, Bacillus subtilis, Sarcina lutea, Micrococcus fulvus, Ehrlich ascites tumour in mice, sarcoma 180 ascites-type in mice and leukemia L1210 in mice. It is soluble in water, but insol. in organic solvents. The UV spectrum determined in water shows an absorption max. at 280mμ, an absorption min. at 251mμ and a shoulder at 290-292 mμ and has IR absorption maxima at 3300, 1650 and 1540 cm^{-1}.

It is decomposed gradually and carbonised ay 260°C and has an isoelectric point at pH 3.3. The elementary analysis gives C 48.53, H 6.72; N 14.98; S 1.71; O 12.00. Aminoacids detectable upon hydrolysis are aspartic acid, threonine, serine, glutamic acid, proline, glycine, alanine, cystine, valine, isoleucine, leucine, tyrosine, phenylalanine, lysine, arginine and tryptophane. Antibacterial activity is preserved upon treatment with trypsin, chymotrypsin and pronase and it is stable at pH 3.5-7.

In an example, in a nutrient medium (pH 7.0) contg. 3% glucose, 2% defatted soybean meal, 0.1% K_2HPO_4, 0.1% $MgSO_4$, 0.005% $FeSO_4$, 0.001% $ZnSO_4$, 0.001% $CaCl_2$ and 0.05% silicone oil, Streptomyces carzinostaticus var. F-41 is cultured at 28°C for 3 days with stirring at 300rpm. under aeration of 18l/min. From 16l. of the cultured broth is obtd. a powdery substance, dechromoeocarzinostatin (205mg). 25. 8. 77 as 102324 (8pp16).

MITR ★ D16 32515B/17 ★J5 4036-300

Acrylonitrile polymer fibre adsorbent - used to adsorb protein from aq. soln.

MITSUBISHI RAYON KK 24.08.77-JA-101403
A97 F01 J01 (A14) (16.03.79) C07g-07

The fibrous material adsorbent, is composed of acrylonitrile type polymer whose average single fibre fineness is ≯0.5 denier. The fibrous material has smallfineness compared with prior art synthetic fibre, thus the surface area of a given wt. of the assembled material is larger than that of conventional synthetic fibre, which increases the adsorption capacity, say, 10 times c.f. use of urokinase.

Desorption or elution of adsorbed protein can be easily effected using weak alkaline aq. soln. 24. 8. 77 as 101403 (4pp75).

GREC D16 57886Y/33 =J7 9006-608

Gamma-globulin prepn. for treating Pseudomonas aeruginosa infections - with high titres of original endotoxin protein-, elastase- and protease-antibodies

GREEN CROSS CORP 05.02.76-JA-010866
*B04 (30.03.79) *DT2639-012 A61k-37/06 A61k-39/40*

New immunotherapeutic agents for the prophylaxis and therapy of Pseudomonas aeruginosa infections consist of [illegible] from human serum or plasma, having an HA titre of ≥1:128 for OEP (original endotoxin protein) antibodies ≥ 1:32 for elastase antibodies and ≥1:64 for protease antibodies, and opt. protein stabilizers and preservatives.

Prophylaxis and treatment of infections due to Pseudomonas aeruginosa, esp. elastase- and protease-producing strains may be effected. The new agents are suitable for treatment of severe infections due to Ps. aeruginosa, e.g. human corneal ulcers, peritoneal infections, septicaemia and meningitis, and are effective in infections in which a combination of chemotherapy and conventional immunotherapy is ineffective. Daily dosage is 150 mg/kg i.m. 5. 2. 76 as 010866, A61k-37/06, 39/40 (30. 3. 79) GREEN CROSS CORP. (7pp) (J5 2096731)

MITN D16 42306Y/24 =J7 9006-631

Aerobic culture of microorganisms - using bubble cap-type culture tower with multiple feed for water-soluble substrate

MITSUBISHI GAS CHEM IND 30.10.75-JA-130781
*(30.03.79) *J52054-078 C12b-01/08*

The tower has a built-in draught tube and a device for supplying a multiple feed of substrate. The tower shows a low power consumption, a high transfer velocity of oxygen a dilution ratio which can be increased and a high yield of microbial body on the substrate.

The supply of water-soluble substrate, such as sugar, alcohol, organic acid etc. can be in the form of its aq. soln or vapour through the draught tube. 30. 10. 75 as 130781 C12b-1/08 (30. 3. 79) MITSUBISHI GAS CHEM. IND. (10pp) (J5 2054078)

SANT- D16 35326V/19 =J7 9006-632

Accelerating microbial growth in submerge fermentation - using anaerobic condition and reduced pressure

SANTORY CO LTD 02.05.72-JA-044047
*(30.03.79) *J49006-189 +C12c-11*

Aerobically grown brewer's yeast, sake, alcohol and baker's yeast are anaerobically cultured under a reduced pressure to reduce the amt. of dissolved CO_2, growth of yeast is activated.

In an example Saccharomyces cerevisiae was cultured in a malt medium (reducing sugar 10.5 g/100 ml, pH 5.2) at 27°, 0.8 atm. number of yeast was 12.04 x 10^7, compared to 8.92 x 10^7 when cultured by the ordinary method. 2. 5. 72 as 044047 C12c-11/00 (30. 3. 79) SANTORY CO. LTD; (4pp) (J4 9006189)

KANF D16 24211W/15 =J7 9006-633

Increasing growth rate of yeast culture - by addn. of carnitine, its precursors or derivs to medium

KANEGAFUCHI CHEM KK 16.01.74-JA-008023
*(30.03.79) *BE-822-067 C12c-11/08 C12d-13/06*

Microorganism belonging to one of the general Saccharomyces, Pichia, Saccharamycopsis, Rhodotorula, Candida, Torulopsis or Trichosporon is cultivated under aerobic conditions in a nutrient medium which can be assimilated by the microorganism and contains carnitine, one of its precursors or derivs.

Suitable microorganisms are Saccharomyces cerevisiae or rouxii, Pichia farinosa or membranaefaciens, Saccharo-mycopsis lipolytica, Rhodotorula rubra, Candida novellus tropicallis, lipolytica, arborea, guillemondii or rugosa, etc. The nutrient medium pref. contains a C. source e.g. sugars oils, fats, alcohols, org. acids or hydrocarbons.

Suitable precursors of carnitine are crotono- and butyro- betaine and suitable derivs. are acetyl-, propionyl-, butyryl-, palmitoyl- and stearoyl- carnitine. The speed of cell growth is increased, thus shortening the process time increasing the yield and avoiding the danger of contamination. 16. 1. 74 as 008023, C12c-11/08, C12d-13/06 (30. 3. 79) KANEGAFUCHI CHEM IND. LTD. (5pp) (J5 0100282)

CELL- D16 74974U/49 =J7 9006-634

Cell culture appts - comprising permeable capilliary with circulating nutrient medium

CELLCO INC (CEL -) 18.05.72-US-254678
*(30.03.79) *NL7306-659 C12k-09*

Process for growing cells in vitro uses a capillary mounted in a chamber, the capillary having a wall which is permeable to nutrients necessary to cell growth, passing a nutrient medium through the capillary while the chamber contains a living cell culture, and allowing cells to settle on the capillary.

Generally the capillary unit consists of several parallel capillaries e.g. hollow cellulose acetate filaments, mounted e.g. in a glass tube and sealed with epoxy resin and caps. Nutrient medium is circulated through the capillary while the cell culture in the chamber remains in the stationary phase. Cells deposit on the capillaries and cell prodts. such as lactic acid and hormones pass into the nutrient stream from which they can later be recovered. 18.5.73 as 056252 (clg. 18.4.72-US-254678) C12k-9/00 (30.3.79) CELLCO INC (7pp) (J4 9041579)

TOYM ★ D16 32665B/17 ★J7 9006-989
Vertical fermentation reactor - having pipes connected to gas blow ring at the bottom of the tank, stirrer and removable cover
TOYOBO KK 29.11.72-JA-120228
J04 (03.04.79) B01i-10 C12b-01

Vertical reactor comprising a tank with a demountable cover, to which a stirrer is fixed and hollow pipes are also fixed, so that the pipes, when the cover is closed, extend vertically near the inner wall of the tank. The lower end of each pipe is connected to a gas blow ring at the bottom of the tank. The reactor is used for fermentation. 29.11.72 as 120228, B01j-10/00, C12b-1/00 (3.4.79) TOYOBO KK (3pp26) (J4 9077887)

CVPA D16 45403S/27 =NL -159-932
Pipeline transport deposition prevention
SCHOLTENS CHEM FAB NV (VOLK- SCFA) 30.12.69-NL-019600
*H03 J06 Q35 +Q42 (17.04.79) *DT2064-194 B65g-53/30 +E02f-07/10*

Hydraulic transport through pipelines of precipitating suspensions, esp. the transport of dredging prods. is obtd. by adding polymerous biocolloids (I) as agents to reduce the settling rate of solids. Pref. the agents (I) consist of gums formed from solns. of glucose or other mono- or polysaccharides by micro-organisms or enzymes isolated from these. The pref. gum used is xanthomonas gum.

Addn. of (I) in small quantities leads to improved suspending capacity of the transport medium. (I) are natural prods. harmless to the medium. 30.12.69 as 019600 (4pp279)

SHIO D16 69910V/40 =NL -159-990
2-keto-l-gulonic acid prodn. - by microbiogical reduction of 2,5-diketo-d gluconic acid
SHIONOGI KK 22.03.73-JA-032842
*B05 (17.04.79) *DT2413-963 C07b-29/02 C12d-01/06 +C07h-07/02*

2-Keto-L-gluconic acid (I) and salts are prepd. microbiologically by culturing a (I)-producing strain of Brevibacterium, Bacillus, staphylococcus, Micrococcus or Pseudomonas or their isolated enzyeme prepns., with 2,5-diketo D-gluconic acid (II) or its salt. (I) is then isolated from the mixt. obtd.

The pref. strain used is Brevibacterium ketosoreductum ASM-1005 (ATCC-21914). (I) is an intermediate in the synthesis of ascorbic acid. The process requires less reaction steps than known methods.

In an example, calcium-2,5-diketo-D-gluconate is cultured with Brevibacterium ketosoreductum in a medium contg. glycerol, polypeptone, yeast extract, monopotassium phosphate and $MgSO_4$ at pH 6.3-7 and at 30°C. After 72 hrs. 1980/ml. of (I) is obtd. 22.3.74 as 003911 (6pp279)

HAYB D16 41827R/23 =NL -160-032
Process for producing isoamylase by a bacterium
HAYASHIBARA KK 02.06.67-JA-034867
*(17.04.79) *J70016-788 +C11d-13/10 C13l-01/08*

Isoamylase is prepd. by growing in culture an isoamylase-producing organism and isolating the isoamylase from the culture medium. The microorganism used is Psuedomonas amyloderamosa SB-15 (ATCC 21262).

Amylase is mfd. from a starch which contains amylopectin by treating the starch with the isoamylase obtd. 4.6.68 as 007782 (4pp549)

RHON D16 40962F/00 =NL -160-033
Antibiotic 17967 r p
RHONE-POULENC SA 13.05.68-FR-151589
*B04 C03 (17.04.79) *NL6906-827 C12d-09/14 +A61k-35/74*

An antibiotic 17,967 R.P. (I) is prepd. by culturing a strain of Strep. roseopullatus 20.073 (NRRL 3430) followed by isolation of (I) and purification.

New antibiotic (I) is active against bacteria and has a strong antimitotic activity on certain malignant tumours. It is also active against esp. Staphylococcus spp. which are resistant against certain other antibiotics with antitumour activity. 5.5.69 as 006827 (14pp279)

KIRI/ ★ D16 32721B/17 ★SU -145-719
Stable dry agglutinating serum for use in brucellosis - prepd. by treating immunised young bulls serum with sucrose soln. before vacuum drying, to improve storability
KIRIS N D 10.04.61-SU-726007
B04 C03 (07.08.78) A61k-35/16

Dry agglutinating serum, for use in brucellosis infections, is prepd. by immunising young bulls with bacterial antigen over 5 day period and treating the sepd. blood serum with 10% sucrose soln. (1:1 ratio), followed by drying in vacuo.

The antigen is prepd. by killing brucella strain bacteria by heating them to 60°C. The addn. of sucrose soln. improves the stability of serum, useful during transport or storage.
Kiris, N.D., Muromtseva, A.A., Plotnikova, L.S. Bul. 34/15.9.78. 10.4.61 as 726007 (2pp938)

BEKI ★ D16 33001B/17 ★SU -610-859
Microorganisms culture unit - has partitions with parallel horizonta tubes connected to heat carrier headers
BELORUSS KIROV TECHN INS 07.05.76-SU-357686
(12.05.78) C12b-01/10

The improved foam breaking and enhanced mass exchange in the unit for microorganisms culture are due to partition The latter are in the form of parallel horizontal tubes connected to a common header for the flow of heat carrier. The sections are linked by overflow pipes whose lower end is fitted in the pocket of the partition having a weir.

The nutrient is fed onto the top partition, and then overflows to the lower partitions. The air moves upwards through the clearance between the horizontal tubes, and the nutrient is saturated with oxygen above the partitions. The produced foam is raised to the swirler where it is broken up by impacting the deflector. The fluid flows down while air is exhausted upwards.
Bortnikov, I.I., Vaitekhovich, P.E. Bul. 22/15.6.78. 7.5.76. as 357686 (3pp89)

PISH= ★ D16 33002B/17 ★SU -610-86
Malting process control system - adjusts aerating air temp. b altering cold water feed rate
PISHCHEPROMAVTOMATI 17.02.76-SU-327034
(20.05.78) C12c-01/08

The reduced power intake and improved malt quality are achieved by adjusting the temp. of air fed for the aeration This is ensured by feeding cold water to the air cooler at rate depending on the temp. setting. The air feed rate fo the aeration is controlled by the sign of the deviation between the actual temp. of malt layer and the set temp.

The interval between the blowing periods is changed as a function of the absolute value of the deviation of the actual temperature of malt layer from the selected level
Slivko, V.I., Volodin, V.A. Bul. 22/15.6.78. 17.2.76. as 327034 (3pp89)

GIDR= ★ D16 33003B/17 ★SU -610-8
Yeast and culture fluid flotation separator - has bottom diffus connected to disperser using stator with two concentric perforat shells and cylinder rotor
GIDROLIZPROM COMBIN 02.08.76-SU-391801
P41 (20.05.78) B03d-01/14 C12c-11/24

The unit for sepg. microorganisms from culture fluid ensures an improved dispersion of air, and separates the ascending flow of foam with microorganisms from the descending flow. The latter is made up of the clarified culture fluid, so that the flotation process is intensified.

The tank includes layers of inclined shelves for foam dewatering, and a conical diffuser in the bottom with the narrow end projecting from the tank. The diffuser is connected to the disperser which comprises a stator with two concentric shells and a cylinder rotor, both perforated. The foam breaker is fitted above the shelves, while the delivery trough is set below the shelves.
Sirotnikov, S.Z., Voinov, V.A., Makarov, Yu.P. et al. Bul. 22/15.6.78. 2.8.76. as 391801 (3pp89)

ORCH= ★ D16 33004B/17 ★SU -610-862
Clarifying drinks, esp. cognac - by introducing poly-di:methyl-aminoethyl methacrylate as cationic flocculant
ORCHARD VINE WINE 05.01.77-SU-441032
A97 (A14) (20.05.78) C12h-01/02

Clarification of drinks, esp. cognac, is effected by introducing a polymeric cationic flocculant, stirring and leaving the drink aside for some time. The stability of the product is improved by using as a flocculant polydimethylaminoethyl methacrylate in an amt. of 10-40 mg. per litre of the drink. The cost is lower than in the known process.
Klyachko, Yu.A., Sirbiladze, A.L., Shnaider, M.A. et al. Bul. 22/15.6.78. 5.1.77. as 441032 (2pp70)

MOHY= ★ D16 33005B/17 ★SU -610-863
Identification of gram-negative enterobacteria etc. - by changes in two-component indicator system showing fermentation of carbohydrate(s), reduction of methylene blue and urease activity
MOSC HYGIENE INST 05.01.77-SU-438185
B04 (20.05.78) C12k-01/04

Gram-negative bacteria can be identified by sowing the bacteria onto a differentiating medium, and then evaluating the enzymatic action of the bacteria. This rather cumbersome method can be simplified by sowing the bacteria in two layers of a composite nutritive prepn. The first layer contains (in g.) K_2HPO_4 0.05-0.15, KH_2PO_4 0.02-0.06, $Na_2S_2O_3$ 0.01-0.03, glucose 0.06-1.0, urea 0.2-0.6, methylene blue 0.04-0.08, phenol red 0.006-0.01, agar 0.55-0.65; and the balance (to 100 ml) is a nutritive broth. The second layer contains (in g.) K_2HPO_4 0.05-0.15, KH_2PO_4 0.02-0.06 iron-ammonium citrate 0.01-0.03, lactose 0.8-1.2, saccharose 0.8-1.2, phenol red 0.004-0.01, crystalline violet 0.0001-0.0003, agar 1.8-2.2; and the balance (to 100 ml) is a nutritive broth. The second layer is placed on the first layer and bevelled. Main groups of entrobacteria and kindred microorganism can be differentiated.
Kalina, G.P., Bul. 22/15.6.78. 5.1.77. as 438185 (3pp70)

BEPI= ★ D16 33006B/17 ★SU -610-864
Stimulating reproduction of parainfluenza virus - for laboratory purposes, using lipid extracts from e.g. rat liver
BELO EPIDEMOLOGY MI 03.08.76-SU-391906
B04 (20.05.78) C12k-07

Reproduction of parainfluenza viruses is stimulated for laboratory purposes, with lipid extracts from e.g. rat liver. The number of viruses is increased 10-1000 times, compared with control experiments.
Davydov, O.V. and Karpova, T.V. Bul. 22/15.6.78. 3.8.76. as 391906 (3pp70)

MULL- D16 25495Y/15 =US 4148-590
Fermentation vessel mixing device - with vertical rotating shaft and freely revolving paddles on drive arms
FA MULLER H 25.09.75-CH-012488
*(10.04.79) *DT2638-739 +B01f-09/22*

Liq. medium contg. micro-organisms is mixed with a gaseous medium in appts. which has a rotor mounted in a mixing vessel; a flat baffle on the rotor having a longitudinal axis radially spaced from the rotor axis of rotation and two flat opposite faces, the baffle being freely turnable about its axis; and a drive for turning the rotor about its axis and for orbiting about the longitudinal axis. The baffle thus rotates in the opposite direction the rotor rotation direction due to impingement of fluid.

The vessel is pref. a biological reactor. 21.9.77 as 853575 (+16.9.76-US-723883) (8pp1376)

KANF D16 57931Y/33 =US 4148-688
L:methionine stereoselective prodn. - by enzymatic or microbiological hydrolysis of (L) or (DL-N)-carbamoyl-methionines
KANEGAFUCHI KAGAKU 04.02.76-JA-011574
*B05 E16 (10.04.79) *DT2704-212 C12d-13/06*

Prepn. of L-methionine comprises subjecting DL- or L-N-carbamoylmethionine to the action of an enzyme in the form of a culture broth contg. a microorganism (I) or sepd. cells of (I) which enzyme is capable of hydrolysing the carbamoyl gp. of L-N-carbamoylmethionine.

Pref. (I) include Achromobacter, Aerobacter and Aeromonas microorganisms. Process is suitable for large-scale economic mfr. 28.1.77 as 763710 (6pp936)

AJIN D16 75925Y/43 =US 4148-689
Prepn. of gels for immobilising microbial cells - from water-soluble polymers and tetraalkoxy-silanes
SANRAKU OCEAN 10.02.77-JA-013650 (14.05.76-JA-055925)
*A97 B04 (A11 A14) (10.04.79) *BE-854-625 C07g-07/02 C12k-01*

Hydrophilic complex xerogel in which microbial cells are immobilised is prepd. by mixing aq. soln. of PVA, gelatin or CMC with a trialkoxysilane $Si(OR)_4$ (where R is $\leqslant$12C alkyl); hydrolysing the mixt with acid or acidic cpd. to obtain a transparent homogeneous complex sol; dispersing the cells in the sol homogeneously at pH 4-8; then gelling the mixt. by drying. Amt. of $Si(OR)_4$ calculated according to the SiO_2 produced by acid hydrolysis is 5-300 wt. % of the dry wt. of the starting polymer.

The cells are esp. enzymically active and the prod. may be used as a catalyst (e.g. for fermentation processes) or pharmaceutically. The xerogel has good biological compatibility. 5.5.77 as 794047 (+27.5.76-JA-062041) (12pp)

CORG D16 63766A/36 =US 4148-690
Photo-metabolic hydrogen prodn. from water - by reducing aq. cofactor soln. with algae and oxidn. of prod. with bacteria
CORNING GLASS WORKS 28.11.77-US-855359 (25.02.77-US-771945)
*E36 (10.04.79) *DT2807-069 C12b-01 +C12k-01*

Continuous photometabolic prodn. of H_2 from H_2O comprises reacting an aq. soln. of a reversibly reducible cofactor in the presence of light with a photometabolically active prepn. of a 1st microorganism (I) under conditions sufficient to reduce (part of) the cofactor in the soln. The reaction prod. is reacted in the presence of light with a photometabolically active prepn. of a 2nd microorganism (II) capable of oxidising the reduced cofactor and releasing H_2 into the soln.

The released H_2 is collected and the soln. is returned to the microorganism prepm. of the first step. Pref. (I) is an algae, esp. Anacystis nidulans, and (II) is a bacterium, esp Rhodospirillum rubrum. 28.11.77 as 855359 (8pp927)

PHIP D16 02417B/02 =US 4148-691
Fermentation plant to reduce monocellular protein from methanol etc. - in closed circuit tube, using static mixing and simplified cooling
PHILLIPS PETROLEUM CO 29.03.77-US-782599
*(10.04.79) *FR2385-797 C12b-01/14*

Fermentation appts. includes a tubular member in the form of a loop; a nozzle for discharge of fluid medium into the flow path in the loop; a pump having an outlet connected to the nozzle and an inlet communicating with the flow path for pressurising medium from the flow path for discharge; a heat exchanger positioned in heat transfer relationship with part of the loop adjacent to and downstream of the nozzle and upstream of the pump inlet; a phase separator having an inlet communicating with the flow path downstream of the heat exchanger and upstream of the pump inlet; injectors opening into the flow path between the nozzle and inlet of the separator to inject O_2; and helically disposed mixing vanes in the flow path between the nozzle and the separator inlet.

The appts. is simple in construction and operation, provides contact between oxygen and the medium in the appts., eliminates stagnant zones and provides good mixing of the medium flowing through the appts. 29.3.77 as 782599 (6pp1376)

WEIN/ ★ D16 33172B/17 ★US 4148-703

Electrophoretic sepn. of enzymes and peptide(s) - on polyacrylamide gel using two sets of shaped electrodes

WEINTRAUB M 11.02.76-US-657232

A89 B04 J04 R16 (10.04.79) G01n-27/26

Electrophoretic purificn. of enzymes and peptides on polyacrylamide gel is improved by using divergent located shaped electrodes to provide separate vertical and horizontal fields. These fields are operated intermittently; the vertical electrical field separates the enzymes etc. according to mobility, and the horizontal field causes them to move horizontally.

Pref. the 2 fields are switched automatically to maintain a defined electrical field distribution and gradient along the width of the gel.

High level of purificn. and suitable for large scale use. There is no flow of buffer through the gel and the modular system of electrodes used makes the system of electrodes used makes the system very flexible. 11.2.76 as 657232 (13pp1251)

JOHO D16 06123Y/04 =US 4148-870

Complexes of osmium tetroxide with heterocyclic contg. tert. nitrogen - are safet to handle and used esp. to prepare biological specimens for electron microscope examination

JOHNSON MATTHEY LTD 09.07.75-GB-028877

*E12 J04 +R16 (E17) (10.04.79) *DT2630-823 G01n-01*

In fixing or staining cells in the prepn. of specimens for electron microscopy examination, by treating the cells with O_sO_4, the improvement comprises using a complex of O_sO_4 and a cpd. having a heterocyclic ring contg. 1 or 2 N atoms. selected from pyridazine, phthalazine, isoquinoline triethylene diamine, and quinuclidine. Pref. the complex is in soln. of aq. DMF.

The complexes are stable and give a low vapour pressure of O_sO_4 at ordinary temps. 15.5.78 as 905791 Div ex 4100158 (+2.7.76-US-702132) (4pp982)

WELL D16 21921Y/13 #US 4148-876

Antigenic prepns. contg. pathogen-derived protein - fixed to microvesicles with a lipid double layer

BURROUGHS WELLCOME 29.09.75-GB-039857 (01.03.78-US-882445)

*B04 +R16 (10.04.79) *BE-846-681 A61k-39/12*

Antigenic virosome contains microvesicles which are unilamellar bodies with a single lipid bilayer having an antigenic protein bound to the external surface by hydrophobic bonding. The protein is a haemagglutinin and neuraminidase subunit of a protective surface antigen derived from a myxovirus and has a hydrophobic region. Pref. the walls of the microvesicle contain lecithin, and cholesterol as strengthener.

Prepn. is immunogenic and used in vaccines. 1.3.78 as 882445 (5pp997)

LCHO D16 49117Y/28 =US 4148-877

Atoxic biologically active fraction from bacteria - esp. Enterobacteria which affords protection against bacterial infection

CHOAY SA 19.05.76-FR-015093 (29.12.75-FR-040041)

*B04 (10.04.79) *DT2659-431 +A61k-39/02 C12d-13/10*

A non-toxic, antibacterial, prod. is obtd. of the Gram neg. enterobacteriacae, by enzymatically splitting the water soluble constituents of the exo- and endocellular parts of the cell walls in an aq. soln. at pH 5-9.5 at ≤ 100°C, the constituent having a component of molecular wt. <10000, the antibacterial property of the endotoxin LPS, toxicity and stability to heating to ≥108°C with an enzyme selected from deoxyribonuclease and lipase which so separates components of molecular wt. 500-10000 from those of molecular wt. >12000; keeping pH at 5-9.5 and at <100°C; forming portion contg. lower molecular wt. components; and sepg. by filtration through a membrane retaining prods. of molecular wt. >10000.

The prod. is water soluble, non-toxic, antibacterial, not an antigen, stable on heating and 103-107°C but unstable >107°C. 21.12.76 as 752993 (12pp982)

PFIZ D16 55756Y/31 =US 4148-880

Antibiotic mixtures from Actinoplanes auranticolor A.azureus - which are useful as chick and swine growth promoters and for treating swine dysentery

PFIZER INC 13.08.75-US-604260 (16.04.74-US-461298)

*B04 C03 (10.04.79) *US4038-383 A61k-35*

Growth and feed efficiency in non-ruminant animals is increased by feeding the animals a compsn. contg. 20-200 ppm. of Compound 37,932. This compsn contains 10-100 ppm. of an antibiotic produced from Actinoplanes auranticolor ATCC 31011 or Actinoplanes azureus ATCC 31157.

The compsn. is used for chicks and swine, and are effective against swine dipentery. The parent patent (55756Y/31) claimed the antibiotics. 16.12.76 as 751032 Div ex 4038383 (+17.1.75-US-541800) (15pp976)

PFIZ D16 02359B/02 =US 4148-882

Poly:cyclic-ether antibiotics from Actinomycetes ATCC 31286 - useful as antibacterials, anticoccidials and to improve ruminant feed utilisation

PFIZER INC 24.06.77-US-809620

*B04 C03 (D13) (10.04.79) *EP-----258 A61k-35*

The antibiotic Compound 47,433 or its pharmaceutically-acceptable cationic salt is prepd., which in the free acid form is soluble in methanol, acetone, chloroform, methylisobutyl ketone, ethyl acetate and insoluble in water.

Cpd. has m.pt. of 89-99°C, optical rotation of $[\alpha]_D$=+16° at a concn. of 1% in methanol; an av. compsn. of 64.92wt.% C, 9.73% H and 25.35 wt.% O; when pelleted in KBr exhibits absorption in the infrared region at wavelengths 2.87, 3.42, 5.77, 6.85, 7.30, 8.05, 8.60, 9.20, 10.15, 10.53 and 11.45 (wavelengths in μ).

New polycyclic ether antibiotics are prepd. from a species of actinomycete wunder submerged fermentation conditions. Prod. is esp. useful in controlling coccidiosis in poultry and improving feed utilisation efficiency in ruminants. 24.6.77 as 809620 (6pp931)

PFIZ D16 18411B/10 =US 4148-883

Antibacterial antibiotic 47444 - obtd. by cultivation of Nocardia argentinensis ATCC 31306 in nutrient medium

PFIZER INC 18.08.77-US-825563

*B04 (10.04.79) *EP-----991 A61k-35*

An antibiotic mixt. is produced by cultivating Nocardia argentinensis Huang. sp. nov. ATCC 31306 under submerged aerobic conditions in aq. nutrient medium contg. assimilable sources of C and N until antibiotic activity is obtd. and then sepd. off the mixt. Pref. an Antibiotic Compound 47.444 is prepd., which is soluble in methanol, ethanol, chloroform, methylene chloride, acetone, MIBKz and ethyl acetate, but insoluble in water.

Pharmaceutical compsn. is prepd. suitable for combating Staphylococcal infections in animals, contg. a physiologically-acceptable carrier and a therapeutically-effective anti-staphylococcal amt. of Compound 47,444. 18.8.77 as 825563 (5pp931)

USSH ★ D16 33257B/17 ★US 4148-888

Antitumour and antiviral 3-de:aza:adenosine - due to adenosyl:homocysteine hydrolase activity

US SEC OF HEALTH 13.03.78-US-886106

B02 (10.04.79) A61k-31/70 C12b-09 C12l-01

Use of 3-deazaadenosine (I) as an antitumour and antiviral agent in tissue culture and as an adenosylhomocysteine hydrolase inhibitor, ic claimed.

(I) is more effective than 3-deazaadenosulhomocysteine as an adenosylhomocysteine hydrolase inhibitor. The antiviral and antitumour effects are a consequence of its adenosylhomocysteine hydrolase inhibiting effects. 13.3.78 as 886106 (5pp916)

BOEF D16 16121A/09 =US 4148-994

Crystalline beta:nicotinamide-adenine di:nucleotide metal salts - for chemical and enzymatic analyses, are storage stable and not hygroscopic (NL 22.2.78)

BOEHRINGER MANNHEIM GMBH 20.08.76-DT-637598

*B02 +R16 (10.04.79) *DT2637-598 +A61k-31/70 C07h-17*

New orthorhombic monolithium salt of β-nicotinamide-adenine-dinucleotide hydrate has the following characteristics: the space gp. $P2_12_12_1$; the cell dimensions a=10.073±

003A, b=15.839±0.004A, c=17.821±0.004Å; and the ang-
s α=β=γ=90°. The new crystalline salt can be prepd. from
dil. aq. soln. of the amorphous Li salt of β-NAD by
djusting the pH to 3-7, mixing the soln. at 10-50°C with a
ater-miscible organic solvent until the commencement
turbidity, and crystallising out the prod. at 4-30°C.

The new salt is stable under normal conditions and can
e prepd. reproducibly in high yields. It provides a high
urity form of β-NAD for use in enzymatic and chemical
nalysis. 27.12.76 as 754879 (3pp927)

YRM- ★ D16 33316B/17 ★WP 7900-201
as prodn. from earth formations - by in-situ microbial fermentation
f organic material
VYRMETODER AB (MART/) 21.12.77-SW-014619 (12.10.77-SW-
011500)
H01 Q49 (19.04.79) C12d-03/10 E21b-43/22
/S: N(BR, DT, GB, JA, SU, US) + E(FR).

ecovery of organic gases from formations contg.
rganic material (earth strata, bedrock or lake sedi-
nents) is carried out by (a) adding to water micro-
rganisms capable of fermenting the organic material
nd/or growth promoters for such microorganisms;
b) pumping the treated water into the formation through
ne or more conduits (wells, pipes, drain pipes, radial
screen pipes and/or ditches); (c) pumping water contg. organic gases in gaseous and/or dissolved form out of the formation through one or more conduits located at a suitable distance from the injection conduits; and (d) reducing the pressure of the water in a separating chamber to a pressure below that in the formation to release the gases.

The process is esp. useful for producing methane, e.g. from oil shale formations, swamps, marshes, coal deposits and oil or gas deposits. It can be applied to formations with a low content of organic material and does not significantly harm the environment.

10.10.78. as SW0058 (14pp357).
(E) ISR: US2660550; US2413278; US4085972; US3185216; US3724542; US3826308; US3332487; DS2410267; DS1110586;+ 2 Journal references.

See Also

D13 FR 2398110

D17: SUGAR; STARCH

BRAN/ ★ D17 B/17 ★IT 1028-505
Sugar diffusion juice purification - by using ion exchange resin to remove impurities
BRANDOLI G 14.11.69-IT-007444
(10.02.79) A23l

NISS- ★ D17 32356B/17 ★J5 4035-224
Preventing caking of sugar - by addn. of maltose
NISSHIN SEITO 19.08.77-JA-099308
(15.03.79) C13f-03 C13k-01

Process comprises adding 0.5-30 pts. wt. of maltose to 99.5-70 pts. wt. of sugar such as sucrose, glucose, etc. partic. powdery sugar. Maltose has similar properties to sugar and prior restrictions relating to other additives are eliminated. 19.8.77 as 099308 (4pp5).

TATL D17 58430V/33 = J7 9006-526
Saccharose-triglyeride reaction prod. surfactants - reaction being conducted in presence of basic catalyst at atmospheric pressure
TATE & LYLE LTD 16.03.73-GB-012794
*E13 (D13) (29.03.79) *BE-812-369 C07h-01 C07h-13/06 C09k-03*

Surfactant is prepd. by transesterification of saccharose in the presence of a triglyceride by mixing solid saccharose with the triglyceride in the liq. phase at 110-140°C with a basic catalyst at atmospheric pressure without a solvent Equimolecular quantities are pref. used at 120-130°C partic. at 125°C. A 16-18C fatty glycride is pref. partic. tallow Pref. catalyst is K_2CO_3 at 5-12% (based on the reaction mixt. partic. a monoglyceride or biglyceride or a prod. of the reaction used at 5-10% (based on the reaction mixt.).

The prods. are used as emulsifying agents, they are non-toxic, tasteless, odourless biodegradable and hydrolyse to natural foods in the body. 14.3.74 as 028643 (clg. 16.3.76-GB-012794) C07h-13/06, 1/00, C09k-3/00 (29.3.79) TATE & LYLE LTD. (11pp) (J5 0024210)

RAFT D17 95748R/51 = J7 9006-616
Saccharose recovery from sugar refinery - molasses
RAFFINERIE TIRLEMONTOISE 24.06.70-BE-752442 (08.07.69-BE-735802)
*(30.03.79) *BE-752-442*

FMCC D17 20825Q/00 #J7 9006-617
Amylose material obtained by acid hydrolysis of starch
FMC CORP 23.05.66-GB-022819 (27.05.66-JA-033629)
*A11 E13 (30.03.79) *GB1143-219 +C13l-01/12*

UPRO= ★ D17 33007B/17 ★SU -610-865
Sugar-beet juice sulphitation unit - has cyclone separator and perforated sulphur di:oxide and liquid mixing disc perpendicular to tube axis
UKR PROVISION MACH 06.01.77-SU-441283
(20.05.78) C13d-03/10

The unit is simplified due to the separator connected to the mixer of sulphur dioxide gas with liquid.

The mixer has a tube with a nozzle and a connector for feeding the sulphur dioxide gas. The nozzle is in the form of a perforated disc fitted at right angles to the tube axis, while the separator is of the cyclone type.

The fluid for sulphurisation is fed under pressure towards the disc from which it flows in the shape of jets that break up as droplets. The ejector effect of the jets draws the sulphur dioxide gas resulting in a two-phase flow ensuring intensive sulphurisation. The gas-liquid stream reaches the inner wall of the cylinder forming a turbulised fluid film with gas bubbles where the sulphurisation is completed.

Zozulya, S.A., Vyskrebtsov, V.B., Fedotkin, I.M. et al.
Bul. 22/15.6.78. 6.1.77. as 441283 (3pp89)

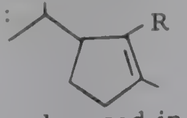
See Also

D15 EP - - - 1470 D16 DS 2152620

D18 : SKINS ; HIDES ; LEATHER ; TOBACCO

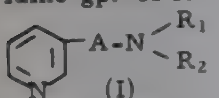
JAPM D18 65583X/35 = J7 9006-638
Perfume compsn for tobacco - contg 2-methyl-5-isopropyl-aldehyde, or carboxylic acid, or ethyl ester
JAPAN MONOPOLY CORP 27.12.74-JA-148667
*E15 P15 (30.03.79) *J51079-797 A24b-03/12*

Perfume compsn. contains as active component 2-methyl-5-isopropyl-1-cyclopentene-1-aldehyde, -carboxylic acid, or -carboxylic acid ethyl ester of formula (I): (R is CHO, COOH, $COOCH_2H_5$). Cpds. (I) where R is COOH or $COOC_2H_5$, are novel, (I) is used in amt. 0.01-1.0 wt % to improve the smoking taste of tobacco, and may be used in natural tobacco, regenerated tobacco, synthetic tobacco or artificial tobacco. 27.12.74 as 148667, A24b3/12 (30.3.79) JAPAN MONOPOLY CORP. (4pp) (J5 1079797)

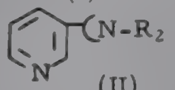


JAPM D18 65585X/35 = J7 9006-639
Perfume compsn. for improving tobacco flavour - contg. amine cpd. contg. substd. pyridine gp
JAPAN MONOPOLY CORP 27.12.74-JA-148669
*E13 P15 (30.03.79) *J51079-799 A24b-03/12*

Perfume compsn. contains an amine cpd. contg. substd. pyridine gp. of formula (I):



(I)



(II)

(A is lower alkyl, lower alkenyl, alkylketone, sec. tert. lower alcohol, lower fatty acid its ester or salt dibasic acid, its ester or salt, pri-, sec- or tert. alkoxy or alkenylamine or 2nd, 3rd alkyl or alkenylamine substd. with $\geqslant 1$ R_2, R_1 is lower alkyl, R_2 is glycocycl of 3-6C or its tautomer or glycocyl or trisaccharide or its tautomer, or their intermolecular transfer compound) or (II). (⊂N is pyrrolidine, pyrroline, pyrrole, piperidine, dihydrodine, pyrrolidone or its tautomer), 27.12.74 as 148669 A24b-3/12 (30.3.79) JAPAN MONOPOLY CORP. (6pp)(J5 1079799)

BRTA D18 17249T/11 = NL -159-870
Cigarette treatment - reducing tar and nicotine formation
BRIT AMER TOBACCO LTD 31.08.70-US-068163
*P15 (17.04.79) *NL7109-754 A24d-01/02*

Cigarette consists of a tobacco column enclosed in a wrapping sleeve in which there are $\geqslant 2$ perforated regions in which the perforations are surrounded by an oxidising agent. The oxidising agent has the effect that the inhaled prods. of combustion are more completely consumed and that consequently less harmful substances enter the lungs. 2.3.72 as 009754 (6pp1370)

LEAT= ★ D18 33090B/17 ★SU -611-187
Solutions dispenser programmed control equipment - used in leather cycle counter coupled to pump piston and to programmer
LEATHER FOOTWARE IN 23.08.76-SU-399203
R26 (24.05.78) G05d-07/06

Programmed control equipment for solutions dispensing is used in leather tanning ind. and includes piston pump, programmer and colouring components valves.

Increased accuracy and reliability are ensured by providing the system with cycles counter which is kinematically coupled to the pump piston and to the programmer whose output is connected to the control input of the actuating element. The cycles counter is made in the form of photoelectric position transducer.
Babloyan, V.P., Nekrasov, V.S., Ogievich, V.A. et al
Bul. 22/15.6.78. 23.8.76. as 399203 (2pp847)

BRTA D18 16743Y/10 = US 4148-325
Processing cut tobacco stalks and leaves - by passage through column fluidised by air, steam and water
BRIT AMER TOBACCO LTD 18.08.75-GB-034299
*P15 (10.04.79) *DT2636-311 A24b-03*

A bed of tobacco of greater depth than its mean horizontal direction is treated by maintaining the bed in a fluidised state using air flowing at a velocity greater than the incipient fluidising velocity but less than the entrainment velocity.

The tobacco is pref. treated using water introduced as a spray-on through a diffuser counter-current to the fluidising air. Pref. steam is introduced to the bed through a diffuser. The tobacco pref. passes through the fluidising chamber counter-current to the air flow.

The filling power of the tobacco is increased. 6.8.76 as 712207 (6pp1376)

SVYG D18 58736R/33 = US 4148-947
Softening of leather
STATNI VU GOTTWALD 10.02.69-CS-000853
*+P42 (10.04.79) *NL7001-513 +B05d-03/12*

Feather sheet is continuously treated by supporting the sheet between two endless, saturable belts, moistening the belts, conveying the sheet through treatment stages in eac of which simultaneously one belt is heated and the other is cooled while pressurising the sheet, and alternating the belts that are heated and cooled.

The belts are pref. passes over and between cylindrica rollers with at any time one of the belts only being in contact with a respective roller. The rollers provide the heat source at each stage. The belts are pref. moistened by pas-ing through a liq. bath. Treatment time is reduced.
13.5.74 as 469425 (+9.2.70-US-009574) (3pp1376)

See Also

D13 J7 9006640 D23 J7 9006615 D23 NL 159951

DERWENT PUBLICATIONS LTD. Rochdale House 128 Theobalds Road London WC1X 8RP England

Central Patents Index
NEWSLETTER

14th June 1979.

1979 No. 10

* 1. INSTRUCTION CLASSES

Subscribers are reminded that the deadline for return of forms for the forthcoming instruction classes was 31st May. Replies are now being analysed and any subscribers still considering their training requirements should contact Derwent immediately, preferably by telex, to ensure inclusion in the schedule.

* 2. COUNTRY ALERTING BULLETINS

With effect from Week B16 the following countries CA, CH, DL, RD and SW will appear under the heading "Other Countries" in alphabetical sequence with the Minor Countries at the end of the Alerting Bulletins.

* 3. BIBLIOGRAPHIC PRINT TAPES

The last batch of print tapes, containing data up to Week A51, and issued in February 1979, included a number of duplicate records. This problem affected all sections.

Production of the current quarterly tapes (data to Week B13) is being delayed for another week or two, to enable the existing data to be cleaned up, and to ensure that the problem does not recur in the future.

* 4. SECTION B (FARMDOC) PUNCH CODE SEARCH TAPES

It has been discovered by our computer bureau that due to a technical fault the tapes despatched on 27th April 1979 which should have contained data up to and including Week A51 inadvertently only contained data up to Week A39. We apologise for this and corrected replacement tapes will be despatched within the next week.

5. MANUAL CODES PRINTABLE ONLINE

Basic references added to the file from B08 onwards have all their Manual Codes added to the print file in line MC, which prints out in Standard Format PRT 0P4.

6. USE OF LINK/AND ONLINE

The attention of users is drawn to page 9 of the Supplement to the February 1979 SDC Newsletter in which it states that the two

repeated shampooing
not cause mutation of certain Salmonella typhimurium
29.12.77 as 758735 (23pp200).

agents, e.g. trisodium ethane 1-hydroxy-1,1 diphosphonate. 22.6.76 as 025841. (8pp931)

operators AND and LINK should never be used together in the same search statement.

This is an important point that users may have overlooked.

* 7. MANUAL CODE/COMPANY/CLASSES TAPE (Item 20)

Subscribers to this product should note that the file updated to B13, which has been despatched recently, contains Section N (Catalysis) Manual Codes and their relevant Accession Number postings for Week B01-B13 and future updates will continue to include such data.

8. SDC ONLINE FILE POSITION

WPI	SDC has updated to	Update code
Bibliographies	B13	7903
Manual Codes	B11	7903
Multipunch A+ Key Terms	A51	7813
Multipunch BCE	B03	7901

* 9. MULTIPUNCH SEARCHING UNDER SEVERAL SUBHEADINGS ONLINE

There appear to be problems when the procedures as outlined in Item 10 of the last Newsletter are adopted. Indeed, the simple search given has yielded incorrect answers.

Users should avoid the approach until we have clearly defined with SDC what the limitations are, and what anomalies remain to be corrected.

We hope to be able to report on progress in the next Newsletter.

* 10. RING INDEX TYPE NUMBERS IN 90,000 SERIES

Due to major changes now planned for 1980, we would like to remind subscribers that the use of the above numbers (for coding chemical fragments), which was announced in Instruction Manual No. 5A (February 1978) as commencing at CPI Week A01, was never implemented, and these numbers should not be included in multipunch searches.

* 11. HINTS ON ONLINE SEARCHING

(a) Searching for Japan as a patent country

When carrying out a search for all Japanese patents on a particular subject or in the name of a particular patentee, the use of the search term "ALL J#/PA" results in a "permanent postings overflow" message even when combined with another search term.

This type of search should be carried out by combining the subject parameter with each of the possible country codes. This is illustrated by the following search for all Japanese patents having WINDSCREEN as a title term.

```
RNM  AND TO +; RNM OR TO .
SS 1  WINDSCREEN/TT
SS 2  /PA 1+J5.1+J4.1+J7.1+JA
```

An alternative method (see item (b)), where the number of postings in SS 1 is low, is to stringsearch for :J: in the FM line.

(b) Searching for a patent country together with another parameter

When searching for all patents from a given country (e.g. USA) together with another parameter, such as a patentee code (e.g. BRAX for British Aircraft Corporation), a direct search (US/PA AND BRAX/PC) could give 5 to 6 time slices due to high postings for US/PA. An alternative method, involving stringsearching the FM line, is illustrated below:-

```
SS 1  BRAX/PC
    PSTG  (138)
SS 2  STRS/FM :US:
```

This method does, of course, become uneconomic if the number of postings for SS 1 exceeds about 250.

(c) Searching for "Standard Thesaurus Terms" containing "="symbol

Because the use of "=" symbol only became effective from CPI Week A04, complete retrieval on this type of term can only be achieved by additionally ANDing together the two words linked by "=" for the period up to Week A04. For example, a search for the word KNOCK=DOWN should be carried out as follows:-

```
SS 1  KNOCK=DOWN/TT
SS 2  /TT KNOCK AND DOWN AND NOT 79/AY
```

The first few answers for SS 2, relating to the period CPI Weeks A01 to A51 may be eliminated by the use of the SKIP technique.

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not cause mutation of certain Salmonella typhimurium
29.12.77 as 758735 (23pp200).

agents, e.g. trisodium ethane 1-hydroxy-1,1 diphosphonate. 22.6.76 as 025841. (8pp931)

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Our Ref: Advice Note No. 23

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Telex: 267487

14th June 1979

CENTRAL PATENTS INDEX

Material Despatched in Consignment of 14th June 1979

1: ALERTING BULLETINS - COUNTRY ORDER

33321B - 35238B	(B18)

EXAMINED JAPANESE APPLICATIONS

The advanced version of the alerting abstracts which will appear as the current version in Week B23 Alerting Bulletins (Country Order) are included in this week's consignment.

: ALERTING BULLETINS - CLASSIFIED

31553B - 33320B	(B17)

3: WEEKLY ALERTING BULLETIN INDEX BOOKLET

33321B - 35238B	(B18)

4: BASIC ABSTRACTS JOURNALS

29731B - 31552B	(B16)

7: COMPLETE SERIES BASIC ABSTRACTS ON MICROFILM

Reel 210A Delayed Basic Abstracts "Y" Series
*Reel 249 00001B - 02500B (B01-B02)

*Delayed Reel now issued.

8: PROFILE BOOKLETS

23945B - 25900B	(B13)
25901B - 27846B	(B14)
27847B - 29730B	(B15)

PROFILE MANUAL CODE CARDS

Profile 2A
Section A

A2 140434	(B13)
A10 140541 - 140560	(B13)

Profile 21A
Section H

14154, 14157	(B13)
Section J	
19994 - 19997	(B13)
Section N	
02815 - 02841	(B11)

9: CS MICROFILM

A Reel 29 22113 - 22479	(B12)
A Reel 30 22480 - 23823	(B12)
**A Reel 32 24264 - 25750	(B13)
B Reel 14 22104 - 23903	(B12)
C Reel 7 18285 - 21619	(B11)

**A31 Delayed for technical for technical reasons.

1977 THE QUEEN'S AWARD FOR EXPORT ACHIEVEMENT

Directors: M. Hyams (*Chair. & Man.*) V. S. Hyams B. G. Paver A. B. Comfort P. T. Smith *Executive Directors:* A. M. Brooks M. J. Whiffin H. Birnbaum M. D. Dixon H. Winning I. S. Smith P. Norton S. J. Newey C. J. Page K. M. Walker M. E. Pope R. H. Hope T. M. Harvey

repeated shampooing
not cause mutation of certain Salmonella typhimurium 29.12.77 as 758735 (23pp200).

agents, e.g. trisodium ethane 1-hydroxy-1,1 diphosphonate, 22.6.76 as 025841. (8pp931)

9: CS MICROFILM (contd.)

F Reel	9	18383 - 21534	(B11)
F Reel	10	21543 - 22538	(B12)
G Reel	7	20015 - 22318	(B12)
H Reel	6	18489 - 22457	(B12)
J Reel	9	20017 - 22030	(B11)
L Reel	8	20181 - 22492	(B12)

10: COMPLETE SPECIFICATION BOOKS

B No.	1115	29731B - 30021B	(B16)
B No.	1116	30022B - 31552B	(B16)
C No.	684	29731B - 31552B	(B16)

13: COMPANY CODE CARDS

27847B - 29730B (B15)

17: MANUAL CODE CARDS

*A	140432 - 140741	(B13)
B	27847B - 29730B	(B15)
C	27847B - 29730B	(B15)
D	23402 - 23444	(B13)
E	60819 - 60969	(B13)
F	31263 - 31320	(B13)
G	20761 - 20801	(B13)
H	14127 - 14161	(B13)
J	19949 - 20008	(B13)
K	06362 - 06377	(B13)
L	27586 - 27704	(B13)
M	34018 - 34135	(B13)

*Indicates Re-issue in Section A
136670-136859

19: PUNCH CODE CARDS

B 20011B - 22014B (504 cards) (B11)

C 20013B - 21998B (265 cards) (B11)

The following delayed cards are included in this week's consignment:

Section B
B11: NIL

Section C
B11: 00456B, 00458B(4), 00828B, 01784
01848B(4)

Item 19: Section B punch cards include a reissue for 15828F.

Section C punch cards include a reissue for 01455T.

20: MANUAL/CODE/COMPANY/CLASSES TAPE

A01 - B13

23: WEEKLY SDI TAPES

Delayed.

RIN SERVICE

WEEKLY INDEXES

B, C, E and Overall (B07,BO

Sheets and Cards

51064 - 51087 (BO
51088 - 51153 (BO

CS MICROFILM BY COUNTRY

FR NEW LAW	2105 - 2110	OPI	30.3
DT OLS	3597 - 3600	OPI	17.5
NL	985 - 986	OPI	22.5
UK	1116 - 1117	OPI	31.5
*CANADA	1658 - 1659	OPI	13.3

*Delayed reel now issued.

PATENTS ABSTRACTS PUBLICATIONS
DESPATCHED THIS WEEK

Belgian Patents Abstracts	B19
British Patents Abstracts	B18
French Patents Abstracts	B18
German Patents Abstracts	B18
German Patents Gazette	B18
Japanese Patents Report	No. 19 (Despatched 8.6.79)
Japanese Patents Gazette	B18
Netherlands Patents Report	B18
Soviet Inventions Illustrated	B18
U.S. Patents Report	B18
WPA Journals	B18
European Patents Report	B20
PCT Patents Report	NONE

WORLD PATENTS INDEX

Gazettes Sections P, Q, R, CH	B18 (Despatched 11.6.79) B19
Priority Index	B18 (Despatched 11.6.79) B19

WPA BASIC ABSTRACTS MICROFILM

Section Q Reel 12 J8176A 45 - K6361A 48	Delayed Reel now issued.
Section R Reel 12 J8178A 45 - K6409A 48	Delayed Reel now issued.

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repeated shampooing with
not cause mutation of certain Salmonella typhimurium
29.12.77 as 758735 (23pp200).

agents, e.g. water-soluble fluoride, and anticalculus
agents, e.g. trisodium ethane 1-hydroxy-1,1 diphosphonate. 22.6.76 as 025841. (8pp931)

D2: DISINFECTANTS; DETERGENTS

D21 : DENTAL; TOILET PREPARATIONS

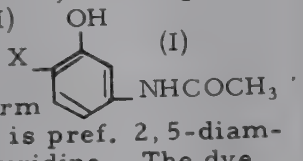
OREA D21 88665V/52 =DS 2427-487
Fatty compn. for lipstick and eye shadow - contg. a fat mixed with a comparable homopolymer
L'OREAL SA 08.06.73-LU-067773
*A96 (A14) (19.04.79) *BE-815-976 A61k-07*

A solid or pasty cosmetic, e.g. rouge, lipstick or mascara, contains at least one fat and at least on nontoxic homopolymer taken from the gp. of homopolymers of vinyl esters of 7-20C satd. linear or branched monocarboxylic acids and homopolymers of acrylic or methacrylic esters of 11-21C satd. linear or branched monocarboxylic acids.

The homopolymers have a molecular wt. between 2000 and 500000. 7.6.74 as 427487 (9pp068)

OREA D21 01983W/02 =DS 2429-967
Hair dye compn contg. para phenylene diamine - with a halo-substd meta amino phenol coupling agent
L'OREAL SA 22.06.73-LU-067861
*E24 (19.04.79) *BE-816-675 A61k-07/13*

Hair dye contains (a) a known oxidation base which is ≥ 1 cpd. contg. two amino gps. or an amino and a hydroxy gp. in para-position on the benzene or heterocyclic ring and (b) as coupler ≥ 1 cpd. of the formula(I) (where X is F, Cl or Br), e.g. 2-chloro- 5-acetylaminophenol.



(I)

The oxidation base may be in the form of the free base or acid addn. salt and is pref. 2,5-diamino-pyridine or 2-hydroxy- 5-amino-pyridine. The dye gives a blonde or light brown colour. 21.6.74 as 429967 (8pp068)

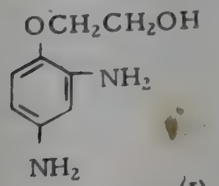
DEGS ★ D21 31791B/17 ★DT 2746-525
Yellow dental gold alloy for fusing to porcelain - also contains zinc, platinum, opt. palladium, rhodium, tantalum and/or tungsten
DEUTSCHE GOLD & SILBER 17.10.77-DT-746525
M26 (19.04.79) C22c-05/02

An alloy for supporting fused-on porcelain in dentistry contains, by wt., 0.3-2 % Zn in addn. to 60-90 % Au, 5-35 % Pt, 0-10 % Pd, 0.5-3 % Rh, 0.1-2 % Ta and/or W. Wt. ratio sum Pt metals : Zn : Ta and/or W is (15-30) : 1 : (0.5-1.3) pref. 25 : 1 : 1.

The alloys are also used as casting alloys for dental inlays, crowns and bridges, etc. in combination with plastics. Zn addn. prevents Ta and W oxidn. in re-casting. The alloys have a saturated golden shade exceeding that of Cu-contg. Au-Pt alloys and resisting several re-melting and casting processes. 17.10.77 as 746525 (8pp200).

BRIM ★ D21 31809B/17 ★DT 2758-735
Oxidn. dye compsn. for hair - contains aq. carrier, 1-hydroxy:ethoxy-2,4 di:aminobenzene, or salt, and a para-component
BRISTOL MYERS CO 06.10.77-US-839871
E14 (19.04.79) A61k-07/13

New 1-hydroxyethoxy-2,4-diaminobenzene having formula (I), or esp. its non-toxic salts, is used together with a p-component (II) in oxidn. dye compsns. for dyeing keratinous fibres. The compsns. contain a carrier and a colour-active quantity of (I) and (II), pref. 0.001-3 wt.% (I), or salt thereof, and 0.001-5 wt.% (II) capable of reacting on fibres in the presence of an oxidising agent, to form a coloured dyestuff.



(I)

The compsns. are used partic. for dyeing human hair, on head or as wigs. Shades obtd. are permanent and resist repeated shampooing with min. change in colour. (I) do not cause mutation of certain Salmonella typhimurium 29.12.77 as 758735 (23pp200).

ALKU ★ D21 31945B/17 ★EP ---1-471
Natural beeswax substitute compsn. - obtd. from a difunctional aliphatic acid, aliphatic alcohol and glycol
AKZO NV 11.10.77-US-841261
A25 (A96 D23) (18.04.79) C07c-69/34
D/S: E(BE, DT, FR, GB, NL).

A natural beeswax substitute is obtd. by reacting, under esterification conditions, (A) a 7-36C difunctional aliphatic acid, (B) a 10-22C aliphatic alcohol and (C) ethylene glycol, propylene glycol, polyoxyethylene glycol of mol. wt. 100-1500 or polyoxy-propylene glycol of mol. wt. 150-1025 in amts. such that the numbers of acid and OH functionalities are approx. equal, (B) and (C) each supplying ≥10% the OH functionalities, until the mixt. has acid value 10-30.

Alternatively, the reaction can be effected until the mixt. has acid value 0-30 and the prod. (I) mixed with a prod. (II) obtd. by reacting, under esterification conditions (a) 2 moles of a 10-30C aliphatic alcohol and 1 mole of a 7-36C difunctional aliphatic acid or (b) a 12-30C aliphatic acid and a 32-36C branched chain alcohol until the mixt. has acid value 0-30. (I) and (II) are in the wt. ratio 1:2-2:1 and the mixt. has acid value 5-30 for (a) or 10-30 for (b).

The substitute is useful in cosmetic formulations.

10.10.78 as 200235 (17pp558).
(E) ISR: US3912642; US2805247; GB854673.

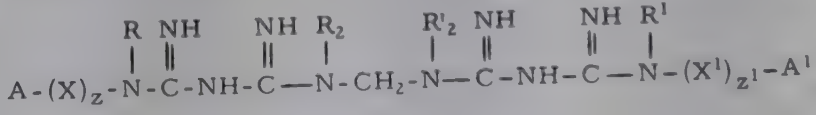
MINN D21 57996Y/33 =GB 1544-776
Highly pressure-resistant dental material prepn. - by polymerising mixt. of finely divided inorganic filler, polymerisable liq. organic binder and initiator
MINNESOTA MINING CO 09.02.76-US-656522
*A96 (25.04.79) *DT2705-220 +C08k-07*

Composite dental restorative material is prepd. by mixing and polymerising a liq. organic binder and a finely divided particulate filler having 70-95wt.% of its particles of size 0.7-25μ and 5-30wt.% of its particles of size 0.2-0.7μ. Pref. the binder comprises a glycidyl methacrylate deriv. of Bisphenol A and it may contain a reactive diluent. The filter is esp. α-quartz.

The materials show high compressive strength without loss of desirable translucency. 8.2.77 as 005168. (6pp945)

PROC D21 03257Y/02 =GB 1544-977
Bis biguanides for use in compsns. for tooth care - preventing formation of scale on teeth and avoiding discolouration
PROCTER & GAMBLE CO 24.03.76-US-670518 (23.06.75-US-589232)
*B05 E14 (25.04.79) *NL7606-824 A61k-07/22 A61k-31/15 C07c-129/16*

Bis-biguanide cpds. of formula (I) are new, where A and A^1 are each a substd. Ph contg. halogen, nitro, hydroxy or 1-6C alkyl or alkoxy substits.; X and X^1 are each 1-3C alkylene; z and z^1 are 0 or 1; R and R^1 are H, 1-12C alkyl and 7-12C aralkyl; R_2 and R'_2 are H, and 1-2C alkyl.



$$A-(X)_z-\overset{R}{N}-\overset{NH}{\overset{\|}{C}}-NH-\overset{NH}{\overset{\|}{C}}-\overset{R_2}{N}-CH_2-\overset{R'_2}{N}-\overset{NH}{\overset{\|}{C}}-NH-\overset{NH}{\overset{\|}{C}}-\overset{R^1}{N}-(X^1)_{z^1}-A^1$$

(I)

Pref. (I) is used in an oral compsn. contg. 0.01-2.5wt.% of (I); in a dentifrice, contg. 0.5-95wt.% dentifrice abrasive and 0.1-2wt.% of (I) used as an antiplaque agent; (I) is also used in mouthwash, chewing gum and lozenge compsns. The oral compsn. may contain anticaries agents, e.g. water-soluble fluoride, and anticalculus agents, e.g. trisodium ethane 1-hydroxy-1,1 diphosphonate. 22.6.76 as 025841. (8pp931)

PROC D21 03257Y/02 =GB 1544-978

Bis biguanides for use in compsns. for tooth care - preventing formation of scale on teeth and avoiding discolouration

PROCTER & GAMBLE CO 24.03.76-US-670518 (23.06.75-US-589232)

*B05 E14 (25.04.79) *NL7606-824 A61k-07/22 A61k-31/15*

Oral compsn. comprises a carrier for use in the oral cavity and 0.01-2.5% bis-biguanide anti-plaque agent of formula A-$(X)_z$-N(R)-C(=NH)-NH-C(=NH)-N(R_2)-$(CH_2)_n$-N(R'_2)-C(=NH)-NH-C(=NH)-N-(R^1)-$(X^1)_{z^1}$-A^1 (I) where A and A^1 are each substd. Ph contg. halogen, nitro, hydroxy or 1-6C alkyl or alkoxy substits.; X and X^1 are each 1-3C alkylene; z and z^1 are 0 or 1; R and R^1 are H, 1-12C alkyl and 7-12C aralkyl; R_2 and R'_2 are H, 1-2C alkyl; and n is 2-4. Pharmaceutically acceptable salts of (I) are also prepd.

(I) is used in the form of a dentifrice contg. 0.5-95% dentifrice abrasive and 0.1-2% (I), a mouthwash, chewing gum or lozenge. Compsns. are esp. used to inhibit formation of plaque and caries. 22.6.76 as 33381/78, Div. ex 1544977. (9pp931)

NIOF ★ D21 32353B/17 ★J5 4035-221

Cosmetic compsn. - contains a polypropylene oxide cpd. to provide water holding and emulsifying property

NIPPON OILS & FATS KK 24.08.77-JA-100637

A96 (A25) (15.03.79) A61k-07

The cosmetic compsn. contains the cpd. R-O-$(C_3H_6O)_aX$ (I) (where R is 12-22C alkyl, alkenyl; X is 8-18C branched fatty acid gp. a = 10-25.

(I) which can be prepd. by adding propyleneoxide to higher alcohol and esterifying the adduct with branched fatty acid does not corrode celluloid, shows emulsifying property and water-holding property, gives light touch to skin and is stable and hardly hydrolysed. 24.8.77 as 100637 (4pp).

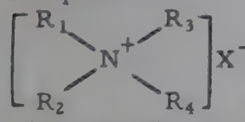
LIOY ★ D21 32354B/17 ★J5 4035-222

Hair rinsing compsn. - contg. quat. ammonium salt and water-soluble polymer(s) as essential components

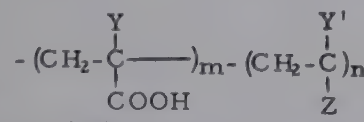
LION FAT & OIL KK 26.07.77-JA-089520

A96 (15.03.79) A61k-07/08

Objective hair rinsing compsn. contains 0.5-5 w/w% of quaternary ammonium salt (I) and 0.1-2 w/w% of water soluble polymer (II) and/or polymer (III) as the essential components.


(I)

$[R_1R_2N^+R_3R_4]X^-$


(II)

$-(CH_2-C(Y)(COOH))_m-(CH_2-C(Y')(Z))_n-$

-$(CH_2CH_2O)_p$-CH_2CH_2OH (IV).

In the formulae, R_1 is 8-12C (hydroxy)alkyl; R_2 is 1-22C (hydroxy)alkyl or benzyl; R_3, R_4 are each 1-4C alkyl gp. or the gp. (IV) of which p is 0-5 in average. X is monovalent anion originated from quaternising agent. Y, Y' is each H or methyl. Z is OH, acetyloxy gp., carbamoyl gp. or propionoyloxy gp.; and m/n is 10/0-3/1.

The mol. wt. of the polymer (II) is 10000-600000. The polymer (III) is a water soluble polymer of mole wt. 10000-600000 which is composed of 90 w/w% of the monomer unit structuring the polymer (II) and 10 w/w% of other polymerisable monomer unit.

The compsn. can give better rinsing effect in oily feeling, combing property and pliability than conventional hair rinsing compsns. and excellent finishing effect can be attained. It is stable in wide pH range even at low temp. 26.7.77 as 089520 (9pp5).

NAKA/ ★ D21 32355B/17 ★J5 4035-223

Hair growing agent - contg. mixt. of Laminariales and Cyanophyta or Chlorophyta extracts as effective ingredients

NAKAZAWA T 25.08.77-JA-102045

(15.03.79) A61k-07/06

The hair tonic contains a homogeneous mixt. of the extract of Laminariales and the extract of Cyanophyta (e.g. Spirulina) or Chlorophyta (e.g. Chlorella) as the effective ingredient.

The extracts show synergic hair-growing effect, that is, it is effective to prevent the falling-off of hair and the formation of dandruff and to make hair glossy and pliable. The prod. is combined at ca. 10% in hair-treatment, shampoo, hair rinse, hair tonic, hair cream, pommade, etc. 25.8.77 as 102045 (2pp5).

MORI/ ★ D21 32518B/17 ★J5 4036-3

Dandruff and urticaria preventative shampoo prodn. - by blendi rice bran ferulate with soap or slightly acidic synthetic cleaner

MORITA S 25.08.77-JA-102437

A96 (17.03.79) A61k-07/06 C11d-09/26

Dandruff and urtication preventive shampoo is prepd. b the blending 0.01-1.0(0.05-0.1)wt.% of rice bran ferula (i.e. oryzanol) to the base material of soap or slightly acidic synthetic cleaner. The soap is Na or K salt of fat acid, and the synthetic cleaner is e.g. N-acyl-L-sodiu glutamate.

Harmless dandruff and urtication preventive hair sha poo is prepd. using secondary prod. of rice oil, i.e. mixt. of steroid and ferulate ester of triterpene alcohol 25.8.77 as 102437 (3pp170).

SHIS D21 30997X/17 =J7 9006-

Odourless, stable, permanent wave compsn - contg an ethylene propylene carbonate as accelerator

SHISEIDO KK 04.09.74-JA-101744

*E19 (30.03.79) *J51029-235 A61k-07/09*

The compsn. comprises 1-40% of Na, K, NH_4, mono or di ethanol amine hydrogen sulphite or sulphite as main ing -ient 5-70% of ethylene or propylene carbonate as accel ator, and other additives. The compsn. is used together with a compsn. contg. water-sol. barium salt, such as ba um acetate. 4.9.74 as 101744, A61k-7/09 (30.3.79) SHISEIDO KK (4pp) (J5 1029235)

PENN D21 62178S/39 =J7 9006-

Dental cements containing water-solubleacrylic acid - copolym and zinc oxide

PENNWALT CORP 10.03.70-US-018319

*A96 (A16) (02.04.79) *DT2110-665 A61k-05/06 +C08k-03 C08l-33/02*

Water-soluble acrylic acid copolymer of mw 20000-750 (pref. 30000-40000) consisting of 10-90 (pref. 55-65) mo polymerised acrylic acid, 0-5 mol % polymerised 1-8C alkyl acrylate, bal. polymerised glutaconic, aconitic, ci conic, mesaconic, itaconic, fumaric, maleic and/or tig acid is used in dental cement mixtures contg. 27-75 w copolymer per wt. ZnO, and pref. consisting of 4-8 pb -polymer 10-18 pbw ZnO and 4-9 pbw water. 10.3.71 a 012542 (clg. 10.3.70-US-018319) A61k-5/06, C08k-3/22 C081-33/02 (2.4.79) PENNWALT CORP. (3pp)(J4 60025

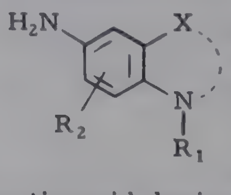
THER- D21 12611S/07 =NL-159

Heterocyclic hair dyes

THERACHEM THERAPEU (THE -) 06.11.67-OE-009977

*E23 (17.04.79) *GB1223-270 A61k-07/13*

Dye prepns. suitable for dyeing human hair contain het cyclic amino cpds. of formula (I) and customary additi



In (I) R_1 = H or (max 10C) aliphati hydrocarbon opt. substd. with hydro X = atoms required to form a hetero lic, non-aromatic 5- or 6-ring and contg. a coupling component on the b of aromatic amino- or hydroxyl-cont compounds, pyrazolones, aroyl or a acetic acid derivs.; R_2 = H, halogen, opt. substd. (1-4 alkyl amino opt. substd. with alkyl or hydroxyalkyl; o (1-4C) alkoxy.

(I) are known cpds. described in US 2196739 as use in colour photography. (I) give a good and even colour, not dye or irritate the scalp, are non-toxic and are ea removed. 9.10.68 as 014457 (6pp279)

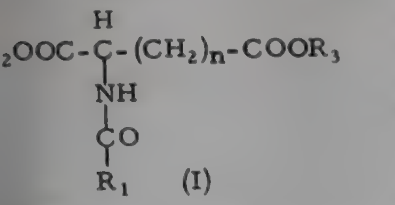
AJIN D21 35799V/19 =NL-160

Aminocarboxylic acid diesters - useful as oil-sol. surfactants for care compsns

AJINOMOTO KK (NIEM-) 23.10.72-JA-106018

*E16 (17.04.79) *NL7314-487 A61k-07 B01f-17/22 C07c-10 C08g-65/32*

New acylaminocarboxylic acid esters are of general fo mula (I): In (I) R_1CO is opt. branched, opt. satd. alip tic (7-21C) carboxylic acid; R_2O and R_3O are each opt. branched, opt. satd. monovalent ies of polyoxyalkylene-higher alcoholethers consisting of n opt. branched, opt. satd. monovalent (8-30C) alcohols



$$_2OOC-\overset{H}{C}(NHCOR_1)-(CH_2)_n-COOR_3$$

(I)

residues of polyoxyalkylene-higher alcohol ethers consisting of an opt. branched, opt. satd. monovalent (8-30C) alcohol and a polyoxyalkylene with 2-20 oxyalkylene units (2-4C), or residues of polyoxyalkylene igher fatty acids consisting of an opt. branched, opt. atd. monovalent aliphatic carboxylic acid and a polyoxy-lkylene with 2-20 polyoxyalkylene units (2-4C) n = 1 or 2.

(I) have emulsifying activity with much higher solubil-ty in oils and higher emulsifying capacity than known gents. They may be used as oil-soluble non-ionogenic urfactants in cosmetics and perfumery. (I) are stable when used in cosmetics, even after prolonged storage. They have superior spreading- and softening properties nd give emulsified products with increased shine and nilky whiteness. In hair cosmetics, they give a softer rip and shine to the hair. 22.10.73 as 014487 (13pp279)

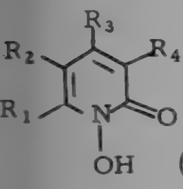
FARH D21 07516V/05 =SU -580-806

Anti-dandruff agents - contg 1-hydroxy-2-pyridone derivs

HOECHST AG 11.07.72-DT-234009

*B03 E13 (12.05.78) *DT2234-009 A61k-07/06*

1-hydroxy-2-pyridones of formula (I) and/or their salts are used as anti-dandruff agents. In the formula, R_1 is H, 1-17C alkyl, 2-17C alkenyl, 5-8C cycloalkyl, cycloalkyl-(1-4C alkyl) in which the cycloalkyl group can be substd. by 1-4C alkyl, aryl, aryl-(1-4C alkyl), aryl-(2-4C alkenyl), aryloxy-(1-4C alkyl), aryl-thio-(1-4C alkyl), benzhydryl, phenyl-sulphonyl-(1-4C alkyl), furyl or furyl-(2-4C alkenyl), the aryl residues opt. being substd. by 1-4C alkyl, 1-4C alkoxy, NO_2, CN or halogen; R_2 is H, 1-4C alkyl, 2-4C alkenyl or alkynyl, halogen or benzyl; R_3 is H, 1-4C alkyl or phenyl; and R_4 is H, 1-4C alkyl, 2-4C alkenyl, methoxymethyl, halogen or benzyl. (I) are easy to incorporate into various cosmetic preparations on account of their good solubility and stability properties.



(I)

Pref. formulations contg. (I) are shampoos, although other formulations such as aqueous-alcoholic solns. hair fixatives, hair oil, hair pomades, brilliantine etc. are also possible. The amount of (I) in these formulations is generally 0.05-10%, although larger amounts may be present in formulations in conc. form.

Dittmar, W., Futterer, E., Lohaus, G. Bul. 42/15.11.77. 11.7.73. as 951651 (9pp)

JASK/ D21 16424B/09 =US 4148-329

Hair shaping compsn. for all types of hair - contg. straight chain di:aldehyde and opt. catalyst and thickening agent

JASKOWSKI M C 17.08.77-US-825226

*A96 E17 P24 (10.04.79) *GB2002-833 A45d-07*

Hair shaping compsn. includes a 2-6C straight chain dialdehyde (pref. glyoxal) as active ingredient. A specified compsn. is 10 wt. % glyoxal, 0.2 wt. % NH_4 sulphate, 0.25 wt. % wetting agent, 2wt. % hydroxypropyl methylcellulose and balance demineralised water.

Compsn. can be used as a hair straightener or curl producer. Treatment is effective, safe and long lasting. 17.8.77 as 825226 (4pp997)

COLG ★ D21 33196B/17 ★US 4148-743

Toilet soap bar contg. polyethylene oxide - blended as powder with soap chips

COLGATE PALMOLIVE CO 06.12.77-US-858044 (04.06.76-US-693076)

A96 (D25) (10.04.79) C11d-09/26

Toilet soap bars comprising (by wt.) ≥60% soap and 0.5-10% polyethylene oxide (I) of mol. wt. $\geq 10^5$ are made by first mixing soap chips with powdered (I). The mixt., contg. >11 wt. % moisture (by wt. of soap chips) consists of the chips with (I) powder bonded to it and is then blended with other conventional soap bar ingredients and the prod.

surfactant (esp. high foaming) and opt. also a hydrolysed protein and superfatting agent.

By blending (I) and soap so that the powder adheres to the chips, specks are avoided in the bar. 6.12.77 as 858044 (6pp1251)

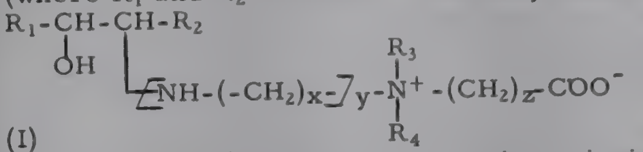
HENK D21 74163Y/42 =US 4148-762

Hydroxy alkyl diamine or triamine betaine cpds. - used in hair shampoos and bubble baths

HENKEL KG AUF AKTIEN 15.04.76-DT-616800

*E16 (10.04.79) *BE-853-583 C11d-01/88*

A cosmetic cleaning agent is prepd. contg. an acid neutralised deriv. of a surface-active betaine of formula (I) (where R_1 and R_2 are each 1-18C alkyl such that R_1+R_2 have 9-18C; R_3 and R_4 are each 1-4C alkyl or alkylol, x is 2-4, y is 1, z is 1-4). Agent also contains anionic surfactant in amt. 5-30 wt. % w.r.t. compsn.; and a carrier.



$$R_1-\underset{OH}{CH}-CH-R_2 \quad \lfloor [NH-(-CH_2)_x-]_y-\overset{R_3}{\underset{R_4}{N^+}}-(CH_2)_z-COO^-$$

(I)

Compsn. is esp. used for cleaning the hair and skin of warm-blooded animals by topical application. 5.4.77 as 784738 (6pp931)

ARMO D21 77838X/42 =US 4148-812

Anti-perspirant contg astringent complex - prepared from aluminium or zirconium cpd and basic zirconium cpd gel

ARMOUR PHARM CO 26.03.75-US-562300 (01.02.77-US-764627)

*E32 (E12 E33) (10.04.79) *DT2605-386 C07f-07*

Prepn. of basic Zr-amino acid gels comprises reacting in aq. medium a water-soluble salt of an amino acid and a water-soluble Zr salt to precipitate a gel, and recovering the gel. A pref. gel is formed by reaction of Na glycinate with zirconyl chloride and/or hydroxide, the Na glycinate having hbeen formed by reaction of Na_2CO_3 with glycine.

Prod. is useful in antiperspirant compsns., e.g. in the form of sprays, creams or lotions. 1.2.77 as 764627 Div ex 4028390 (9pp927)

GENM ★ D21 33252B/17 ★US 4148-872

Plaque inhibiting chewing gum - which contains di:ethyl-hexyl-sulpho-succinate salt, mono:caprylin and flavouring oil

GENERAL MILLS INC 28.11.77-US-855525

B05 (10.04.79) A61k-07/16 A61k-09/68

Chewing gum comprises 0.001-15% di-(2-ethylhexyl)-sulphosuccinate salt (I), 0.001-15% monocaprylin (II), 0.05-10% cinnamon oil, peppermint oil and/or spearmint and 10-95% gum base.

The gum is used for prevention of plaque-formation and/or removal of plaque from the surface of the teeth, so that growth of calculus is limited. 28.11.77 as 855525 (7pp1248)

STEI- D21 35229A/20 =US 4148-873

Sun-screening compsn. contg. hop extract as UV absorbers - obtd. by organic solvent extn. of Humulus lupulus; opt. treating to remove humulone(s) derivs

STEINER S S INC 05.11.76-US-739304

*(10.04.79) *DT2749-273 A61k-07/42*

Human skin is treated to protect it from erythema-producing sunlight radiation while promoting tanning. A sunscreening compsn. is applied topically to the skin contg. a sunscreening agent effective in absorbing erythema-producing UV-radiation which transmitting UV-radiation which promotes tanning.

Compsn. contains a physiologically acceptable carrier for the sunscreening agent. Sunscreening agent comprises ≥2 wt. % of an organic solvent soluble extract of hops contg. humulones and lupulones extracted from hops.

Compsns. can be in the form of lotions, creams or ointments and packaged in aerosol cans and glass and plastic containers. 5.11.76 as 739304 (2pp931)

RUBH ★ D21 33253B/17 ★US 4148-875

Gel toner compsn. for skin - contains protein encapsulated by hectorite clay and polar cpd.

RUBENSTEIN, HELENA INC 28.03.77-US-781844 (05.09.75-US-611435)

A96 (10.04.79) A61k-31/78 B01j-13

consists of a carrier

and an encapsulated base. The carried comprises an emulsifier, a dispersing agent, a nonionic surfactant, a hymectant, a gel-forming amt. of hectorite clay, a peptiser for the clay, and water. The encapsulated base comprises milk protein, hectorite clay a cpd. with polar gps. in sufficient amt. to form insoluble particles greater than colloidal size on reaction with the clay and water

The compsn. is non-oily, easily washed off, and contains protein encapsulated so that it is protected from degradation and loss of activity. 28. 3. 77 as 781844 C. i. p 4087555 (7pp955)

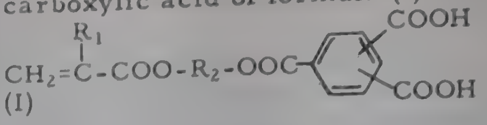
MITC D21 04563B/03 = US 4148-988

Hardenable adhesive compsn. - comprises a (meth)acryloxy alkylene tri:mellitate, comonomer and free radical catalyst or photosensitiser

MITSUI PETROCHEM IND KK 13.10.77-JA-121858 (28.06.77-JA-076190)

*A81 G03 +R44 (A14 A96) (10.04.79) *GB2000-789 C08f-222/16*

Curable compsn. comprises (A) an ethylenically unsatd. carboxylic acid of formula (I) or an acid anhydride there (B) ≥1 other ethylenic cally unsatd. monome copolymerisable with and (C) ≥1 catalyst se -ted from free radical initiators and photosensitisers. I (I), R is H or methyl and R_2 is 2-4C alkylene. In the benz ring A, 2 carboxyl gps. are bonded to C atoms other tha the C atoms adjacent to the C atom to which the ester gp is bonded.


(I)

Pref. (A) is 4-methacryloxyethyltrimellitate or its a hydride. (B) is e. g. an acrylic monomer or an aromatic vinyl monomer. Compsn. is useful as an adhesive which forms bonds having excellent water resistance and dural lity. It is esp. useful as a dental adhesive or as an unde coating agent for an adhesive or paint. 19. 1. 78 as 91685 (7pp927)

See Also

D13 GB 1544654 D13 GB 1544701 D13 GB 154470
D16 DS 2152602 D22 US 4148905 D23 J5 403522

D22 : BANDAGES ; DRESSINGS

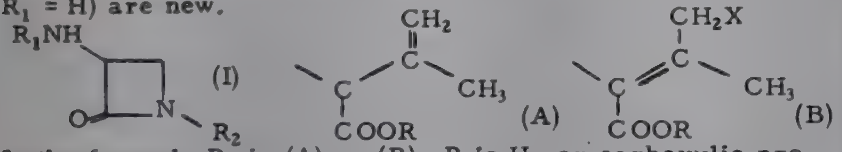
ELIL ★ D22 31575B/17 ★BE -871-401

2-3-Amino-2-oxo-1-azetidinyl 3-methyl 2- or 3 butenoic acid derivs. - are antibiotics which are administered parenterally or used as disinfectants

ELI LILLY & CO 26.10.77-US-845766

B03 E13 (20.04.79) A61k C07d

Azetidinones of formula (I) and their hydrochlorides (whe R_1 = H) are new.



In the formula R_2 is (A) or (B), R is H, or carboxylic protecting gp. or salt forming gp. X is 1-3C acyloxy, hydroxy, 1-4C alkoxy, benzyloxy or pyridinium, R_1 is H or R_5-CO-, R_5 is H, 1-4C alkyl, halomethyl, phenyl, benzyloxy, 4-nitrobenzyloxy, 2, 2, 2-trichloroethoxy, t-butoxy, 4-methoxybenzyloxy, R_6-$(O)_m$-CH_2-, R_7-CHW- or R_8CH_2-, m = 0 or 1, R_6 is 1,4-cyclohexadienyl or phenyl (opt. substd. by one or two substituents chosen from hydroxy, nitro, cyano, CF_3, 1-4C alkyl or 1-4C alkoxy, R_7=R_6 or 2- or 3-thienyl, W is opt. protected hydroxy, opt. protected carboxy, opt. protected amino or -NH-CO-N(CH_3)-CO-NH-CH_3 and R_8 = 2- or 3-thienyl, 2-furyl, 2-thiazolyl, 5- or 1-tetrazolyl or 4-isosazolyl).

(I) are antibiotics which inhibit the growth of pathogenic microorganisms. They are administered parenterally in doses of 100-500 mg/kg or used to prepare disinfectant solns. contg. 10-50 g/l of (I) e. g. used to sterilise dental and medical equipment. 20. 10. 78 as 871401 (25pp395)

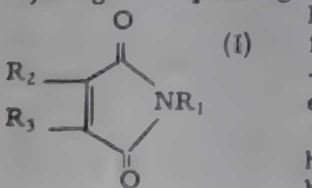
KAOS D22 48900U/35 = DS 2229-971

Maleimide cpds. - used as deodorising agents for toilets, refuse receptacles etc.

KAO SOAP KK 28.00.72-JA-002775 (21.06.71-JA-044726)

*E13 P34 (19.04.79) *DT2229-971 A61l-09/**

Anti odorant agent acting by removing mercaptans and hydrogen sulphide gases contains a cpd. of formula (I)


(I)

In (I) where R_1, R_2 and R_3 are H, 1-12C alkyl, hydroxymethyl, 2-hydroxyethyl, carboxymethyl, 2-aminoethyl, phenyl or a phenyl gp. substd. with a 1-3C alkyl, aniline or phenylhydrazine and R_2 and R_3 can also be halogen).

Agent can also contain citric acid, maleic acid, phosphoric acid, tartaric acid, glyoxal or glutaraldehyde to remove ammonia and amines. The agent may be used for toilets, refuse, etc. 20. 6. 72 as 229971 (4pp068)

MMMM- ★ D22 31728B/17 ★DT 2745-9

Gas sterilising system - recycling gas by cooling below temp liquefaction and extracting liquid

MMM MUNCHENER MEDIZ 12.10.77-DT-745961

P34 (19.04.79) A61l-01

A sterilising system uses sterilising gas which is passe in the gaseous phase into a closed chamber for the killin of bacteria. To drain off the gas for the purpose of usin it again, the sterilising gas is cooled to below its temp. of liquefaction and discharged in the liquid phase.

This is a simple method of sepg. the sterilising gas from the water vapour present in the sterilising chambe It does not complicate the design and the function of the gas steriliser. 12.10.77 as 745961 (13pp39).

HAUF/ ★ D22 31763B/17 ★DT 2746-

Disposable diaper in form of bag for air travel - is made fr transversely folded laminated sheet permeable absorbent impermeable layers

HAUFE L 14.10.77-DT-746219

F07 P27 (19.04.79) A47g-09/08

Disposable baby's diaper which serves also as a carry pillow is formed from a laminated sheet which is folded transversely intermediate its length and welded, bonde or joined along the juxtaposed folded over edges.

The sheet includes an inner layer, in use of bag, wh is made of a matted fibre web which is moisture permeable but moisture repellent to provide a relatively d layer, an intermediate layer also made from a matted fibre web, e.g., cellulose fibres or floccules, and moi ure absorbing, and an outer, impermeable layer. The inner layer may be treated such that it is not allergy in ducing. 14.10.77 as 746219 (7pp536)

DEXC ★ D22 31808B/17 ★DT 2758-

Antislip sheet material for covering surgical sheets - made of fa covered with discrete resin drops NL 17.4.79)

DEXTER CORP 11.10.77-US-841029

A96 F07 P31 +P42 (19.04.79) A61b-19/06 B05d-05

Anti-slip sheet material consisting of light-weight flexi fabric with a flat surface on one side and a scrub-resis surface on the other side, 2-10% of which is covered by resin droplets of medium stiffness.

Used as fastening to throw-away surgical sheets cov ing the point of operation, incision being made through coverings. The material is non-absorbent and water-re ellent, and prevent slipping of surgical instruments, et laid upon it, even at 40° to the horizontal. 28.12.77 as 758496 (13pp195).

LEX ★ D22 31887B/17 ★DT 2844-871

Autoclave sterilisation by evaporating formalin - with heated pipe onnection for evaporator to autoclave

ELECTROLUX AB 17.10.77-SW-011660 (17.10.77-SW-011659)
P34 (19.04.79) A61l-13/02

Articles are sterilised in an autoclave by converting for each batch a certain amt. of formalin in an evaporator into steam and formaldehyde which is introduced into an autoclave at a negative pressure. The chemical compsn. and the gaseous state of the formaldehyde are maintained by a supply of heat along the entire path from evaporator to autoclave chamber.

This reduces the amt. of residue of formaldehyde and paraformaldehyde in the articles to a tolerable measure. 14.10.78 as 844871 (20pp39).

UNIL ★ D22 31891B/17 ★DT 2844-956

Particulate absorption material with improved wettability with blood - treated with polyethylene glycol, polypropylene glycol or their block copolymer

UNILEVER NV 10.04.78-GB-013951 (18.10.77-GB-043308)
A96 +P34 (A25) (19.04.79) A61l B01j-01/22 C09k-03/32

Particulate absorption material (I) swellable in water is surface treated with $\geqslant 1$ polyether (II) $HO(C_2H_4O)_a(C_3H_6O)_b(C_2H_4O)_cH$ (where a + c or b is 0), to improve dispersibility in blood. (II) is used in amt. to allow blood to flow by capillary action through (I).

(II) pref. has a mol. wt. of 300-6000 and is a liq. polyethylene- or polypropylene glycol or their block copolymer. The material is prepd. by mixing (I) with (II) pref. in a volatile solvent and removing the solvent (I) may be a (non)-woven such as cotton, rayon, wool, gauze or paper.

(I) has better "blood wettability" i.e. blood is able to flow into the interior of (I). (I) may be used for tampons and surgical or medical prods.. 16.10.78 as 844956 (24pp952).

FARB ★ D22 31931B/17 ★EP ---1-437

Burning transiently explosive gases - by feeding quiescent gas streams into burner and recombining stream into hyper-critical vortex with axial forward and reverse flows

BAYER AG 10.10.77-DT-745488
J09 Q73 (18.04.79) B01d-53/34 F23d-13 F23g-07/06
D/S: E(BE,CH,DT,FR,GB,NL).

Transiently explosive gases or mixtures of gases of transiently varying chemical composition and explosibility are burnt by supplying the gases or mixtures in a number of quiescent streams, with a min. velocity which is greater than the max. occurring flame propagation velocity, and at such an angle to the common axis of the flow of all streams into a common comb stion chamber (4) that the recombining gas streams in the chamber form a hypercritical vortex. Vortex induces peripheral forward flow and rearward axial flow. If required, chamber may be supplied with auxiliary fuel or air supply.

Combustion chamber is compact due to reduced air requirement.

28.9.78 as 100018 (28pp536).
(G) ISR: DT2625139, DT2027535, DT2317513, US3999936, US3805714, DS2031002, DT2525305, DS2042364, US3867089, US3985494 + 1 Journal Reference, FR2290634, US3867089, US3985494 + 1 Journal Reference.

FARB ★ D22 31932B/17 ★EP ---1-438

Burning transiently explosive gases without back-firing - by feeding the gases into a quiescent annular chamber before discharging into combustion chamber with vortex flow

BAYER AG 10.10.77-DT-745493
J09 Q51 Q73 (18.04.79) B01d-53/34 F01n-03/10 F23d-13 F23g-07/06
D/S: E(BE,CH,DT,FR,GB,NL).

Transiently explosive gases or gas mixtures are burnt without danger of back-firing by feeding the gases before their entry into a combustion chamber into a quiescent annular chamber in which the gas flow velocity is greater than the max. possible flame propagation velocity, inducing a vortex in the gas flow. The vortex which is coaxial [illegible] and the combustion chamber is of the hyper critical type so that a radially outer, axially forward and a radially inner axially rearward flow is induced. If required, auxiliary fuel or air may be supplied.

Combustion chamber is compact due to reduced air requirement.

29.9.78 as 101029 (31pp536).
(G) ISR: DS-232500, DT2434960, FR2366517, DT2317513, GB1465310, US2581075, FR1409309.

POPU- ★ D22 31938B/17 ★EP ---1-452

Ampoule for long term storage of polymerisable substances - the ampoule and stoppers for it being made of a material which does not induce polymerisation

POPULATION RES INC 11.10.77-US-840903
A96 E16 P33 Q32 (A14 A17 A35) (18.04.79) A61j-01/06 B65d-35/30
D/S E(BE, CH, DT, FR, GB, LU, NL, SW).

A polymerisable material, such as a monomer of methyl cyanoacrylate useful as a tissue adhesive, is stored in an ampoule comprising a hollow body (12) closed at one end by a stopper (32) covered by a material (36) pref. PTFE which does not induce polymerisation, and closed at the other end by a piston (50) having a flared inner end (64) and having an external sealing ring (62) pref. of a high modulus rubber e.g. butyl, natural, buna. A space (80) is defined between the body wall. The sealing ring, and the flared end of the piston. The piston and body are made of a material such as polyethylene, which will not induce polymerisation.

In use, to disperse the material, the stopper is pierced by a hypodermic needle (42) and the piston pushed into the body to force the material into a syringe (40).

The choice of material for the body, the stopper and the piston helps prevent polymerisation, and increases shelf life. The space (80) contains any material leading past the piston and prevents it from contaminating the material remaining in the body.

9.10.78 as 101106 (18pp525)
(E) ISR: FR1412340; FR2264562; CH366126; FR1333235; US3151617; GB811398; US3540444; US2695735; FR1074325; GB1346982.

PHAS D22 69038X/37 =GB 1544-935

Antimicrobial amino-substd. 2-alkanol derivs - prepd. e.g. by hydrolysing N-(2-hydroxyalkyl) phthalimides (BE200876)

PHARMASCIENCE LABS 24.02.75-FR-005647
*B05 C03 E16 +P34 (25.04.79) *DT2606-106 C07c-93/04 C07c-149/10*

Hydroxylated amines of formula (I) $R-X-CH_2-CH(OH)-CH_2-NH_2$ and their salts, are novel and possess bacteriostatic activity. They are used as sterilising agents and preservatives, esp. in the cosmetics industry, and as antiseptics, e.g., in dermatology.

R is opt. satd. straight chain 5-18C aliphatic hydrocarbon gp., and X is O, S or NH. A specific cpd. is 3-decyloxy-2-hydroxy-1-aminopropane-hydrochloride.

24.2.76 as 007204. (11pp393)

MITO ★ D22 32241B/17 ★J5 4034-567

Deodorising waste gas from crematorium - by contact with a wall covered with a catalyst contg. layer

MITSUBISHI HEAVY IND KK 24.08.77-JA-100636
Q73 (14.03.79) F23g-07/06

Method comprises decomposing bad-smelling components contained in waste gas by removing dust therefrom, adjusting it to a temp. that is suitable for contact reaction, and passing it through a contacting layer filled with catalyst.

The improvement comprises colliding the waste gas with a wall positioned in front of a contacting chamber wherein the contacting layer is housed so as to be turned-over or varied in current, so that fine solids, e.g. bone powder, etc. are easily and economically removed from the waste gas without necessitating any large amt. of assisting fuel (used for recombustion deodourisation in prior art), thereby the catalytic activity of the catalyst in the contacting layer is hardly reduced. 24. 8. 77 as 100636 (3pp34)

KUSA/ ★ D22 32348B/17 ★ J5 4035-215

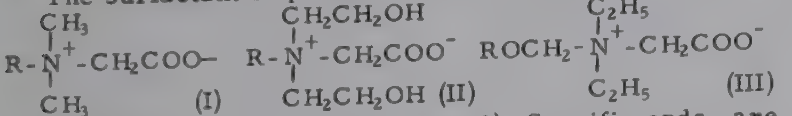
Non-toxic, odourless disinfectant - comprises poly:hydric alcohol fatty acid ester and lower alcohol in amphoteric betaine surfactant

KUSANO K 25.08.77-JA-101143

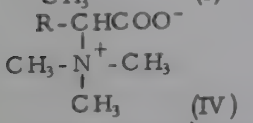
E17 P28 (15.03.79) A01n-09/24 A47k-10/02

The disinfectant is prepd. by mixing (a) 30-5 w/w% polyhydric alcohol fatty acid ester and (b) 10-2 w/w% lower alcohol, in betaine-type amphoteric surfactant, and impregnating the obtd. compsn. in paper or cotton material. The material can be used as a sanitary band, etc., for sterilising skin, removing sweat, cleaning, etc.

The surfactant is pref. of formula (I)-(IV):



$$R-\overset{CH_3}{\underset{CH_3}{N^+}}-CH_2COO^- \;(I) \qquad R-\overset{CH_2CH_2OH}{\underset{CH_2CH_2OH}{N^+}}-CH_2COO^- \;(II) \qquad ROCH_2-\overset{C_2H_5}{\underset{C_2H_5}{N^+}}-CH_2COO^- \;(III)$$



(IV)

$$\begin{array}{c} R-CHCOO^- \\ | \\ CH_3-\overset{+}{N}-CH_3 \\ | \\ CH_3 \end{array} \;(IV)$$

(where R is alkyl). Specific cpds. are lauryldimethylbetaine, myristyldimethylbetaine, stearyldimethylbetaine, lauryl(hydroxyethyl)betaine, myristyl-(hydroxyethyl)betaine, N-lauryl-N, N-diethylbetaine, N-stearyloxymethyl-N, N-diethylbetaine, α-trimethylammocapric acid, α-trimethylammono-linolic acid, etc. (a) is glycerine laurate, pentaerythritol palmitate, mannitol oleate, sorbitan linolate, stearic acid-sucrose ester, palmitic acid-sucrose ester, etc.; and (b) is (m)ethanol, n-amylalcohol, i-amylalcohol, etc. 25. 8. 77 as 101143 (4pp5).

ELEX D22 63718X/34 = J7 9006-504

Charging unit for supplying eg cans of food - to a steriliser continuously via a lock chamber SW280676)

ELECTROLUX LTD 02.12.74-SW-015089

*P34 +Q31 (29.03.79) *DT2552-225 A61l-03 B01j-04 B65b-55/06*

Appts. for continuously charging an autoclave with articles to be treated e.g. cans of foodstuff, ampoules containing pharmaceuticals, which are to be sterilised and/or cooked, comprising perforated transport containers into where the articles can be introduced, a conveyor in the autoclave chamber for these containers, a movable lock chamber corresponding to the shape and size of the transport containers which can be sealingly connected to an inlet or outlet opening of the autoclave provided with a shut-off device and conveyor devices for the transfer of the transport container from the lock chamber is the autoclave chamber. The transport container is tubular and can accommodate a row of articles therein.

The autoclave and its charging unit is extremely compact and heat losses are relatively low compared to existing sterilisers. 2. 12. 75 as 142452 (clg 2. 12. 74-SW-015089) B01j-4/00, A61l-3/00, B65b-55/06 (29. 3. 79) ELECTROLUX LTD. (6pp) (J5 1078786)

SQUI D22 10351T/07 = J7 9006-556

Enzyme-inhibiting peptides - useful as hypotensives

SQUIBB E R & SONS INC 28.07.70-US-058686

*B04 E16 P34 (E13) (29.03.79) *NL7108-452 C07c-103/52 +A61k-37/64*

The peptides: Pyr-X-Trp-Pro-Y-Pro-Z-Ile. Pro. Pro (I), Pyr-X-Trp-Pro-Y-Pro (II), R-Trp-Pro-Y-Pro (III) and their derivs. are hypotensives which act by inhibiting the conversion of angiotensin I to angiotensin II, and are used as biodegradable uv absorbants in anti-sunburn lotions.

(I)-(III) are prepd. by standard peptide-synthesis techniques. 20. 7. 71 as 054131 (clg. 28. 7. 70-US-058686) C07c 103/52, A61k-37/64 (29. 3. 79) SQUIBB & SONS INC. E. R. (14pp) (J4 7003327)

NPDC D22 21465S/12 = J7 9006-647

Entrapped essences in dry composite fibre - prods giving a strong fragrance in water

NATIONAL PATENT DEV CORP 05.09.68-US-757636

*A16 F06 P34 (A14 A96 F09) (30.03.79) *US3567-118*

STTN ★ D22 32684B/17 ★ NL 7711-034

Oxidised cellulose prods. useful as haemostatic agents - prepd. by treating cellulose with nitric acid contg. phlegmatised alkali nitrite catalyst

STATNI VU TEXTILNI 03.10.75-CS-006704 (07.10.77-NL-011034)

A11 P34 (A96) (10.04 79) A61l-15 C08b-15

The process comprises treating wood- or cotton cellulose
with an oxidn. liquor contg. nitric acid in the presence of
a phlegmatised alkali nitrite as catalyst. The oxidised cel
lulose is then stabilised and/or converted into the Ca-,
Na- or NH_4 salt. The prod. is then dewatered, dried or op
impregnated or otherwise treated. The resulting oxidised
cellulose material, made by nitro-oxidative treatment for
20-30 hrs., is then subjected to a radiation dose of at mo
10^5 J.kg.$^{-1}$

The resulting oxidised cellulose has improved stability
at room temp. than prior art oxidised cellulose prods.
Prods. are esp. useful in medical applications for stoppin
bleeding, e.g. of wounds or during operations. The material has a good haemostatic effect and adhesion to tissue
and is rapidly absorbed by the tissue so that irritation of
the tissue is avoided. The prods. may be e.g. in the for
of gauze, non-woven fabrics, knitted fabrics etc. 7.10.7
as 011034 (19pp513)

ARTI= ★ D22 32735B/17 ★ SU -392-71

Prepn. of bactericidal dyestuff for textiles and polymer films - b
treating di:chloro-triazine dye with aromatic hydroxy gp.-cont
bactericide, e.g. hexachlorophene in aq. alkali

ARTIFICIAL SYNTH FI 03.12.71-SU-719079

A60 E21 F06 (08.08.78) C09b-62/08

Bacterial active dyestuff for colouring polymeric films an
fibres is obtd. by treating an alkaline soln. of a dichloro-triazine dye with a hydroxyl-contg. bactericide, e.g., hexachlorophene, levomycetin etc.

It is esp. useful in making hosiery, linen fabrics, footwear, etc.

Liverant, V. L., Yagupolskii, L. M., Ilchenko, A. Ya. et
al. Bul. 24/30.6.78. 3.12.71. as 719079 (2pp314)

AUCR= ★ D22 33065B/17 ★ SU -611-0

Endocrine organ tissue conservation for transplant use - usi
freezing unit with sectional upper vessel contg. shaft with cutti
knives in slots

AS UKR CRYOBIOLOGY 11.01.77-SU-442130

P34 Q75 (15.05.78) A61m-01 F25d-03/10

To increase the tissues' storability, the unit body is sectio
al. A shaft which can be displaced in the vertical direction
is placed in the body upper part. The shaft has knives placed on horizontal bases for tissue cutting and cooling. The platform is provided with slots for knife passage.

Pushkar, N. S., Itkin, Yu. A., Oboznii, E. P. Bul. 22/15.6.78. 11.1.77. as 442130 (3pp110)

MCCA/ D22 25568A/14 #US 3976-0

Protective dressing allowing air to reach a wound - comprising se
stiff rods the ends of which rest on soft foam pads

MCCARTNEY J S 29.09.76-DT-643899 (28.04.75-US-572275)

*P32 (24.08.76) *DT2643-899 A61f-05/30 A61f-13*

Skin protective device permitting air circulation include
resilient deofrmable mounting securable to the skin adja
ent the area to be protected without producing residual
pressure and such that it follows to change in the skin co
tour; and a protector, spaced from the area to be protect
of sufficient rigidity to prevent foreign bodies contacting
the skins. Any pressure placed on the protector is absor
by the mounting.

The protector is pref. air permeable and the mountin
adhesive foam. The protector is pref. removable from th
mounting. Used for protection of burns, incisions and
skin grafts. 28. 4. 75 as 572275 (17pp1376)

TORA D22 25641A/14 = US 4148-

Sterilising dialyser contg. semipermeable membrane - by saturat
with liq. contg. antibacterial agent e.g. aq. hydrogen peroxide
irradiating

TORAY INDS INC 24.09.76-JA-113716

*A96 J01 P34 (A35 A88) (10.04.79) *DT2742-588 A61l-01 A6*
01/03 +A61l-13

A wet state sterilisation method for a semipermeable m
-brane of a dialyser, pref. an artificial kidney involves
saturating the membrane with an antibacterial agent sus
pended in a liq., and irradiating the membrane with mi
-biological radiation rays in the presence of the agent.

In particular, the antibacterial agent is an aqs. solu
of 4ppm hydrogen peroxide; the radiation rays are γ or

ectron rays of ≥2Mrad; and the semipermeable mem-
ane comprises polymethyl methacrylate, cellulose, poly
crylonitrile or polycarbonate.

The method affords excellent sterilisation with increa -
d safety, and is particularly advantageous when applied
hollow filament dialysers. 22. 9. 77 as 835597 (8pp1382)

IC- ★ D22 33157B/17 ★US 4148-664

emostatic, wound sealing collagen prodn. - by dehydrating llagen, partially converting to salt then de-aggregating to mass of rils and fibres

AVICON INC 18.04.78-US-897502 (29.09.70-US-076638)

A96 F07 (10.04.79) C08l-89 C09h-01

haemostatic mass of finely-divided fibrils and fibres is ade by first placing wet collagen (A) is aq. ethanol contg. -90 wt. % ethanol (counting water in (A)) and stirring to ualise ethanol contents in (A) and liq. The recovered (A) placed in ethanolic acid contg. enough acid to form a rtial salt contg. 50-90% stoichiometric amt., stirring r 3-20 hrs. to equalise ethanol contents, then washing e sepd. partial salt with ethanol to water content 1%.

The salt is then vacuum dried to volatiles content about %, conditioned to volatiles content 8-15% then deaggrega- d and fiberised. The resulting mass contains ≥5wt. % fib- ls and fibres of effective length ⋡1mm, and ⋡10 wt. % of 12mm; has surface area ≥1sq. m/g, bulk density ⋡ 8lb/cu . and Haemostat-Adhesive test value ⋡1500 when wet ith blood.

When in contact with a wound the mass becomes self- dhesive and seals the wound. 18. 4. 78 as 897502 Div ex 742966 (+7. 5. 73, 2. 5. 74, 10. 5. 76-US-358145, 466214, 34940) (8pp1251)

TM ★ D22 33225B/17 ★US 4148-803

itrosamine reaction prod. from nitro-alcohol and amine - useful r controlling growth of bacteria and fungi in e.g. starch adhesives

INT MINERALS & CHEM CORP 23.02.78-US-880687 (01.10.76-US-728695)

E13 G03 H01 (10.04.79) C07c-111 C07d-249/04

new reaction prod. (I) is made by reacting a nitroalcohol f formula $RR_1C(NO_2)CH_2OH$ (II) (where R and R_1 are H, n) ethyl or hydroxymethyl) with 1 mole amine R_2NH_2 where R_2 is 1-4C alkyl, phenyl, benzyl, toluyl and xylyl) t 50-70°C, to give a nitroamine (III). (III) is then reacted ith HNO_2 at 0-5°C to give a nitroso cpd. (IV) which is ien reduced to (I).

(I) are useful for controlling bacteria and, when R_2 has ≥4C, also fungi, partic. in starch adhesives and solns., etroleum drilling muds and water-dilutable cutting oils. hey are used at 100-2000, (500-1000) ppm. 23. 2. 78 as 80687 (5pp1251)

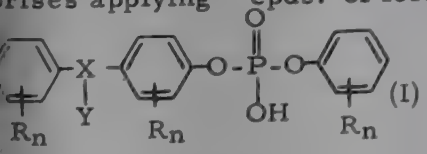
ELR ★ D22 33254B/17 ★US 4148-878

latelet aggregation inhibiting phosphate ester(s) - used in vivo or blood banks, heart lung machines and for preserving organs for ansplant

NELSON RES & DEV 23.12.77-US-864020

B05 E11 (10.04.79) A61k-31/68 A61k-35/14

nhibiting platelet aggregation in vitro and vivo com- rises applying cpds. of formula (I) or their salts:-



(I)

In (I), X is 2-8C alkenyl or alkyl which may contain a carbonyl gp.; Y is H, alkyl, dialkylaminoethyl, aryl, aralkyl, these latter two pt. substd. by ≥1 R; R is H, lower alkyl, lower alkoxy, alogen, CF_3, NO_2, OH, CN, $COOR_1$, $CONR_1R_2$, $NHCOR_1$, NR_1R_2 r $CH_2NR_1R_2$; R_1 and R_2 are H or lower alkyl; R, R_1 and R_2 re same or different; n is 0-5.

(I) are anticoagulants in vivo or for use in blood banks eart lung machines and for preserving organs for trans- lant. 23. 12. 77 as 864020 (4pp916)

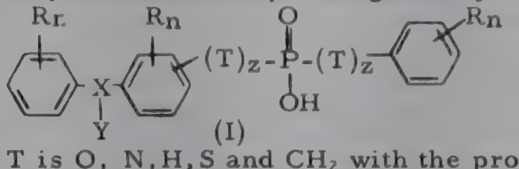
ELR ★ D22 33255B/17 ★US 4148-879

latelet aggregation inhibiting phosphorus derivs. - esp. henyl:alkyl:phenyl phosphinate(s) and phosphonate(s)

NELSON RES & DEV 23.12.77-US-864017

B05 E11 (10.04.79) A61k-31/68 A61k-35/14

Inhibiting platelet aggregation in vitro and vivo comprises applying a cpds. of the formula (I) or their salts (where X is (2-8C) alkyl or alkenyl which may contain one carbonyl gp.; Y is H, alkyl, dialkylaminoethyl, aryl, aralkyl or aryl and aralkyl substd. by one or more R, R is H, lower alkyl, lower alkoxy, halogen, CF_3, NO_2, OH, CN, $COOR_1$,



(I)

$CONR_1R_2$, $NHCOR_1$, N NR_1R_2 or $CH_2NR_1R_2$; R_1 and R_2 are H or lower alkyl; R, R_1 and R_2 being same or different T is O, N, H, S and CH_2 with the proviso thén only one T is 0; Z is 0 or 1; n is 0-5).

(I) are anticoagulants in :vivo or for use in blood banks, heart-lung machines and in the preservation of organs for transplant. 23. 12. 77 as 864017 (4pp916)

THOR/ ★ D22 33256B/17 ★US 4148-884

Bactericidal compsn. contg. stable halogen complex - with alkylamine salt and nonionic surfactant

THOROGOOD D E 16.05.77-US-797184 (11.04.66-US-541517)

A97 B05 C03 (A25) (10.04.79) A01n-11 A61k-33/18

Bactericidal compsn. contains as active ingredient a complex (A) formed by reacting (a) an 8-18C alkylamine salt (I) (b) a nonionic surfactant (II) and (c) I_2, Br_2 or Cl_2 or an interhalogen cpd. contg. F, Cl, Br or I. (A) gives a neg. starch-iodine test for free halogen and is stable without loss of halogen when boiled in aq. soln.

Pref. the halogen is I_2; (I) is a 12-14C alkylamine sulphonate and (II) is a condensate contg. 9-17 ethylene oxide units. Opt. the compsn. also contains polymyxin, chlorotetracycline, oxytetracycline, chloroamphenical, penicillin or HCHO.

Used as disinfectants and also for topical application to humans or animals, and oral application to animals. They have low toxicity (generally LD_{50} >5.3g/kg in mice) and are effective against Gram. pos. and neg. bacteria, spores fungi, nematode eggs and viruses. 16. 5. 77 as 797184 (+7. 5. 68, 2. 9. 69, 29. 12. 69, 14. 7. 72, 30. 9. 74-US-727376, 854793, 888926, 272008, 510752) (8pp1251)

DOWC ★ D22 33261B/17 ★US 4148-899

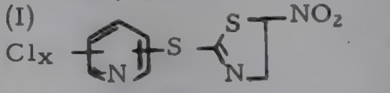
5-Nitro-2-thiazolyl-thio poly:chloro-pyridine(s) - useful as antibacterial and antifungal agents e.g. to prevent mildew on paint films

DOW CHEMICAL CO 28.06.78-US-919884

C02 E13 G02 (10.04.79) A01n-09/22 C07d-417/12

Thiazolylthio pyridines (I), are new (where x is 3 or 4).

(I)



(I) are antimicrobial agents active against bacteria and fungi and can be incorporated into a compsn. as e.g. dust spray, solvent solns. oil-in-water emulsions. (I) are useful for long-term protection against fungal growth or on materials having a wood basis as a protective or decorative paint film. 28. 6. 78 as 919884 (3pp957)

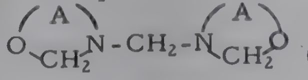
STER D22 12498A/07 =US 4148-905

Heterocyclic methylene-bis-aza-oxo- and -aza-thio cpds. - preservatives and disinfectants, prepd. from aminoalcohol or amino:thiol and formaldehyde

STERLING DRUG INC (SCHU) 06.08.76-DT-635389

*B03 E13 G02 (B07 D15 D21 G03) (10.04.79) *DT2635-389 +A01n-09/22*

The growth of bacteria and fungi in a material is prevented or retarded by treating the material with a bis-oxazolidine cpd. of formula (I) (where A is 1,2-alkanediyl having 2-10, pref. 2-4C atoms). One pref. cpd. is N,N'-methylenebis-(oxazolidine).



(I)

The method is useful for preserving and disinfecting water-based paints, cold lubricating agents, adhesives solns. and dispersions, cosmetic and pharmaceu -tical products, self-polishing wax emulsions, and cooling water circulation systems and recycled water systems used in paper mfr. Generally the treated material contains the bis-oxazolidine cpd. in a concn. of 0.1-4 wt. %. 27. 7. 77 as 819245 (4pp990)

See Also

D15 BE 872867 D15 EP 1436 D15 GB 1444827

D23: OILS; FATS; WAXES

SCMZ ★ D23 31554B/17 ★BE-871-273

Hydrogenating crude glyceride oils using nickel catalyst - together with auxiliary copper chromite catalyst

SCM CORP 17.04.78-US-896508

(17.04.79) C11c

The process comprises reacting the oil with hydrogen in a hydrogenation zone under hydrogenation conditions in the presence of $>$ 0.02% Ni hydrogenation catalyst and $>$ 0.2% of an auxiliary copper chromite catalyst, both amts. based on the oil. The concn. of auxiliary catalyst is maintained practically proportional to the concn. of impurities in the oil. The hydrogenation is stopped after at least a significant increase in the saturation of the oil.

The process enables constant and rapid hydrogenation Also it enables dispensing with the alkali purificn. normally carried out on the oils. 16.10.78 as 871273 (18pp597)

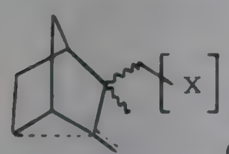
INFL D23 68148X/36 =GB 1544-831

Derivs of alpha- or beta santalene - useful sandalwood perfume constituents

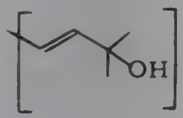
INT FLAVORS & FRAGR INC 19.02.75-US-551030

*E19 (25.04.79) *NL7601-629 A61k-07/46 C07c-33/05 C07d-303/04 C11d-09/44*

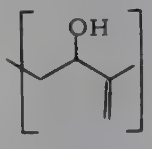
Prepn. of cpds. of formula (I) is claimed where X is (II) or (III). One of the dashed lines is a C-C bond. Each wavy line is a C-C single bond, one of which is epimeric w.r.t. the other.



(I)

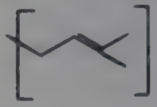


(II)



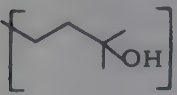
(III)

Process comprises subjecting a cpd. (I) (where X is (IV)) to intense oxidn. by insufflating air through it, while agitating, and exposing to UV in presence of catalyst comprising alkaline metal hydroxide and rose bengal. Prod. is then fractionally distilled.

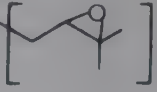


(IV)

Obtd. prods. are new, as are also those cpds. where X is (V) or (VI). Prepn. of epoxide deriv. (X = (VI)) and the alcohol (X = (V)) are also claimed.



(V)



(VI)

Cpds. have sandalwood aroma and are useful in perfumes, etc.

19.2.76 as 006524. (57pp963)

PROC D23 40818Y/23 =GB 1544-863

Conditioning compsn. for fabrics - (SW 14.3.77)

PROCTER & GAMBLE CO 22.06.76-US-698551 (14.07.75-US-595638)

*F06 (25.04.79) *J52053-093 D06m-13/52*

Fabrics are treated during the course of a laundering operation by applying to wet fabrics maintained at $<$ 55°C during laundering, a fabric conditioning prills of size 5-2000μ.

Each prill contains 95-99.5wt.% base prill material of melting/softening pt. $>$ 38°C. Material is a water-insoluble non-ionic and/or mixt. with cationic fabric softening agent, where mixt. has non-ionic/cationic wt. ratio of 5:1 to 1:5. Prill also contains 0.5-5wt.% fabric conditioning material free of softeners and solvents for the base material. Each component of fabric softening material has b.pt. $>$ 100°C being inert to chemical reaction with base prill material. Fabrics are dried in an automatic laundry dryer at 38-115°C. Volatile agents such as perfumes can be delivered to fabrics using the prills. 13.7.76 as 029104. (20pp931)

CANA ★ D23 32043B/17 ★GB 2005-526

Dehulling of rapeseed or mustard seed defatted meals - by slurrying in non-aq. solvent which does not dissolve protein

CANADIAN PAT & DEV LTD 07.10.77-CA-288305

(25.04.79) A23k-01/14

Rapeseed or mustard seed is treated to recover an oil fraction and a protein-rich flour fraction by (a) crushing the seed and removing the oil to give a meal contg. flour and hulls; (b) suspending the meal in a non-aq. liq. (I) (non-solvent for protein content; suspension solids content 5-33% by wt.); (c) adjusting H_2O-content of the meal to $<$10% by wt., and adjusting particle size to pass 150 mesh screen (Tyler); (d) sepg. suspension by centrifugation or gravity liq. sepn. to afford a flour slurry as an overflow stream, and a hull slurry as an overflow stream; and (e) sepg. solvent from each slurry to give from steps (a) and (e) an oil fraction, and flour and hull fractions respectively as separate prods.

The process is continuous and separates nearly pure oil, flour, and hull fractions. The hull fraction contains $>$ 20% protein and 20% crude fibre, and is useful as a ruminant feed. In addn., the sepd. pure hulls are useful in adhesives, plastics, etc. 18.9.78 as 037225. (14pp478)

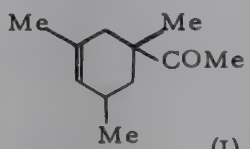
NORD- ★ D23 32053B/17 ★GB 2005-671

Diels-Alder adduct of methyl-pentadiene and methyl isopropenyl ketone - has conifer needle fragrance of improved duration and intensity

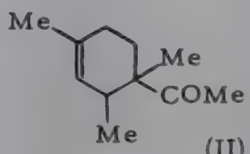
NORDA INC 26.09.77-US-836893

E15 (25.04.79) A61k-07/46 C07c-49/61

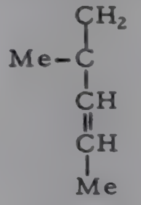
A Diels-Alder adduct (mixt. of (I) and (II)) of 2-methyl-1,3-pentadiene (III) and methyl isopropenyl ketone (IV) is new.



(I)

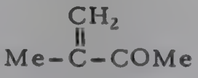


(II)



$$\begin{array}{c} \mathrm{CH_2} \\ \| \\ \mathrm{Me-C} \\ | \\ \mathrm{CH} \\ \| \\ \mathrm{CH} \\ | \\ \mathrm{Me} \end{array}$$

(III)



$$\mathrm{Me-\overset{\overset{CH_2}{\|}}{C}-COMe}$$

(IV)

The adduct prepd. from (III) contg. minor amts. of 4-methyl-1,3-pentadiene is also new.

The adduct mixt. (I) and (II) has an intense, natural, reproducible, and long lasting conifer needle fragrance. 15.9.78 as 036926. (7pp478)

UYMA- ★ D23 32059B/17 ★GB 2005-713

Recovering protein and oil from coconut kernels - by aq. extraction, adjusting extract to controlled alkaline pH and recovering oil from obtd. cream and protein from aq. phase

UNIV MALAYA 29.09.78-GB-038700 (30.09.77-GB-040768)

C03 (D13) (25.04.79) C07g-07 C11b-01/10

Coconut kernel protein and oil are recovered by forming an aq. dispersion of comminuted kernel and sepg. into an extract and a solid residue. The extract is then adjusted to pH $\nless$ 8.2 but not high enough to saponify the oil or denature the protein, and the extract is then sepd. into a cream, an aq. layer and a solid residue. The oil is recovered from the cream and the protein is recovered from the aq. layer.

The solid residues from various stages are useful as animal feeds. The nutritional value of the protein should be higher than that obtd. by expeller processes. Oil yields are higher and acid value is lower than obtd. by expeller processes. 29.9.78 as 038700. (4pp949)

OLEI- ★ D23 B/17 ★IT 1028-509

Table olive oil industrial prepn. - by chemical treatment and fermentation in one vat

CENT OLEIFICI COOP 30.03.71-IT-002107

(10.02.79) A23b

RIKV ★ D23 32352B/17 ★J5 4035-220

Synthetic wax used as hardener for cosmetics - consists of ester of poly:hydric alcohol, e.g. pentaerythritol, with di:basic organic acid or fatty acid

RIKEN VITAMIN OIL KK 22.08.77-JA-100362

(D21) (15.03.79) A61k-07 C07c-69/26

The synthetic wax is composed of the ester formed between ≥1 polyhydric alcohol selected from pentaerythritol, diphentaerithirol, sorbitol, mannitol, partially esterified sucrose and polyglycerol, and dibasic organic acid and fatty acid. As dibasic organic acid malonic acid, maleic acid, succinic acid, glutaric acid, phthalic acid, etc. can be used and as fatty acid 10-22C (un)satd. fatty acid such as lauric acid, palmitic acid, heptadecanic acid, stearic acid, etc. can be used.

The wax is equal to Japan wax and being excellent in physical properties it can be used favourably as the hardening agent for oily cosmetics. 22. 8. 77 as 100362 (3pp5)

AJIN ★ D23 32364B/17 ★J5 4035-244

Oil and fat compsn. for coating rice cake - contains vegetable oil, palm oil and lecithin

AJINOMOTO KK 23.08.77-JA-100789

(15.03.79) A23g-03

Compsn. is composed of >40 w/w% liquid vegetable oil such as rice oil, corn oil, cotton seed oil, rapeseed oil, soybean oil etc., <60 w/w% palm oil (including fractionated liquid palm oil) and 0.1-2 w/w% lecithin (esp. soybean lecithin).

The compsn. has excellent preservative stability, imparts good taste, flavour and body to rice cakes and maintains brilliance of rice cakes even in the winter. 23. 8. 77 as 100789 (3pp5).

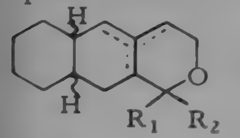
ROUR D23 50206U/35 = J7 9006-614

Naphthopyrans prepn - as odourants, from 2-hydroxy -2-hydroxyethyl decalin and a ketone

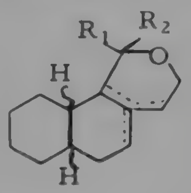
ROURE-BERTRAND DUPO 16.02.72-FR-005139

*E13 (30.03.79) *BE-795-525 A61k-07/46 C07d-311/92*

Cpds. of formula:-



or



(where R_1 and R_2 = 1-4C alkyl, the dotted line represents an optional double bond coming from the 4-carbon) are prepd. by condensing the hydroxyethyl-hydroxy decalin with R_1COR_2 and opt. catalytically hydrogenating. Cpds. have an odour like ambergris. They may be used in toilet waters cosmetics, soaps, washing liqs etc. 14. 2. 73 as 018219 (clg. 16. 2. 72-FR-005139) A61k-7/46, C07d-311/92 (30. 3. 79) ETS ROURE-BERTRAND FILS & JUSTIN DUPONT (6pp) (J4 8091074)

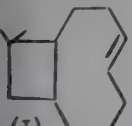
FIRM D23 19570W/12 = J7 9006-615

Oxygen-contg. sesquiterpene derivs for perfumes and aromas - prepd. by reacting sesquiterpene (mixt) with acetylation agent in presence of acid catalyst

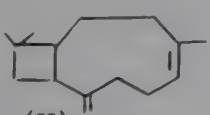
FIRMENICH SA 05.09.73-CH-012784

*B05 C03 E15 +P15 (D13 D18) (30.03.79) *DT2440-025 A23l-01/22 A24b-03/12 A61k-07/46 C07c-49/61*

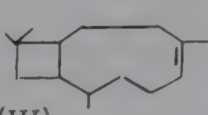
The title derivs. are prepd. by reacting a cpd. (I)-(IV):



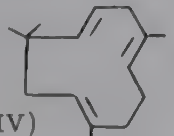
(I)



(II)



(III)



(IV)

or a mixt. with an acetylation agent in the presence of an acid catalyst. The prods. may be used as perfume- or aroma-additives to fortify, improve or alter perfume compsns. or the aroma of foodstuffs, drinks, pharmaceutical prepns. and tobacco prods. They may also be mixed with synthetic perfumes and aromas. 4. 9. 74 as 101815 (clg. 5. 9. 73-CH-012784) A61k-7/46, C07c-49/61, A231-1/226, A24b-3/12 (30. 3. 79) FIRMENICH SA (5pp)(J5 0058035)

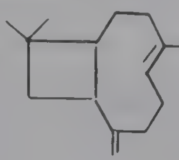
FIRM D23 19570W/12 = NL-159-951

Oxygen-contg. sesquiterpene derivs for perfumes and aromas - prepd. by reacting sesquiterpene (mixt) with acetylation agent in presence of acid catalyst

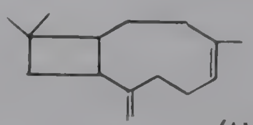
FIRMENICH SA 05.09.73-CH-012784

*B05 C03 E15 +P15 (D13 D18) (17.04.79) *DT2440-025 A23l-01/22 A24b-15/04 A61k-07/46 C07c-45/14 C07c-49/61 C11b-09*

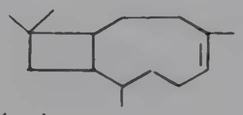
New caryophyllene, iso-caryophyllene, iso-dihydrocaryophyllene or humulene derivs. (I) are prepd. by acetylating β-caryophyllene(1a), iso-caryophyllene(1b), iso-dihydrocaryophyllene(1c) or α-humulene(1d) or mixtures, in the presence of an acid catalyst:



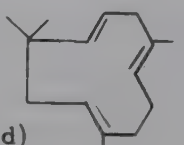
(1a)



(1b)



(1c)



(1d)

(I) have perfuming- and/or aromatising properties and may be used as perfuming or scent-modifying agents and as aromas or taste-modifying agents. They have a well-defined and strongly retained woody note which blends harmoniously with many other perfumery or aromatising components. (I) may be used in perfumes, cosmetics, cleaning products, etc. as well as in foodstuffs and tobacco.

In an example, humulene is reacted with acetic acid an hydride and $ZnCl_2$ is N_2-atmosphere. Fractional distillation gives ca. 70% 1-acetyl 11-methylene 4, 7, 7-trimethylcycloundeca 4, 8-diene. 28.8.74 as 011449 (7pp279)

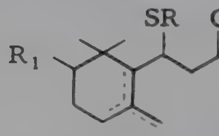
GIVA D23 40514T/25 = NL-159-962

Ionone and irone derivs - as perfume and aromatic agents

GIVAUDAN L & CIE SA 08.12.70-CH-018130

*E15 (17.04.79) *BE-776-390 A23l-01/23 C07c-149/26*

S-Contg. ionone and irone-derivs. of formula (I) are new:



(I)

In (I) R is H or acetyl and R_1 is H or methyl. The dotted lines give a double bond, which is located in 1 of the 3 positions.

The derivs. are useful in the prepn. of compsns. with flavour and swell properties and may be incorporated in perfumes, cosmetics, aerosols as well as in foodstuffs and drinks e.g. milk prods. and mineral waters. 1.12.71 as 016509 (9pp549)

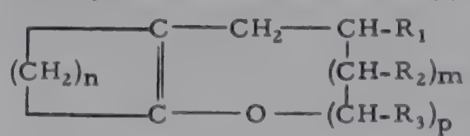
HAAR D23 07405U/06 = NL-159-981

Oxabicycloalkenes prodn - from cyclic ketones useful as perfume components

HAARMANN & REIMER GMBH 21.07.71-DT-136496

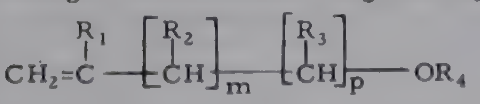
*E13 (17.04.79) *NL7209-993 C07d-307/93 C07d-311/94 C07d-313/06*

Oxabicycloalkenes of formula (I)



(I)

(where R_1, R_2 and R_3 are each H, CH_3 or C_2H_5; m and p = 0 or 1 and n = 9-13), are prepd. by reacting satd. cyclic ketones contg. 11-15C in the ring with cpds. of formula (II):



$$CH_2{=}\overset{R_1}{\overset{|}{C}}-\left[\overset{R_2}{\overset{|}{C}H}\right]_m-\left[\overset{R_3}{\overset{|}{C}H}\right]_p-OR_4 \quad (II)$$

(where R_4 is the acyl radical of an aliphatic 1-5C carboxylic acid, when m and p = 0 or an acyl radical of an aliphatic 1-5C carboxylic acid or H when m and/or p = 1).

The reaction mixt. after removing excess cyclic ketone is hydrolysed (when R is aliphatic carboxylic acid) and the reaction mixt. reacted with less than the stoichiometric amt. of acid catalyst. Oxabicycloalkene is removed, and used as fragrances or in the mfr. of perfumes. 19.7.72 as009993 (8pp549)

D 23: OILS; FATS; WAXES -p. 42

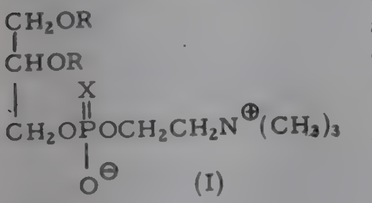
ESSE= ★ D23 32840B/17 ★SU -585-709
Preparing rose petals for essential oil extn. - using cobalt isotope as source of gamma radiation, to increase yield and quality
ESSEN OIL CULTURES 22.09.75-SU-174448
K08 (19.07.78) C11b-09/02

Prepn. of rose petals for the extraction of essential oil by ionising irradiation is improved by using as a radiation source isotope Co^{60}, the irradiation rate is 300 R/min. - the total dosage is 1-3 kR. By this method, the energy consumption is reduced and the cost is lowered.

Zaltsfas, A.A. and Tyutyunnik, V.I. Bul. 28/30. 7 78. 22. 9. 75. as 174448 (2pp70)

MOPE= ★ D23 32843B/17 ★SU -586-643
Lecithin derivs. and thione analogues prepn. - by treating di:acyl glycerol with ethylene-ortho chloro-phosphite, nitrogen di:oxide or sulphur and tri:ethylamine
MOSC PEDAGOG INST 16.04.76-SU-350674 (16.04.76-SU-148316)
E11 (20.09.78) C07f-09/10

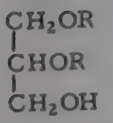
Lecithins and their thione analogues are of formula (I):



$$\begin{array}{l} CH_2OR \\ | \\ CHOR \\ | \quad\ \ X \\ | \quad\ \ \| \\ CH_2O\overset{}{P}OCH_2CH_2N^{\oplus}(CH_3)_3 \\ \quad\ \ \ | \\ \quad\ \ \ O^{\ominus} \end{array}$$

(I)

where X is O or S and R is acyl gps. comprising 4-31C carboxylic acid radicals. These cpds. are prepd. more simply and in higher yield by reacting diacyl-glycerol derivs. of formula (II), (where R is as above) with ethylene-phosphorous acid chloride. The resulting diacyl-glycerol α-ethylene-phosphite is treated with nitrogen oxides at (-) 10 - (-) 15°C or with S at 50-80°C and then with triethylamine at 40-80°C.



$$\begin{array}{l} CH_2OR \\ | \\ CHOR \\ | \\ CH_2OH \end{array}$$

(II)

Nifantev, E.E., Predvoditelev, D.A., Alarkon, Kh. Kh. Bul. 38/15.10.78. 16.4.76. as 148316 (3pp938)

KALA/ ★ D23 33000B/17 ★SU -610-858
Fatty acids saponification control - with reagent feed rate controlled by monitoring viscosity stabilisation level
KALASHNIK A I 23.06.76-SU-374566
E17 R26 (12.05.78) C10c-01 G05d-27

The accurate control of complete saponification in the production of plastic lubricants is ensured by feeding fatty acids and the saponifying agent into the reactor. The mixt. is circulated at a rate depending on the viscosity of the reaction mass, and when the viscosity is stabilised its value is compared with the set level.

The deviation of the viscosity from the set value is used for adjusting the ratio of fatty acids and saponifying agent feeds to the reactor, while the rate of circulation is maintained at the level reached when the viscosity stabilisation was attained.

Kalashnik, A.I., Manoilo, A.M., Shkaraputa, L.N. et al. Bul. 22/15.6.78. 23.6.76. as 374566 (3pp89)

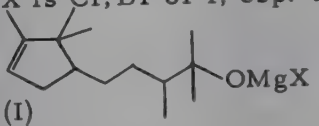
HENK D23 44237A/25 =US 4148-810
Sterol isolation from fat processing distillation residues - by transesterification with methanol and formation of a calcium chloride adduct
HENKEL KG AUF AKTIEN 11.12.76-DT-656208
*B01 E15 (10.04.79) *DT2656-208 C07j-09*

Sterols are isolated from the distn. residue of fat processing by (a) transesterifying a residue with methanol at 180-240°C to liberate the sterols, (b) sepg. the residue contg. sterol from the methanol, (c) dissolving the residue in an aprotic solvent selected from ligroin, toluene, diethylketone, ethyl acetate and 1,2-dichloroethane, (d) adding $CaCl_2$ and a small amt. of methanol or water to form a $CaCl_2$-sterol adduct, (e) sepg. the adduct and (f) decomposing it to the free sterol.

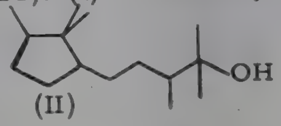
In (d), the wt. ratio sterol to $CaCl_2$ is 1:0.5-2, the wt. ratio $CaCl_2$ to methanol is 3:1 to 1:2 and the wt. ratio $CaCl_2$ to water is 4:1 to 3:2. The sterols are obtd. in good yield and high purity. 6. 12. 77 as 857898 (5pp992)

INFL ★ D23 33306B/17 ★US 4149-020
Organo-magnesium intermediate for cyclopentenyl pentanol deriv. - useful in perfumery to provide sandalwood odour
INT FLAVORS & FRAGR INC 05.04.78-US-893542
E12 (10.04.79) C07c-33/02

The organomagnesium cpd. of formula (I) is new: (where X is Cl, Br or I; esp. Br). (I) is made by reacting the corresp. ketone with CH_3MgX.



(I)



(II)

(I) is an intermediate, by hydrolysis, for the corresp. alcohol of formula (II). (II) has a long-lasting woody, oily, sandalwood aroma and is useful in perfumery 5. 4. 78 as 893542 (11pp1251)

See Also

D13 GB 1544701 D13 GB 1544702 D13 SU 507303

D24: SOAP; SOAP DETERGENTS

JOHA/ ★ D24 31719B/17 ★DT 2745-861
Permanently marked soap cake mfr. - by combining raised lettering on one strand with hollow lettering on other strand
JOHANNSEN F 12.10.77-DT-745861
(19.04.79) C11d-13/18

The Parent Patent described a system of producing multi-coloured pieces of soap. Two or more strands of soap are passed through rolls which produce a pattern of meshing male and female letters for a brand name or a logo. The strands are joined in the fashion of a sliding clasp fastener to the final size and are cut or pressed to shape.

The lettering remains visible throughout the life of a piece of soap. This is a simpler process than extrusion in the form of letters. 12.10.77 as 745861 Add to 2610940 (7pp39).

HISH/ D24 63934Y/36 = J7 9006-527
Granular metal soap compsn. - comprises aluminium stearate, zinc stearate and/or zinc laurate, and alkaline earth metal or zinc soap
HISHIDA I 22.01.76-JA-006206
*E12 (29.03.79) *J52089-612 B01j-02 C07c-53/24 +C07c-51/52*

The compsn. comprises Al staric, Zn stearate and/or Zn laurate and $\geqslant$ 1 of Mg, Zn, Ca or Ba metal soap. Pref. the soap also contains petroleum series of oil, plasticiser, lub-ricant or surfactant which is liq. at normal temp. and can soften or melt the metal soap at $<$ 100°C. Waxes and/or low molecular weight of resin are pref. further. At least one is colouring agent, foaming agent, filler, flame-retar-er, and/or antistatic agent may be further added.

The compsn. can be simply, stably prepd. by granulatin in a mixer for a short period of time. The waxes are past of solid which is generally used as lubricant or physical properties-controlling agent. The plasticisers are those used for PVC or thermoplastic resin. The lubricants are hydrocarbons, aliphatic acids, aliphatic acid amide, este alcohol and their mixture. 22. 1. 76 as 006206 C07c-53/24 51/52, B01j-2/00 (29. 3. 79) HISHIDA I (9pp)(J5 2089612)

D25: OTHER DETERGENTS

CARG- ★ D25 31587B/17 ★BE -871-431
Concentrate of quaternary ammonium cpd. and oily material - easily mixed with water to form fabric softening compsn.
CARGO FLEET CHEM 22.10.77-GB-044062
E19 F06 (20.04.79) D06m

The concentrate comprises a quaternary ammonium salt which contains ⩾1 8-30C alkyl radical and an oil or a cpd substantially insoluble in water having oily/fatty properties. The concentrate is used to form an emulsion/dispersion with water, which may also be prepd. using the components of the concentrate and water. The aq. compsn. is used to soften fabrics.

The concentrate can easily be put into dispersion/emulsion with cold water to give a softening agent of acceptable viscosity, whereas at present with aq. paste concentrates suitable mixing equipment and careful control is required to obtain a satisfactory dispersion/emulsion. 20.10.78 as 871431 (19pp597)

FMCC D25 07435W/05 =DS 2433-113
Sodium dichloro isocyanurate dihydrate crystals - having low apparent density are prepd. by drying moist crystals mixed with acetone
FMC CORP 13.07.73-US-378829
*E34 (19.04.79) *BE-817-516 C07d-251/36*

A storage stable, free flowing Na dichloroisocyanurate dihydrate with a bulk density 0.1-0.3g/cm^3 is prepd. water moist sodium dichloroisocyanurate dihydrate (I) is contacted with an organic solvent, which is miscible with water e.g. acetone. The treated I is dried at below 48°C (25-35 °C) to remove the organic solvent but not water of hydration.

(I) is useful as disinfectant, bleach and detergent additive. 10.7.74 as 433113 (4pp068)

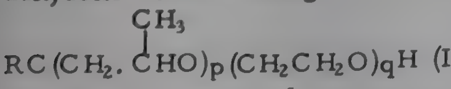
BENC ★ D25 31685B/17 ★DT 2744-753
Free-flowing dust-free granulate, esp. for detergent mfr. - is prepd. by heating solid water-contg., water releasing material in granulator (NL 9.4.79)
BENCKISER J A GMBH 05.10.77-DT-744753
J04 (19.04.79) B01j-02 C11d-17/06

Solid, water-contg. raw materials which release water below their m.pt. are exposed, in a granulator, to sufficient heat to release water. The raw materials granulated may be (1) water-contg. alkali silicates, esp. alkali metasilicates contg. 5-9 mol H_2O, e.g. alkali metasilicate + 5 mol H_2O (water-release at 60°C) and alkali metasilicate + 9 mol H_2O (water-release below 40°C); (2) water-contg. phosphates, esp. alkali triphosphate + 6 mol H_2O; (3) mixts. contg. 1 water-contg. component e.g. $Na_2SO_4.10\ H_2O$ or $Na_2CO_3.10\ H_2O$; (4) mixts. of a water-contg. alkali silicate with anhydrous alkali silicate and/or further water-contg. alkali silicate.

The granulates obtd. are pref. used in prepn. of detergent and cleansing compsns. The granulates are free-flowing, non-dusting, do not agglomerate, require no subsequent conditioning phase, form no dust on mixing with detergent and have a uniform grain-size. Active Cl-contg. materials may be added to mixt. before granulating. 5.10.77 as 744753 (16pp200).

LIOY ★ D25 32126B/17 ★J5 4034-306
Heavy-duty liquid detergent compsn. - comprises block polymer of polyoxyalkylene ether and alkyl:ether sulphate
LION FAT & OIL KK 23.08.77-JA-101464
A97 (A25) (13.03.79) C11d-01/83

The compsns. comprise (a) a block polymer of polyoxyalkylene ether having formula (I):



$$RC(CH_2.\overset{\overset{\textstyle CH_3}{|}}{C}HO)_p(CH_2CH_2O)_qH \quad (I)$$

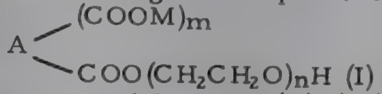
(where R is opt. branched alkyl and p and q are average addition moles of oxyalkylene and p is an integer of 1-3 and q is an integer of 5-15) and (b) an alkylether sulphate in a wt. ratio of component (a) to the component (b) ranging from 7/3-4/6.

In an example, detergent comprises 20 wt. % of $RO(C_3H_6O)_p(C_2H_4O)_qH$ (where R is a 9-11C alkyl, p is 1, 2 or 3 and q is 8 or 12), 20 wt. % of $C_{12-13}O(C_2H_4O)_3SO_3Na$, 10 wt. % of ethanol and 50 wt. % of water. The polyalkylenealkyl ethers have structures of block type and may be prepd. as addn. prods. of a starting alcohol with 1-3 moles of propylene oxide and then with 5-15 moles of ethylene oxide.

The compsns. show high washing powder, foaming property, tendency to be rinsed easily and low film foaming property. 23.8.77 as 101464 (5pp59).

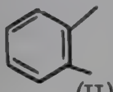
SHIV ★ D25 32127B/17 ★J5 4034-307
Non-pollutant detergent compsn. - contg. a polyoxyethylene deriv. surfactant prepd. e.g. from succinic anhydride and polyethylene glycol
NEW JAPAN CHEM 24.08.77-JA-101949
A97 (A25) (13.03.79) C11d-03/20

The detergent compsns. contain a cpd. of formula (I)

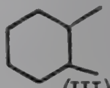


$$A\begin{cases}(COOM)_m\\ COO(CH_2CH_2O)_nH\end{cases} \quad (I)$$

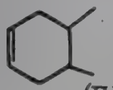
In (I) A is a divalent or trivalent residue of 1-3C alk(en)yl, opt. substd. by methyl or OH, or gp. of formula (II)-(IV):



(II)



(III)



(IV)

and m is an integer of 1 or 2, n is an integer of 2-150 and M is an alkali metal, ammonia or amine.

In an example, succinic anhydride is mixed with an equimolar portion of polyethylene glycol having a molecular wt. of 200 under agitation. The mixt. is reacted at <90°C. The temp. is then gradually increased to 130°C. The mixt. is maintained at 130°C until the system is changed into fully homogeneous state to obtain a monoester in stoichiometric yield. The monoester is aged at 130°C for 30 min. The cooled monoester is then added dropwise into an aq. caustic soda soln. while cooling the mixt. to obtain an aq. 50% soln. of Na succinic polyethylene monoester having saponification value of 78.7.

The compsns. are free from phosphate which causes pollution of waste water. 24.8.77 as 101949 (6pp59).

ASAE ★ D25 32519B/17 ★J5 4036-307
Cleaning compsn. for removing oil stains e.g. in kitchens - contains oxyethylene-oxypropylene alkoxide cpd. and pref. anionic or nonionic surfactant
ASAHI ELECTROCHEM IND KK 25.08.77-JA-101121
A97 E17 (A25) (17.03.79) C11d-01/72

The compsn. contains 1-15 wt. % (pref. 2-10 wt. %) of a cpd. of formula $RO[(CH_2CH_2O)m.\ (CH_2CH(CH_3)O)_n]H$ (I) where R is 1-4C alkyl, m = 1-5 (pref. 2.5-3.5, n = 0.5-3 (pref. 0.7-1.5).

Compsn. is effective for the cleaning stains of degenerated oils. It is harmless and odourless and is suitable for cleaning food oils from kitchen tables and ventilation fans, and for cleaning bathrooms, etc.

Compsn. is esp. an aq. soln. contg. 1-10 wt. % (pref. 1-5 wt. %) of an anionic or nonionic surfactant and 1-15 wt. % (pref. 2-10 wt. %) of (I). Compsn. may also contain an alkylbenzenesulphonate, α-olefin-sulphonate, sulphonate ester of a higher alcohol, higher alcohol-ethyleneoxide adduct, sodium hydroxide, tripolyphosphate, builder, pigment, perfume, stabiliser, etc. 25.8.77 as 101121 (3pp170).

ETHY D25 69716U/46 =J7 9006-531
Carboxyalkoxysuccinic acid salts - pptd as hydrated salt from water-methanol mixts
ETHYL CORP 27.04.72-US-248053
*E12 (E16) (29.03.79) *NL7305-798 C07c-59/23*

Water sol. salts of carboxyalkoxy succinic acid are made by combining an aqs. soln of the salt (esp. the Na salt of carboxymethoxy succinic acid) with 0.5-10 pts. wt. methanol per pt. wt. aqs. soln. to give a system which is sufficiently concn. in methanol and water to form a hydrates salt in solid separable from (d) without making a liq. phase which is incapable of pptg. the hydrated salt, and (c) crystallising the hydrated salt and sepg. it from the liq. phase e.g. by filtering or centrifuging.

Pref. salt-methanol mixt. contains $\geq$ 10% water and 60-72% methanol and the pptd. hydrated salt is formed at room temp. Prods. are esp. useful as builders in washing powders. 26.4.73 as 048297 (clg. 24.7.72-US-248053) C07c-59/23 (29.3.79) ETHYL CORP. (6pp) (J4 9047315)

KAOS ★ D25 32670B/17 ★ J7 9007-005

Improving dimensional stability of surfactant - e.g. sodium lauryl sulphate, by adding low mol. wt. polyethylene melted in binder e.g. cetyl alcohol

KAO SOAP KK 07.06.74-JA-065203

A97 E17 (03.04.79) C11d-11

Low mol. wt. polyethylene (I) is melted in a binder such as cetyl alcohol (II) and added to detergents to improve dimensional stability.

In an example, 10 pts. (I) was melted in 20 pts. (II) added to 70 pts. powdered Na lauryl sulphate, kneaded as 50-60°C, rolled, mixed with 10 pts. water, colouring agent and perfume, and finally extruded to prepare a solid cleaning compsn. with low solubility and swelling. 7.6.74 as 065203; C11d-11/00 (3.4.79) KAO SOAP CO. LTD. (3pp38) (J5 0156506)

LIOY D25 09497W/06 = J7 9007-006

Spray-dried granules of washing or cleaning compsns. - treated with alcohol or liquid aroma agent and coated with metal soap powder

LION FAT & OIL KK 04.07.73-JA-074863

*(03.04.79) *DT2432-523 C11d-11*

Spray-dried granules of a washing or cleaning prepn. are treated with a short-chain alcohol or a liq. scenting substance, and then the tacky surface of the granules is coated with a pulverulent metal soap (particle size 100 u).

The granular compsn. obtd. has excellent flowability, is non-hydroscopic, does not cake and the scent is preserved even during a prolonged storage. 4.7.73 as 074863, C11d-11/00 (3.4.79) LION FAT & OIL CO. LTD. (3pp)(J50024305)

LIOY D25 12122T/08 = NL -159-943

Isothermic thin film sulphonation of org cpds - using coolant gas stream between fluid reactants and sulphur trioxide

LION FAT & OIL KK 31.07.70-JA-067121

*E19 (17.04.79) *NL7110-603 C07b-13/02*

Liquid organic cpds (I) are sulphonated and/or sulphated with a mixt. of SO_3 and inert gas in a vertical sulphonating reactor whereby (I) move in a thin layer down the wall of the reactor. Between this layer and the gas mixt. of SO_3 and inert gas, a second stream of gas is added; the three streams are added parallel to the reactor whereby this parallel flow is maintained between the surface formed by the flow-opening of the inlet for the mixt. of SO_3 and inert gas and a point 20 cm. below this outflow opening. The linear velocity of the second gas flow is kept equal to the linear velocity of the SO_3-inert gas mixture within the range of 20-100 m./sec. with a margin of ± 5% and the quantity of the second flow of gas is adjusted to 200 and max. 1200 vol.% of the SO_3-inert gas mixt.

The prods. (I) which may be sulphonated are e.g. alkylarylhydrocarbons, alkenes, aliphatic alcohols, alkylphenols as well as their ethoxylates. The process reduces the amt. of coloured prods. and by-prods. The yield is increased. 30.7.71 as 010603 (8pp279)

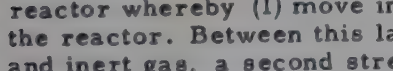
ZELI D25 30563T/19 #NL -159-953

Dialkylaminoalkylterpenylacetic acids - as antibacterials detergents foaming agents and emulsion stabilisers

ZELINSKII ORG CHEM INST 28.10.71-BE-774636 (27.10.71-NL-014802)

*B05 E16 (17.04.79) *BE-774-636 C07c-101/28 + A61k-31/20*

New dialkylaminoalkylterpenyl acetic acids are of formula (I):



$$R'-\underset{\displaystyle COOH}{CH}-(CH_2CH=\underset{\displaystyle CH_3}{C}-CH_2)_n-H \quad (I)$$

in which R' = an aliphatic group (II): $-CH_2-CH_2-CH_2-N(CH_3)_2$; n = 2 or 3.

(I) have antibacterial activity and may be used as antibacterially-active agents such as cleaning-, wetting-, foaming-, flotation agents, stabilising agents for emulsions and suspensions, disinfectants, and preservatives. (I) have strong hydrophilic-, and lipophilic properties.

Prepn. is e.g. by reacting a substd. malonic ester with an alkylhalide and saponifying and decarboxylating the ester formed. 27.10.71 as 014802 (5pp279)

FARH D25 16019U/12 = NL -160-031

Washing-up compsn - contg esters of phosphoric acid

HOECHST AG (KNAP) 04.09.71-DT-144425

*E11 (17.04.79) *DT2144-425 C11d-01/34*

Machine washing of dishes or glasses is effected using a washing up-brightening agent.

The agent used to polish the dishes and glasses is a soln. in water of one or more aliphatic mono- or diesters of aliphatic phosphoric acid, in which the alcohol component of the ester contains 1-8C., e.g. mono- and diisopropyl ester of phosphoric acid of density 1.4 as a soln., in 80 wt.% water. 29.8.72 as 011766 (3pp549)

SYNT= D25 53802S/33 = SU -260-065

Dermophilic washing prepns

SYNTH FAT SUBSTITUT (SYN -) 19.10.68-SU-279361

*F06 (11.08.78) *SU-260-065 + C11d-01/14*

Washing compsn. for textiles contains a surfactant such as an alkylsulphonate and a protein hydrolysate (I). Addn. of (I) provides a compsn. having high dermophilic properties.

Industrial alkylsulphonate contains (in wt. %) alkylsulphonate 83.5-92, NaCl 6-8, hydrocarbons 1.0-1.5, moisture 0.5-1. The protein hydrolysate contains (in wt. %) peptides (mol. wt. 600-700) 38-45, 6, NaCl 0.1-0.4, CH_3COONa 1.4-2.0, water 52.6 - 59.5. The alkylsulphonate is introduced, with stirring, into the protein hydrolysate at 55-60°C over 30-40 min., the mixt. is then kept for 1hr. at 60-70°C. The resulting liquid, termed 'sulphoponate', contains (in wt. %) sodium alkylsulphonate 13-16, peptides 35-40, water 43-46. The surface tension of a 0.125% soln. is 28-30 dyne/cm. the detergency is 58-61% w.r.t. lauryl sulphate. This product is recommended for use as dyeing aid for acetate fabrics, and for washing of textiles dyed with diazotised dyes.

Volkov, Yu.M., Kulabukhova, T.S., Golubkov, S.V. et al. Bul. 3 (1970)/22.12.69. 19.10.68. as 279361 (2pp70)

HENK D25 28685X/16 = US 4148-603

Washing agent for textiles contg. aluminosilicates - to bind calcium and also other substances binding calcium

HENKEL KG AUF AKTIEN 04.10.74-OE-008001

*A97 E36 + P43 (E11) (10.04.79) *DT2544-035 + B08b-03*

Soiled textiles are washed and treated by immersing in an aq. liquor which contains $\geq$2 cpds. inhibiting alkaline eart metal ion pptn. on the soiled textiles by using (1) 0.2-10g of $\geq$1 finely-dispersed, water-insoluble silicate cpd. having a Ca-binding power of $\geq$50mg CaO/g and a formula $(M_2/_nO)_x . M'_2O_3 . (SiO_2)_y$ where M is an n valence cation exchangeable with Ca, x is 0.7-1.5, M' is Al or B, and is 0.8-6; and (2) 0.05-2g/1 of $\geq$1 polyphosphonate chosen from the free acid and salts of (A) azacycloalkane-2,2-diphosphonic acids; (B) cyclic aminophosphonic acids; (c) pyrrolidone-5,5-diphosphonic acid and N-alkyl-pyrrolido -5,5-diphosphonic acids; (D) 3-amino-1-hydroxypropane-1-diphosphonic acid; and (E) polyphosphonic acids. 30.1. as 873381 (+1.10.75, 18.3.77-US-618460, 778977) (13pp91

MONS ★ D25 33195B/17 ★ US 4148-74

Detergent compsns. contg. chlorine bleach - and imido bis:sulphonate salt to reduce damage to dyes in fabric

MONSANTO CO 30.09 77-US-838279

E12 (10.04.79) C11d-07/60

Soiled fabrics are washed using a compsn. comprising a surfactant, a halogen-contg. bleach and sufficient trisodium and/or tripotassium imidobis sulphate salts to mitigate damage to dyed fabrics caused by the bleach.

The bleach is still effective in removing stains, but damage to dyes is reduced. 30.9.77 as 838279 (6pp955)

See Also

D13 GB 1544701 D13 GB 1544702 D21 US 4148743

CPI INDEXES

ALERTING PATENTEE INDEX (II)

Weekly by section and overall, lists all current patents in patentee code order and, within a given patentee, in earliest priority date order. The first line gives patentee code, earliest priority date, patentee name, CPI classes and finally the current patent number. The second line gives the first part of the title, followed by the accession number.

EIGE/ 24.01.75 EIGENMANN L A93 *DT 2602-948
Bonding fluid for road marking strips - 60224X/32
EIGE/ 27.01.75 EIGENMANN L A93 L02(A21) *DT 2602-947
Bonding fluid for road marking strips - 60223X/32

Not in Basic Abstracts Journal

CPI CLASS INDEX (IV)

Weekly only. Headings are all the CPI classes within the section to which an Alerting Bulletin relates, arranged in numerical order. Posted under each class heading is a list, in country then patent number order, of all basic or equivalent documents referenced or cross-referenced under that heading.

M22
*BE -836-489
*CA -987-881
=DS 1569-023
=DS 2245-330
*DS 2517-206
*DS 2519-679
=DS 2520-359
*DT 2450-918
*DT 2451-494
=DT 2451-607

In Country Alerting Bulletin only

BASIC NUMBER INDEX (V)

Weekly by section and overall, lists all entries by accession number. Each heading consists of the accession number in bold, followed by the CPI section letters. There then follows a list of all the family members, commencing with the basic and finishing with the current week's patent. For each family member the CPI week of issue is quoted, and a plus sign indicates that a multiple priority has been claimed.

09125-X ACDF
US 3933-788 X05+
CA -990-674 X26
09192-X BC
US 3933-948 X05
BE -832-423 X10
NL 7509-762 X10
DT 2535-514 X11
SW7509-042 X15
NO7502-837 X16
SF 7502-292 X19
ZA 7504-766 X21

In all Editions

PATENT NUMBER INDEX (VII)

Weekly by section and overall. Lists left to right the patent type (* for basic, = for equivalent or # sign for non-convention equivalent or where the priority has been artificially "added" to the specification), patent number, accession number and CPI classes.

US 3963
#636 36477U A97D15M14
***645** 49861X A41E19J04
=646 19776V A41E19J04
=647 21100X A17+R4
=650 06289S A22
#651 24399W A97K05L02M22
=652 73248V A12
=653 70544V A81G03
***654** 49862X A88H01Q4
***655** 49863X A81G03

In all Editions

BASIC PATENTEE INDEX (X)

Weekly by section in BAJ only. Entries under any given patentee code heading are in earliest priority date order. The title, truncated to 105 characters, is followed by the accession number and current patent number. The last line of each entry consists of the patentee name, the priority details (earliest then latest if there is more than one) and finally the Derwent classes. This index is cumulated quarterly and annually by section as hard copy. Overall A—M cumulations of from a quarter up to 5 years are available as COM.

CALI
Nitrile rubber smooth rolled sleeve for well impression packer - also con
natural rubber, hydrated 49862X/26 *US 3963-6
CHEVRON RESEARCH CO 25.06.73-US-373341 +29.07.74-US-492377 A88 H
Mica contg. plastified sulphur mixt - for coating walls and floors or solidifyi
earth in dams 49433X/26 *DT 2554-3
CHEVRON RESEARCH CO 03.12.74-US-529258 +13.11.75-US-631781 A82L02
CANA
Emulsifying agents of microbial origin - used esp. for oil spills, are made
cultivating a species of 48076X/26 *CA -990-6
CANADIAN PAT & DEV LTD 31.08.72-US-285159 A97 D16 H03

In Basic Abstracts Journal only

MANUAL CODE INDEX IN Basic Abstracts Journal only

At the start of each main group of codes, the manual code and its descriptor are printed in the middle of the column. Each sub-division of a manual code group appearing during the week is given, accompanied by its descriptor. All manual codes occurring during the week within each sub-division are then listed, with accession numbers posted against them.

In all there are about 3,600 manual codes in CPI, each one having an average of less than 200 documents assigned to it per year. The full classification is set out in the Manual Code Instruction Manual, which also contains a keyword index of terms for easy reference.

COUNTRY COVERAGE

"Major" Countries

Covered completely in CPI and WPI from the commencement of the service except: Research Disclosure 1978, Europe and PCT 1979, Sweden transferred from "Minor Countries" 1979. Average weekly numbers are listed alongside.

Fast publishing

Belgium	180	
Europe	150	
France	740	
Germany, W. unexamined	1050	
Japan unexamined	845*	
Netherlands unexamined	240	
PCT	40	
Research Disclosure	20	
South Africa	100	
Sweden	260	
United Kingdom unexamined	600	3325

Slow publishing

Canada	450	
Germany, E.	100	
Germany, W. examined	465	
Japan examined	340*	
Netherlands examined	60	
Soviet Union	1200	
Switzerland	260	
United Kingdom examined	300	
United States	1200	4375

*Only CPI coverage for Japan.

"Minor" Countries

Complete coverage, but only introduced during 1975, with exception of Italy 1978.

Fast publishing

Brazil	140	
Denmark	120	
Finland	60	
Norway	80	
Portugal	30	430

Slow publishing

Austria	125	
Czechoslvakia	180	
Hungary	35	
Israel	40	
Italy	155	
Rumania	25	560

MINOR AND MAJOR COUNTRIES

If the first publication of an invention takes place in one of the 'major' countries listed above, then this publication is called the basic patent, a WPI accession number is assigned, and this is used for all subsequent members of the family.

If, however, the first publication occurs in one of the 'minor' countries listed above, then the document is regarded as a provisional basic. No accession number is assigned, since an abstract is not provided. If this provisional basic is then followed by further family members also from 'minor' countries, these produce entries in the same indexes even though an accession number has still not been assigned.

However, as soon as a member of the family is published in one of the 'major' countries, then this is regarded as the first disclosure. An accession number is assigned, and will apply also to all the earlier members of the family (from the 'minor' countries). Hence it is possible to see, in Index V, entries where the basic has a later week number than some of its equivalents.

For CPI, if the first publication occurs in Sweden, South Africa or Japan — in the case of Non-Japanese nationals — then the document is treated as a provisional basic as outlined above. Other than for Japan where a heading is given, an Alerting abstract is included in CPI at this stage.

Subsequently, when a documentation abstract is available an accession number is assigned to the document and the abstract published in the BAJ and related products. Headings will be included in the Alerting Bulletins for Sweden and South Africa together with abstracts for the Japanese at this later stage.

Entries are included in WPI Gazettes at both stages. At the later stage both a basic and an equivalent heading will be given for each such patent number.

COUNTRY CODES

For patent number (not priority) purposes, DS distinguishes accepted West German specifications (DAS) from the unexamined applications (OLS) which are given the normal DT code. in the case of Japan J5 represents the unexamined applications, and J7 the examined of the present series.

Argentina	AR	Luxembourg	LU
Australia	AU	Malawi	MW
Austria	OE	Mexico	MX
Belgium	BE	Monaco	MC
Brazil	BR	Netherlands	NL
Bulgaria	BG	New Zealand	NZ
Canada	CA	Norway	NO
Chile	CE	Pakistan	PK
Colombia	CO	PCT	WP
Czechoslovakia	CS	Philippines	RP
Denmark	DK	Poland	PO
Europe	EP	Portugal	PT
Finland	SF	Rhodesia	RH
France	FR	Rumania	RU
Germany, East	DL	South Africa	ZA
Germany, West	DS	South Korea	KS
Germany, West	DT	Spain	ES
Greece	GR	Sudan	SD
Hungary	HU	Sweden	SW
Iceland	IS	Switzerland	CH
India	IN	Syria	SR
Ireland	EI	Trinidad	TD
Israel	IL	Turkey	TR
Italy	IT	Untd. Kingdom	GB
Japan	JA	U.S.A.	US
Japan, unex.	J5	U.S.S.R.	SU
Japan, ex.	J7	Yugoslavia	YU

AAOR= 19.07.77 AS ARMN ORG CHEM A97 D13 (A14) =FR 2398-091
Chewing gum base - 12242B/07
ABBO 19.10.77 ABBOTT LABORATORIES A60 C02 D22 E13 =BE -871-358
Bactericidal and fungicidal 2-methyl-1-naphthyl maleimide - 19938B/10
ABES/ 30.04.76 ABE S D13 #GB 1544-843
Rice flavoured snack food based on corn starch - 17548A/09
ADOL/ 05.10.77 ADOLPHE M C03 D13 (D16) =WP 7900-183
Animal foodstuffs obtd. from brewery residues - 40420A/23
AHSC 11.10.77 AMER HOSPITAL SUPPL CORP A89 B04 D16 J04 (A96) =GB 2005-830
Determn. of isoenzyme(s) having different electric charges - 27886B/15
AIDA/ 05.09.77 AIDA K B05 D16 =GB 2005-662
Fermentative prodn. of coenzyme/Q - 22325B/12
*AJIN 26.11.66 AJINOMOTO KK D12 *J7 9006-623
Mutton and lamb flavour improvement - 32644B/17
AJIN 23.10.72 AJINOMOTO KK D21 E16 =NL -160-011
Aminocarboxylic acid diesters - 35799V/19
AJIN 14.05.76 SANRAKU OCEAN A97 B04 D16 (A11 A14) =US 4148-689
Prepn. of gels for immobilising microbial cells - 75925Y/43
*AJIN 22.08.77 AJINOMOTO KK D13 *J5 4035-233
Packaged white mushroom prepn. - 32358B/17
*AJIN 22.08.77 AJINOMOTO KK D16 *J5 4035-283
Proteolytic enzyme prepn. - 32370B/17
*AJIN 22.08.77 AJINOMOTO KK D16 *J5 4035-285
Fermentative L-threonine prepn. - 32372B/17
*AJIN 22.08.77 AJINOMOTO KK D16 *J5 4035-286
LThreonine fermentation prepn. - 32373B/17
*AJIN 22.08.77 AJINOMOTO KK B05 D16 E16 *J5 4035-287
L-Isoleucine prepn. by fermentation - 32374B/17
*AJIN 23.08.77 AJINOMOTO KK D23 *J5 4035-244
Oil and fat compsn. for coating rice cake - 32364B/17
*AJIN 23.08.77 AJINOMOTO KK B05 D16 E16 *J5 4035-288
L-threoning prepn. by fermentation - 32375B/17
*AJIN 24.08.77 AJINOMOTO KK D16 *J5 4035-280
Yeast body prepn. from Saccharomyces strain - 32368B/17
AKIZ/ 22.11.74 AKIZUK S D13 =J7 9006-622
Edible, bleached, dried seaweed - 53234X/28
ALFA 17.09.75 ALFA-LAVAL AB D16 J01 =GB 1544-689
Centrifugal clarifier with liquid seal - 23856Y/14
*ALKU 11.10.77 AKZO NV A25 D21 (A96 D23) *EP ---1-471
Natural beeswax substitute compsn. - 31945B/17
AMCA= 20.07.77 AM USSR CARDIOLOGY D16 G06 =FR 2398-302
Forming visible images by ultrasonic irradiation of ferment plate - 12268B/07
AMCY 21.01.74 AMERICAN CYANAMID CO A41 D22 E13 (A23 A96) =CA 1052-046
Unsymmetrically substd. 1,4-dioxan-2,5-diones - 51231W/31
AMIN- 18.07.77 AMINKEMI AB B07 D22 =FR 2397-843
Heparinisation of charged surfaces - 12259B/07
*AMOR- 28.09.77 AMER CORP D12 *US 4148-112
Hydraulic evisceration of marine molluscs - 33093B/17
AMOR- 05.10.77 AMER ORIGINAL CORP D12 =NL 7810-042
Edible shellfish treatment with sodium sulphite and/or metabisulphite - 30031B/16
ANIS 27.03.75 ANIC SPA D23 E13 =DK 7804-895
Cyanomethyl-substd tetrahydropyran- or -furane derivs - 76212X/41
ARBE 21.01.77 ACIERIES REUNIES BU D15 E14 =GB 1544-903
Treating waste water to remove phenol - 38546A/22
ARMO 01.02.77 ARMOUR PHARM CO D21 E32 (E12 E33) =US 4148-812
Anti-perspirant contg astringent complex - 77838X/42
*ARTI= 03.12.71 ARTIFICIAL SYNTH FI A60 D22 E21 F06 *SU -392-716
Prepn. of bactericidal dyestuff for textiles and polymer films - 32735B/17
*ASAE 23.08.77 ASAHI ELECTROCHEM IND KK D13 *J5 4034-305
Low m. pt., stable fat compsn. - 32125B/17
*ASAE 25.08.77 ASAHI ELECTROCHEM IND KK A97 D25 E17 (A25) *J5 4036-307
Cleaning compsn. for removing oil stains e.g. in kitchens - 32519B/17
*ASAG 25.08.77 ASAHI GLASS KK D15 *J5 4036-061
Removing ammonia etc. from waste water - 32458B/17
ASAH 25.08.77 ASAHI CHEMICAL IND KK A41 D15 E16 =J5 4036-060
Continuous adsorbent regeneration - 18292B/10
*ASAH 26.08.77 ASAHI CHEMICAL IND KK A41 D15 E19 J09 (E35) *J5 4036-075
Burning components of waste water from ammoxidation processes - 32459B/17
ASAH- 22.09.77 ASAHIMATSU KORIDOFU D14 =GB 2005-527
prodn. of clean peeled soya beans etc. - 08059B/05
ASAH- 27.01.78 ASAHIMATSU KORIDOFU D13 #GB 1544-801
Soya protein food from whole beans - 40431A/23
*AUCR= 11.01.77 AS UKR CRYOBIOLOGY D22 *SU -611-087
Endocrine organ tissue conservation for transplant use - 33065B/17
AUMA= 19.07.77 AS WKR MATERIAL SCI D17 J01 #FR 2397-859
Concn. and crystallisation appts. - 86277A/48
*AVIC- 29.09.70 AVICON INC A96 D22 F07 *US 4148-664
Haemostatic, wound sealing collagen prodn. - 33157B/17

BABW 22.07.77 BABCOCK & WILCOX CO D15 E36 J01 K05 =FR 2397-861
Electrodialysis and ion-exchange treatment of ionised soln. - 82185A/46

BABW 22.07.77 BABCOCK & WILCOX CO D15 E36 J01 K05 =US 4148-708
Electrodialysis and ion-exchange treatment of ionised soln. - 82185A/46
BADI 13.11.74 BASF WYANDOTTE CORP A97 D25 #CA 1051-743
Aq alkali hydroxide detergent builder solns - 01580X/01
BADI 02.07.77 BASF AG A97 C03 D13 =J5 4035-074
Feed pellet prepn. from feed flours - 02298B/02
BADI 06.10.77 BASF AG A26 D15 E16 H07 (A97 D22) =DT 2744-982
Poly:alkylene poly:amine prepn. - 31930B/17
*BADI 06.10.77 BASF AG A26 D15 E16 H07 (A97 D22) *EP ---1-436
Poly:alkylene poly:amine prepn. - 31930B/17
BAKP 15.07.75 BAKER PERKINS HOLD D12 =GB 1544-910
Fibrous material e.g. meat deposition into containers - 57492Y/32
BAUD/ 23.04.69 BAUDOT G D13 =IT 1028-506
Production of vegetable milks - 78576R/42
*BAUE/ 14.10.77 BAUER W D12 *DT 2746-176
Sausage meat mincing machine - 31752B/17
BAXT 10.04.69 BAXTER TRAVENOL LAB B04 D16 =DS 2016-274
Separation of leucocytes from whole blood - 76112R/41
BEAF 12.08.77 BEATRICE FOODS CO D13 =J5 4035-242
Natural tasting cheese substitute compsns. - 14565B/08
*BEKI 07.05.76 BELORUSS KIROV TECHN INS D16 *SU -610-859
Microorganisms culture unit - 33001B/17
BENC 00.00.77 BENCKISER J A GMBH D25 E37 =DT 2744-773
Granulation products contg. polymerised phosphate and aluminosilicate - 11963B/07
*BENC 05.10.77 BENCKISER J A GMBH D25 J04 *DT 2744-753
Free-flowing dust-free granulate, esp. for detergent mfr. - 31685B/17
BENC 05.10.77 BENCKISER J A GMBH D25 J04 =NL 7809-990
Free-flowing dust-free granulate, esp. for detergent mfr. - 31685B/17
BENC 05.10.77 BENCKISER J A GMBH D25 E37 =NL 7809-991
Granulation products contg. polymerised phosphate and aluminosilicate - 11963B/07
*BEPI= 03.08.76 BELO EPIDEMOLOGY MI B04 D16 *SU -610-864
Stimulating reproduction of parainfluenza virus - 33006B/17
*BETT- 17.10.77 BETTCHER INDS INC D12 *DT 2845-360
Hand-held trimming knife - 31907B/17
BEZR/ 29.08.68 BEZRODNYI K N D14 =SU -282-050
Autoclave pressure regulating system - 32452V/17
*BIAN/ 20.01.75 BIANCHI D D15 *IT 1028-851
Aq. effluent purification - B/17
*BIAN/ 27.02.75 BIANCHI D D15 *IT 1028-901
Soft and potable water prodn. - B/17
BIOR- 28.04.75 BIO RES CENT KK D17 =CA 1051-803
Enzymatic hydrolysis of cellulose into sugars - 61558X/33
*BIOT- 13.08.75 BIOTECHNICAL PROCES D13 *GB 1544-812
Texturised proteinaceous food prod. - 32038B/17
BISC- 21.12.74 CHEM BISCHOFSHEIM A88 D14 J01 =US 4148-734
Filter material based on cross-linked elastomeric polyurethanes - 52423X/28
BLAN/ 22.09.77 BLAND B J C03 D13 E17 =GB 2005-525
Particulate compsn. for preserving agricultural products - 87894A/49
BLGN 26.09.77 BELGONUCLEAIRE D15 K07 =DT 2840-458
Treating water contaminated radioactively, chemically or biologically - 25181A/14
BLGN 26.09.77 BELGONUCLEAIRE D15 K07 =GB 2005-655
Treating water contaminated radioactively, chemically or biologically - 25181A/14
BLUM/ 19.07.77 BLUM A D15 J02 #FR 2398-025
Submersible aerator for fluids e.g. sewage - 72953A/41
BOEF 20.08.76 BOEHRINGER MANNHEIM GMBH B02 D16 =US 4148-994
Crystalline beta:nicotinamide-adenine di:nucleotide metal salts - 16121A/09
*BOLI 24.10.77 BOLIDEN AB D15 *BE -871-458
Purificn. of water with magnetic sepn. of pptd. sludge - 31595B/17
*BONA/ 19.02.75 BONAMINI G D15 *IT 1028-892
Industrial and domestic sewage biological purificn. - B/17
*BONA/ 19.02.75 BONAMINI G D15 *IT 1028-893
Aq. effluents biological purificn. system - B/17
*BRAN/ 14.11.69 BRANDOLI G D17 *IT 1028-505
Sugar diffusion juice purification - B/17
*BRAS/ 12.07.77 BRASH J D11 *GB 2005-623
Automatic cake inverting device on hot plate conveyor - 32048B/17
*BREG/ 05.12.69 BREGOLI C D13 *IT 1028-504
Olive dough - B/17
*BREV 24.12.77 BREVE TEAM SA C03 D15 J04 K07 (D22 J01) *BE -872-867
Flexible stratified mass transfer element - 31612B/17
*BRIE- 14.10.77 DENA C BRIEL GMBH D13 *DT 2746-248
Prepn. of water-soluble non-denaturated casein from milk - 31768B/17
*BRIG/ 27.12.77 BRIGANTE M F D15 J01 *US 4148-731
Gravity separator for removing solid particles from water - 33186B/17
BRIM 18.07.77 BRISTOL MYERS CO B03 D16 =FR 2398-111
Antibiotic rudolphomycin - 82061A/45
*BRIM 06.10.77 BRISTOL MYERS CO D21 E14 *DT 2758-735
Oxidn. dye compsn. for hair - 31809B/17

BRPE 15 02 67 BRITISH PETROLEUM LTD B04 C03 D16 H04 =DS 1642-598
Continuous process for culture of symbiotic mixtures of - 05775H/00
BRTA 31.08.70 BRIT AMER TOBACCO LTD D18 =NL -159-870
Cigarette treatment - 17249T/11
BRTA 18.08.75 BRIT AMER TOBACCO LTD D18 =US 4148-325
Processing cut tobacco stalks and leaves - 16743Y/10
*BRWI 12.09.77 BROWN & WILLIAMSON D12 *US 4148-925
Cooking and smoking of fish - 33267B/17
BSBE- 14.02.68 MACHINEFAB BEDRI NV D12 =NL -159-863
Device for stopping a flow of shrimps onto a conveyor - 04276R/05
BSBE- 14.03.68 MACHINEFAB BEDRI NV D12 =NL -159-862
Cleaning of cooked shrimps one at a time - 04275R/05
BSBE- 14.03.68 MACHINEFAB BEDRI NV D12 =NL -159-864
Device for turning curved shrimps into alignment on - 04277R/05
BUCL 28.05.74 BUCKMAN LABS INC A60 C01 D22 E12 #CA 1051-778
Alkali-stabilised N-hydroxy methyl dithiocarbamates - 57892X/31
BUCM 12.09.77 BUCHERGUYER MASCH D15 #DK 7704-045
Aeration of foaming liquors - 10641A/06
*BUHL 07.10.77 BUHLER GEBR AG D15 *DT 2843-785
Refuse and sludge conversion to compost - 31856B/17
BUHL 07.10.77 BUHLER GEBR AG D15 =GB 2005-654
Refuse and sludge conversion to compost - 31856B/17

CALG 30.04.74 CALGON CORP A97 D15 (A14) =CA 1052-020
Slit control using tri block copolymers - 58496W/35
*CANA 07.10.77 CANADIAN PAT & DEV LTD D23 *GB 2005-526
De:hulling of rapeseed or mustard seed defatted meals - 32043B/17
*CARB- 19.07.77 CARBOXYQUE FRANCAIS D15 *FR 2398-024
Transportable oxygenator to purify water in lakes - 32000B/17
*CARG- 22.10.77 CARGO FLEET CHEM D25 E19 F06 *BE -871-431
Concentrate of quaternary ammonium cpd. and oily material - 31587B/17
CEAT- 20.03.75 CESK KOMISE ATOMOV A97 D16 K05 M25 =CA 1051-798
Polymer reinforced biomass granules for metal, eg uranium, absorption - 61626X/33
CELL- 18.05.72 CELLCO INC D16 =J7 9006-634
Cell culture appts - 74974U/49
CHEM- 08.07.75 CHEMBIOMED LTD B04 D16 =GB 1544-908
Beta glycoside derivs. for coupling to carriers - 06114Y/04
CHIN 19.02.74 CHINOIN GYOGYSZER B05 D13 E14 =SU -584-764
(3-Sulphopropoxy)-substd. 3-(substd. phenyl)-2' hydroxy-propiophenones - 57507W/35
CHIN 01.07.77 CHINOIN GYOGYSZER A97 D13 (A11) =J5 4035-251
Food flavours contained in cyclodextrin complex - 78426A/44
*CHUG 22.08.77 CHUGOKU KAKO KK A97 D16 *J5 4035-050
Cultivating edible mushrooms - 32270B/17
CIBA 20.07.77 CIBA GEIGY AG A26 B07 C03 D22 (A18 A96 B04) =FR 2398-084
Water insoluble polysiloxane hydrogel - 09935B/05
*CISC- 23.08.77 CISCO KK D13 *J5 4035-245
Crackling sugar confectionery contg. gas bubbles - 32365B/17
*CLAR/ 29.11.77 CLARK J F D15 *US 4148-617
Recovering water from ambient air - 33137B/17
COLG 07.03.68 COLGATE PALMOLIVE CO D25 E19 F06 =DK 7804-058
Fabric stain removal - 61359Z/00
*COLG 04.06.76 COLGATE PALMOLIVE CO A96 D21 (D25) *US 4148-743
Toilet soap bar contg. polyethylene oxide - 33196B/17
COLG 10.05.77 COLGATE PALMOLIVE CO D25 E19 =PT --68-012
Opaque liquid detergent compsn. for cleaning hard surfaces - 67110A/38
COLG 18.07.77 COLGATE PALMOLIVE CO D22 E14 =FR 2397-841
Phenol liquid disinfectant compsn. - 84151A/47
COLG 12.09.77 COLGATE PALMOLIVE CO A97 D25 =DK 7803-769
Particulate phosphate free washing product - 06094B/04
COLG 12.09.77 COLGATE PALMOLIVE CO A97 D25 =SW 7808-892
Particulate phosphate free washing product - 06094B/04
COLG 06.10.77 COLGATE PALMOLIVE CO D25 E37 =DT 2843-390
Washing powders based on zeolite(s) and nonionic detergent - 14201B/08
COLG 06.10.77 COLGATE PALMOLIVE CO D25 E37 =GB 2005-715
Washing powders based on zeolite(s) and nonionic detergent - 14201B/08
COLG 06.10.77 COLGATE PALMOLIVE CO D25 E37 =NL 7810-122
Washing powders based on zeolite(s) and nonionic detergent - 14201B/08
COLG 14.10.77 COLGATE PALMOLIVE CO A97 D25 (A25) =DT 2844-399
Abrasive liquid detergent compsn. - 88305A/49
*COLO/ 06.09.77 COLOSIMO G A D12 *US 4148-598
Foodstuff extrusion die contg. elongated passages - 33130B/17
CORG 25.02.77 CORNING GLASS WORKS D16 E36 =US 4148-690
Photo-metabolic hydrogen prodn. from water - 63766A/36
COSD 26.02.73 COSDEN OIL & CHEM CO D23 E14 =CA 1051-927
Phenyl acetaldehyde predn - 52071V/29
COST/ 11.01.77 COSTA R D13 =GB 1544-901
Food kneading machine - 51881A/29
CRAN 03.04.67 CRANE CO D15 =DS 1692-958
Steam turbine power plant waterpurification - 17757S/10
CRIN- 13.09.77 CRINA CENT RECH INT C03 D13 =DK 7804-007
Ruminant feedstuff - B/17
*CRIN- 13.09.77 CRINA CENT RECH IN C03 D13 *SW 7809-600
Ruminant feedstuff - B/17
CSIR 18.07.77 COMMONWEALTH SCIENT ORG D14 =FR 2397-878
Threshing drum for stripping haulm from vegetable matter - 11282B/06
CVPA 30.12.69 SCHOLTENS CHEM FAB NV D16 H03 J06 =NL -159-932
Pipeline transport deposition prevention - 45403S/27

DAII 23.10.69 DAI ICHI KOGYO SEIY D17 E13 (D13) =IT 1028-507
Fatty acid saccharose ester synthesis - 30061S/17
*DAVI/ 18.07.77 DAVIGNONET C D13 *FR 2397-793
Moulded sticks for novelty support for ice lollies etc. - 31981B/17
*DCAF 05.10.77 DCA FOODS INDS INC D14 *DT 2843-547
Continuous treatment oven for food - 31850B/17
DCAF 05.10.77 DCA FOODS INDS INC D14 =GB 2005-524
Continuous treatment oven for food - 31850B/17
DCAF 05.10.77 DCA FOODS INDS INC D14 =NL 7810-037
Continuous treatment oven for food - 31850B/17
*DEGS 17.10.77 DEUTSCHE GOLD & SILBER D21 M26 *DT 2746-525
Yellow dental gold alloy for fusing to porcelain - 31791B/17
DEJI- 06.10.77 DEJ INT RES CO BV D13 =NL 7809-885
Prim. extn. of coffee from ground roast coffee beans - 27848B/15
*DEXC 11.10.77 DEXTER CORP A96 D22 F07 *DT 2758-496
Antislip sheet material for covering surgical sheets - 31808B/17
DEXC 11.10.77 DEXTER CORP A96 D22 F07 =GB 2005-564
Antislip sheet material for covering surgical sheets - 31808B/17
DORO 12.08.74 DORR OLIVER INC D15 J01 =CA 1051-792
Sedimentation pit for continuous operation with rotating rake arms - 02043X/02
*DOWC 28.06.78 DOW CHEMICAL CO C02 D22 E13 G02 *US 4148-899
5-Nitro-2-thiazolyl-thio poly:chloro-pyridine(s) - 33261B/17
*DREI/ 02.05.78 DOS REIS M G D15 H03 *PT --67-979
Accelerated dispersal of oil layers on water - B/17
*DRES/ 12.10.77 DRESCHER H P A89 D16 E36 J04 *DT 2745-763
Measurement of gas e.g. carbon di:oxide in liquids e.g. beer - 31713B/17
*DSOL/ 20.01.67 DIEZ DE SOLLANO C D14 *IT 1028-502
Animal vegetable or mineral flour prodn. appts. - B/17
*DYNL 22.12.77 DYNAPOL B05 D13 E14 (E12) *BE -872-951
4-3-Sulpho-4,5-di:hydroxy-hexyl:oxy 4'-alkoxy di:hydro-chalcone(s) 31634B/17

EAST 11.07.77 EASTMAN KODAK CO B04 D16 J04 =J5 4034-298
Selected isoenzyme activity determn. - 04595B/03
EAST 02.09.77 EASTMAN KODAK CO A96 C03 D13 =GB 2005-537
Pill for ruminants resistant to conditions in the rumen - 24176B/13
EGYE 21.11.74 EGYT GYOGYSZERVEGYESZETI B02 C02 D13 =SW 7900-389
Bactericidal quinoxaline 1,4,-dioxides - 30206X/17
ELEX 02.12.74 ELECTROLUX LTD D22 =J5 1078-786
Charging unit for supplying eg cans of food - 63718X/34
ELEX 02.12.74 ELECTROLUX LTD D22 =J7 9006-504
Charging unit for supplying eg cans of food - 63718X/34
*ELEX 17.10.77 ELECTROLUX AB D22 *DT 2844-871
Autoclave sterilisation by evaporating formalin - 31887B/17
ELIL 20.10.77 ELI LILLY & CO B03 C02 D13 E13 =BE -871-274
Antibiotics 20-deoxy-narasin and 20-deoxy-epi-17 narasin - 19939B/10
*ELIL 26.10.77 ELI LILLY & CO B03 D22 E13 *BE -871-401
2-3-Amino-2-oxo-1-azetidinyl 3-methyl 2- or 3 butenoic acid derivs. 31575B/17
*ENFO/ 04.10.77 ENFORS S O D16 F09 *EP ---1-540
Microbiological modification of hardwood - 31979B/17
ENVI 11.04.75 ENVIROTECH CORP D15 E33 =GB 1544-823
Calcium recovery from sludge contg. phosphate - 81581X/44
*ESSE= 22.09.75 ESSEN OIL CULTURES D23 K08 *SU -585-709
Preparing rose petals for essential oil extn. - 32840B/17
ETHI 25.09.74 ETHICON INC A96 D22 F07 K08 (A18 A35) =CA 1051-739
Needle with detachable suture - 24120X/13
ETHY 27.04.72 ETHYL CORP D25 E12 (E16) =J7 9006-531
Carboxyalkoxysuccinic acid salts - 69716U/46

FARB 30.03.72 BAYER AG A96 B04 D16 (A14) =CA 1052-045
Water-insoluble protein prepns - 62769U/42
FARB 03.07.75 BAYER AG D15 E36 =DS 2529-647
Purifying waste waters of hydrazine prodn. - 05885Y/04
FARB 28.05.77 BAYER AG A25 D21 (A96) =PT --68-066
Prodn. of polyurethane with vinyl gps. for dental impressions 86157A/48
FARB 01.09.77 BAYER AG A60 D25 E16 F06 =GB 2005-663
Basic ester(s) of amino-carboxylic acids and aliphatic poly:ol(s 22199B/12
FARB 03.09.77 BAYER AG D18 =NO 7802-789
Chrome tanning of hides and pelts - 20218B/11
FARB 13.09.77 BAYER AG C03 D16 E13 (D13 D17) =DK 7804-017
Continuous sucrose conversion to iso:maltulose - 22393B/12

FARB 10.10.77 BAYER AG D22 J09 =DT 2745-488
Burning transiently explosive gases - 31931B/17
FARB 10.10.77 BAYER AG D22 J09 =DT 2745-493
Burning transiently explosive gases without back-firing - 31932B/17
*FARB 10.10.77 BAYER AG D22 J09 *EP ---1-437
Burning transiently explosive gases - 31931B/17
*FARB 10.10.77 BAYER AG D22 J09 *EP ---1-438
Burning transiently explosive gases without back-firing - 31932B/17
*FARB 14.10.77 BAYER AG D15 F09 *DT 2746-179
Measuring state of charge of suspensions - 31754B/17
*FARB 15.10.77 BAYER AG D13 *DT 2746-479
Confectionery contg. comminuted dried beet, bran or vegetable fibres - 31785B/17
FARH 04.09.71 HOECHST AG D25 E11 =NL -160-031
Washing-up compsn - 16019U/12
FARH 11.07.72 HOECHST AG B03 D21 E13 =SU -580-806
Anti-dandruff agents - 07516V/05
FARH 22.08.74 HOECHST AG D22 E11 F06 M14 =CA 1051-920
Internal ammonium salts of phosphinic acids - 19015X/11
*FARI/ 26.09.77 FARINONE P D15 F09 *EP ---1-418
Floatation separation of paper pulp stock - 31922B/17
*FATS= 21.06.74 FATS RES INST D13 (D23) *SU -507-303
Protein extn. from soya oil-cake - 32763B/17
FELU 19.10.74 FELDMUHLE AG D15 F09 =CA 1052-022
Purifying waste from cellulose and paper inds - 34120X/19
*FEMI- 20.07.77 FEMIA SOC FRANCO-EU D14 *FR 2398-001
Discharge trap for channel or vibratory feeder - 31997B/17
FERO 01.12.66 FERROSAN B05 C03 D13 =DS 1617-309
Dispersible vitamin preparations - 32400F/00
FIAT 31.01.75 FIAT SPA D15 =DS 2556-674
Waste water purifier and recycler for automatic car washer - 61829X/33
*FIMI- 24.01.75 FIMIC SRL D12 *IT 1028-856
Appts. for producing meat products - B/17
FIRE 12.05.77 FIRESTONE TIRE & RUBBER A26 D13 F06 G06 =PT --68-030
Poly-organo-phosphazene(s) contg. chromophore radicals - 82136A/46
FIRM 11.01.72 FIRMENICH SA D13 E19 (D18) #J7 9006-640
Tobacco, food and beverages - 50661T/32
FIRM 05.09.73 FIRMENICH SA B05 C03 D23 E15 (D13 D18) =J7 9006-615
Oxygen-contg. sesquiterpene derivs for perfumes and aromas - 19570W/12
FIRM 05.09.73 FIRMENICH SA B05 C03 D23 E15 (D13 D18) =NL -159-951
Oxygen-contg. sesquiterpene derivs for perfumes and aromas - 19570W/12
FLUI- 26.04.68 FLUID DEVICE CORP D13 =US 4148-334
Fluid control system with automatic carbon- - 94162R/51
FMCC 27.05.66 FMC CORP A11 D17 E13 #J7 9006-617
Amylose material obtained by acid hydrolysis of starch - 20825Q/00
FMCC 13.07.73 FMC CORP D25 E34 =DS 2433-113
Sodium dichloro isocyanurate dihydrate crystals - 07435W/05
FMCC 03.10.77 FMC CORP D25 E14 F06 =EP ---1-495
Phenyl sulphonate ester cpds. - 91353A/50
FMCC 03.10.77 FMC CORP D25 E11 F06 =GB 2005-744
Organo:phosphorus azide per:oxygen textile bleach activators - 83827A/46
FMCC 03.10.77 FMC CORP D25 E19 =GB 2005-745
Di:sulphone derivs. - 78106A/43
*FOLL- 11.04.75 F LLI FOLLI D11 *IT 1028-633
Bread dough automatic fancy shaping machine - B/17
*FOSS- 07.10.77 FOSS N ELECTRIC AS D13 E13 J04 *EP ---1-513
Determining nitrogen in a sample - 31967B/17
*FRAU 28.12.77 FRAUNHOFER FES A96 B04 D16 (A26) *BE -872-879
Stabilised, insolubilised biochemical products - 31618B/17
*FRIU- 16.10.70 FRIULSALUMI D12 *IT 1028-508
Pork shoulder and back cooking in packaging - B/17
*FUSE 23.08.77 FUKUI KAGAKU KOGYO D15 *J5 4034-554
Treating agent for polluted water - 32240B/17

*GADE- 26.08.77 GADELIUS KK D15 *J5 4035-873
Vacuum evaporator - 32436B/17
*GAMB/ 21.02.78 GAMBLE B R D14 *US 4148-733
Frame support for centrifugal honey extractor - 33188B/17
GENA 29.04.74 GAF CORP D21 E14 =CA 1051-917
Sun screening cpds. for protecting skin and hair - 25777W/15
GENE 30.08.76 GENERAL ELECTRIC CO A11 D16 =GB 1544-760
Rapid, convenient cellulose decrystallisation - 84521Y/47
*GENM 28.11.77 GENERAL MILLS INC B05 D21 *US 4148-872
Plaque inhibiting chewing gum - 33252B/17
GENO 21.11.73 GENERAL FOODS CORP B05 D13 (B04) =CA 1051-714
Low-calorie sweeteners contg. dipeptides - 36172W/22
GENO 07.01.76 GENERAL FOODS CORP D13 =GB 1544-925
Aromatic coffee constituents - 52544Y/30
*GESS/ 23.05.75 GESSI G D15 *IT 1028-653
Bioactive material for biological purificn. of organic effluents - B/17
*GIDR= 02.08.76 GIDROLIZPROM COMBIN D16 *SU -610-861
Yeast and culture fluid flotation separator - 33003B/17

GIVA 08.12.70 GIVAUDAN L & CIE SA D23 E15 =NL -159-962
Ionone and irone derivs - 40514T/25
GOOR 16.05.77 GOODRICH B F CO A14 D22 F01 =PT --68-037
Water absorbent compsn. for disposable nonwoven articles - 06200A/03
GRAC 22.02.77 GRACE W R CO C03 D25 E14 M11 #SW 7806-924
New chelate forming cpds. - 36646Y/21
GRAM- 06.10.77 BROEDRENE GRAM A/S D13 =DT 2843-799
Deeply inlaid decoration of iced lollies with contrast material - 11966B/07
GRAM- 06.10.77 BRODRENE GRAM AS D13 =NL 7809-953
Decoration of iced lollies with patterned imprint - 11967B/07
GRAM- 06.10.77 BRODRENE GRAM AS D13 =NL 7809-954
Deeply inlaid decoration of iced lollies with contrast material - 11966B/07
GREC 05.02.76 GREEN CROSS CORP B04 D16 =J7 9006-608
Gamma-globulin prepn. for treating Pseudomonas aeruginosa infections - 57886Y/33
GREE- 19.03.66 GREENING N & SONS D15 =NL -159-938
Flocculators and clarifiers for sewage and effluent - 40732R/23
*GREN/ 21.07.77 GRENET E P C03 D13 (D16) *FR 2398-110
Treating organic waste by anaerobic fermentation - 32011B/17

HAAR 21.07.71 HAARMANN & REIMER GMBH D23 E13 =NL -159-981
Oxabicycloalkenes prodn - 07405U/06
HAAS/ 06.10.77 HAAS F D11 =DT 2839-997
Cooler for baked wafer sheets - 30148B/16
HAEG- 16.08.74 HAEGER & ELSAESSER D15 J01 =US 4148-727
Liquid purification plant - 26592X/15
HAGG 16.06.77 HAG AG D13 =J5 4036-299
Decaffeinating vegetable materials esp. coffee - 76360A/43
HAMB- 20.02.74 HAMBURGEN G & CO KG D15 =IT 1028-757
Gas-liq. contacting device - 59066W/36
HAMB- 20.02.74 HAMBURGEN G & CO KG D15 =IT 1028-758
Waste water and sewage purificn. appts. - 46116W/28
HAPI 31.05.74 GEBR HAPPICH GMBH A96 B05 D21 =IT 1028-686
Aq compsn contg dequalinium chloride - 72545W/44
*HAUF/ 14.10.77 HAUFE L D22 F07 *DT 2746-219
Disposable diaper in form of bag for air travel - 31763B/17
*HAYA- 20.08.77 HAYASHIDA GIKEN KK D15 *J5 4034-550
Continuously purifying polluted water - 32239B/17
HAYB 02.06.67 HAYASHIBARA KK D16 =NL -160-032
Process for producing isoamylase by a bacterium - 41827R/23
HELM= 14.10.77 HELMINTHOLOGY INST B04 C03 D16 #DT 2746-257
Isolation of Trichinella larvae - 72389A/40
*HENK 01.10.66 HENKEL KG AUF AKTIEN D14 *DS 1532-533
Preventing scale-deposition in bottle-washing - 31662B/17
HENK 06.10.70 HENKEL KG AUF AKTIEN D15 E11 =J7 9006-533
Prepn of 1-amino alkane-1,1-diphosphonic acids - 25409T/16
HENK 04.10.74 HENKEL KG AUF AKTIEN A97 D25 E36 (E11) =US 4148-603
Washing agent for textiles contg. aluminosilicates - 28685X/16
HENK 15.04.76 HENKEL KG AUF AKTIEN D21 E16 =US 4148-762
Hydroxy alkyl diamine or triamine betaine cpds. - 74163Y/42
HENK 11.12.76 HENKEL KG AUF AKTIEN B01 D23 E15 =US 4148-810
Sterol isolation from fat processing distillation residues - 44237A/25
HENK 08.10.77 HENKEL KG AUF AKTIEN A97 D14 =DT 2745-371
Cleaning product for fruit, vegetables and other foods - 27862B/15
HENK 08.10.77 HENKEL KG AUF AKTIEN A97 D14 =NL 7809-480
Cleaning product for fruit, vegetables and other foods - 27862B/15
HISH/ 22.01.76 HISHIDA I D24 E12 =J7 9006-527
Granular metal soap compsn. - 63934Y/36
*HITA 22.08.77 HITACHI KK D15 J03 *J5 4034-549
Electrolysis of domestic waste-water - 32238B/17
HOFF 02.04.74 HOFFMANN-LA ROCHE LTD B03 C02 D16 =CA 1051-800
Lasalocide B-E antibiotics by culturing Streptomyces X-537 - 68964W/42
HOOK 05.03.68 HOOKER CHEM & PLAS CORP D15 E36 F09 =J7 9006-516
Continuous production of chlorine dioxide - 63712Z/00
*HOWA/ 25.08.76 HOWARD G A D14 *US 4148-729
Storing and handling used cooking oils - 33185B/17
*HURK/ 21.10.77 HURKMANS A D11 *BE -871-403
Volumetric depositor for paste esp. edible paste - 31576B/17

*IDEK 22.08.77 IDEMITSU INDUSTRIES KK D13 *J5 4035-249
Water-soluble yeast protein drink prodn. - 32367B/17
IKED/ 28.05.75 IKEDA S D13 E37 =J7 9006-618
Hydrogen peroxide bleaching method for foods - 04729Y/03
INDA- 31.08.76 IN DA TE AG D14 =US 4148-933
Food sterilisation and preservation - 18148A/10
INFL 04.02.75 INT FLAVORS & FRAGR INC B03 D13 E13 (D21 D23 D25) =GB 1544-701
(4)-Methyl-(1)-oxa-spiro-(5,5)-undecane - 18109Y/10
INFL 04.02.75 INT FLAVORS & FRAGR INC B03 D13 E13 (D21 D23 D25) =GB 1544-702
(4)-Methyl-(1)-oxa-spiro-(5,5)-undecane - 18109Y/10
INFL 19.02.75 INT FLAVORS & FRAGR INC D23 E19 =GB 1544-831
Derivs of alpha- or beta santalene - 68148X/36

INFL 04.02.77 INT FLAVORS & FRAGR INC B05 D13 E15 (B07) =US 4148-826
Alpha-substd.-3,3-di:methyl-2-norbornane-methanol cpds. - 21476A/11
•INFL 05.04.78 INT FLAVORS & FRAGR INC D23 E12 *US 4149-020
Organo-magnesium intermediate for cyclopentenyl pentanol deriv. - 33306B/17
INMR 29.07.75 INST MERIEUX A96 B04 D16 J01 (A11) =GB 1544-867
Cationic material for reversibly fixing proteins - 09303Y/06
•INSF 18.07.77 INST FRANCAIS DU PETROLE B05 D16 E16 *FR 2398-046
Prepn. of L-carnitine - 32004B/17
INTM 22.08.75 INT MINERALS & CHEM CORP B02 C02 D13 =US 4148-808
Zearalanol anabolic agent prepn. - 00046Y/01
•INTM 01.10.76 INT MINERALS & CHEM CORP D22 E13 G03 H01 *US 4148-803
Nitrosamine reaction prod. from nitro-alcohol and amine - 33225B/17
INTO 11.04.75 INT PAPER CO D22 F04 =CA 1051-840
Disposable diapers formed from matted fibres - 83495X/45
•ITDE- 22.07.77 SOC INT DESSALEMENT D15 *FR 2398-023
High thermal efficiency solar energy desalination process - 31999B/17
ITRE- 17.06.77 INT REFINING EQUIPM D15 J08 (D13 J01) =J5 4035-167
Climbing film heat exchanger - 00434B/01

•JAGA 26.08.77 JGC CORP D15 F09 G01 *J5 4035-889
Recovery of clay present in a waste liq. - 32447B/17
•JAGN 24.12.77 JAGENBERG WERKE AG D14 *BE -873-023
Automatic dispenser of tiny doses of liq. - 31645B/17
•JAOR 22.08.77 JAPAN ORGANO KK D15 *J5 4034-545
High purity water prodn. suitable for medicines - 32237B/17
•JAPC 22.08.77 NIPPON SHOKUBAI KAGAKU A97 D16 *J5 4035-050
Cultivating edible mushrooms - 32270B/17
JAPM 27.12.74 JAPAN MONOPOLY CORP D18 E15 =J7 9006-638
Perfume compsn for tobacco - 65583X/35
JAPM 27.12.74 JAPAN MONOPOLY CORP D18 E13 =J7 9006-639
Perfume compsn. for improving tobacco flavour - 65585X/35
JASK/ 17.08.77 JASKOWSKI M C A96 D21 E17 =US 4148-329
Hair shaping compsn. for all types of hair - 16424B/09
•JEBS/ 06.09.77 JEBSEN J W D12 *NO 7703-078
Preservation of fish prods. - B/17
•JOHA/ 12.10.77 JOHANNSEN F D24 *DT 2745-861
Permanently marked soap cake mfr. - 31719B/17
JOHM 14.09.77 JOHNS MANVILLE CORP D13 =DT 2839-809
Compsn. for reducing build-up of free fatty acids in cooking oil - 25834B/13
JOHO 09.07.75 JOHNSON MATTHEY LTD D16 E12 J04 (E17) =US 4148-870
Complexes of osmium tetroxide with heterocyclic contg. tert. nitrogen - 06123Y/04

•KALA/ 23.06.76 KALASHNIK A I D23 E17 *SU -610-858
Fatty acids saponification control - 33000B/17
KANE 25.04.72 KANEBO KK D15 E14 F06 =DS 2320-912
Removing colouring cpds from effluents - 70958U/47
KANF 16.01.74 KANEGAFUCHI CHEM KK D16 =J5 0100-282
Increasing growth rate of yeast culture - 24211W/15
KANF 16.01.74 KANEGAFUCHI CHEM KK D16 =J7 9006-633
Increasing growth rate of yeast culture - 24211W/15
KANF 04.02.76 KANEGAFUCHI KAGAKU B05 D16 E16 =US 4148-688
L:methionine stereoselective prodn. - 57931Y/33
•KANF 25.08.77 KANEGAFUCHI CHEM KK B04 D16 *J5 4036-202
De:chromone-carcinostatin - 32477B/17
KANP 27.08.73 KANAGAWA PREFECTURE D15 E36 =J7 9007-151
Treating waste water with ozone - 65405X/35
KAOS 21.06.71 KAO SOAP KK D22 E13 =DS 2229-971
Maleimide cpds. - 48900U/35
KAOS 07.06.74 KAO SOAP KK A97 D25 E17 =J5 0156-506
Improving dimensional stability of surfactant - 32670B/17
•KAOS 07.06.74 KAO SOAP KK A97 D25 E17 *J7 9007-005
Improving dimensional stability of surfactant - 32670B/17
KAOS 05.10.76 KAO SOAP KK A97 D13 =J7 9006-619
Peeling fruit and vegetables in aq. alkali soln. - 39540A/22
KAOS 05.10.76 KAO SOAP KK D13 E17 (E36) =J7 9006-621
Peeling of apples or apricots - 43202A/24
•KAOS 24.08.77 KAO SOAP KK D13 *J5 4035-248
Imitation dairy food prepn. - 32366B/17
•KAZM= 16.08.76 KAZMEKHANOBR NONFER A91 D15 J01 M25 *SU -610-835
Cation exchange resin selective for Gp/V and Gp/VI metals - 32977B/17
•KIBU- 23 08 77 KIBUN KK D13 *J5 4035-236
Strengthened soy bean protein dispersion gel prepn. - 32360B/17
•KIRI/ 10.04.61 KIRIS N D B04 C03 D16 *SU -145-719
Stable dry agglutinating serum for use in brucellosis - 32721B/17
•KOBA- 25.08.77 KOBAYASHI KENKYUSHO D15 *J5 4036-061
Removing ammonia etc. from waste water - 32458B/17
•KOBM 24.08.77 KOBE STEEL KK D15 *J5 4035-168
Fresh water prodn. from sea water - 32318B/17
KOCK/ 23.02.72 KOCKEN A D12 =NL -159-865
Automatic shrimp peeling machine - 53117U/37

KOLE/ 19.07.77 KOLEHAINEN S C03 D13 J04 =FR 2398-304
Determn. of somatic cell count in milk to detect mastitis - 08518B/05
KONN 03.07.74 GIST-BROCADES NV B05 C02 D13 =US 4148-891
Fungicidal compsn contg a polyene antibiotic - 05872X/04
•KUBI 24.08.77 KUBOTA KK D15 J01 *J5 4035-175
Pretreatment for reverse osmosis process - 32322B/17
•KUBI 27.08.77 KUBOTA KK D15 J01 *J5 4035-877
Absorption appts. for heavy metal and organic(s) removal from liq. 32439B/17
•KUNZ- 14.10.77 KUNZEL W MUHLENBAU D16 *DT 2746-314
Malt-house kiln - 31773B/17
KURE 16.09.77 KUREHA KAGAKU KOGYO C03 D16 =GB 2005-708
Nitrogen-contg. polysaccharide active against plant viruses - 26389B/14
KURS 30.09.77 KURARAY KK D13 (D12) =NL 7809-952
Stable, elastic, chewable fibrous milk protein meat substitute 28172B/15
•KUSA/ 25.08.77 KUSANO K D22 E17 *J5 4035-215
Non-toxic, odourless disinfectant - 32348B/17
•KYOW 23.08.77 KYOWA FERMENTATION KK B05 D16 E16 *J5 4035-289
N-Acetyl-L-glutamic acid prepn. - 32376B/17
•KYOW 23.08.77 KYOWA FERMENTATION KK B05 D16 E16 *J5 4035-290
N-Alpha-acetyl-L-ornithine prepn. - 32377B/17
KYOY 24.08.77 KYORITSU YUKI KOGYO A91 D15 (A21) =J5 4035-185
Cationic flocculant esp. for treating effluents - 20258B/11

•LAIT- 19.07.77 CENT LAITIERE HAUTE D13 *FR 2397-792
Food prod. based on milk protein and glucide powders - 31980B/17
•LAND- 19.10.77 LANDUSTRIE SNEEK D15 *BE -871-368
Aerator with vertically adjustable drive mechanism - 31567B/17
LANG- 26.04.74 LANGEN H J & SONS B D12 =IT 1028-808
Tenderising, brining and kneading meat - 74086W/45
LCHO 29.12.75 CHOAY SA B04 D16 =US 4148-877
Atoxic biologically active fraction from bacteria - 49117Y/28
•LEAT= 23.08.76 LEATHER FOOTWARE IN D18 *SU -611-187
Solutions dispenser programmed control equipment - 33090B/17
•LECZ/ 11.10.77 LECZKOWSKI K D15 J08 *EP ---1-382
Water desalination system using natural heat source - 31916B/17
•LEWI- 06.10.77 LEWIS REFRIGERATION D14 *EP ---1-507
Freezer for food prods. in trays - 31961B/17
LEWI- 06.10.77 LEWIS REFRIGERATION D14 =WP 7900-185
Freezer for food prods. in trays - 31961B/17
•LEWI/ 22.05.78 LEWIS J T D14 *US 4148-252
Fruit and vegetable peeler - 33104B/17
•LEZH 19.07.74 LENINGRAD ZHDANOV UNIV D15 J01 *SU -509-287
Inorganic cation exchanger prepn. - 32767B/17
LIFE- 08.07.77 LIFE SAVERS INC A97 D13 =J5 4035-247
Chewing gum with long lasting sweetness - 04517B/03
•LIME= 10.01.77 LITH MEAT DAIRY IND D12 *SU -610-728
Packing large frozen carcasses into plastic bags - 32928B/17
•LINM 12.10.77 LINDE AG D15 J02 *DT 2745-860
Sewage aeration system - 31718B/17
LIOY 31.07.70 LION FAT & OIL KK D25 E19 =NL -159-943
Isothermic thin film sulphonation of org cpds - 12122T/08
LIOY 04.07.73 LION FAT & OIL KK D25 =J7 9007-006
Spray-dried granules of washing or cleaning compsns. - 09497W/06
•LIOY 26.07.77 LION FAT & OIL KK A96 D21 *J5 4035-222
Hair rinsing compsn. - 32354B/17
•LIOY 23.08.77 LION FAT & OIL KK A97 D25 (A25) *J5 4034-306
Heavy-duty liquid detergent compsn. - 32126B/17
LYCK 18.10.77 LYCKEBY STARKEISEFORADIN D13 =DT 2844-896
Enzyme hydrolysis of whole grain esp. wheat - 16027B/09

MANW- 27.07.66 MAN WARME & LUFTTEC D15 J01 =J7 9006-501
Liquid treatment by ion exchange - 58205R/33
MARI- 16.09.77 MARINA SEAFOODS CON D12 =SW 7809-795
Transportation and storage of fresh fish - 30117B/16
•MART/ 12.10.77 MARTINELL RH D16 H01 *WP 7900-201
Gas prodn. from earth formations - 33316B/17
•MATU 26.08.77 MATSUSHITA ELEC IND KK D15 E24 J04 *J5 4036-786
Reagent for quality control of pure water - 32611B/17
MCCA/ 28.04.75 MCCARTNEY J S D22 #US 3976-066
Protective dressing allowing air to reach a wound - 25568A/14
MCNI 26.06.74 MCNEIL LABS INC A60 B03 D21 E13 =CA 1051-907
2-Aryl-4-cyanomethyl-5-methylimidazoles (inters) - 03856X/03
•MEDI= 01.08.76 MEDICAL BIOL PROBL D15 *SU -610-797
Sterile water for long-term storage - 32939B/17
•MEDI= 12.11.76 MEDICAL-BIOLOG PROB D13 *SU -595-895
Space-sickness prophylactic treatment - 32859B/17
MEIJ 04.10.77 MEIJI SEIKA KAISHA B04 D16 =GB 2005-658
Broad-spectrum antibiotic BN-200 - 28137B/15
MERI 17.11.76 MERCK & CO INC B02 C02 D13 (D22) =PT --67-267
Beta-lactam antibiotic 890A-9 - 38809A/22

MERI 17.11.76 MERCK & CO INC B02 D16 =PT --67-268
Beta-lactam antibiotic (890A-10) - 36947A/21
*MERI 02.06.77 MERCK & CO INC B05 C03 D16 *J5 4035-291
Refining of biotics - B/17
MERI 05.08.77 MERCK & CO INC B04 D16 =J5 4035-213
Preserving vaccine from polysaccharide(s) of Neisseria meningitidis - 07792B/04
MERI 11.10.77 MERCK SHARP & DOHME C03 D22 E13 F09 #DT 2745-721
Antimicrobial, antifungal 1,2,5-thiadiazolone-3.cpds. - 32025A/18
METG 11.10.77 METALLGESELLSCHAFT AG D23 E17 =EP ---1-457
Linear hexane free from aromatics - 29954B/16
MIKI/ 01.05.73 MIKI K D15 =J7 9007-149
Ammonical nitrogen removal from water or sewage - 56190W/34
MILE 07.10.77 MILES LABORATORIES INC D13 (D12) =NL 7810-119
Simulated bacon product formed of fat and lean layers - 14203B/08
MINN 09.02.76 MINNESOTA MINING CO A96 D21 =GB 1544-776
Highly pressure-resistant dental material prepn. - 57996Y/33
MINN 26.09.77 MINNESOTA MINING CO D21 M22 =GB 2005-728
Infiltrated, homogeneous metal object - 28158B/15
MISK 30.09.76 MITSUBISHI KAKOKI KAISHA D15 =J7 9006-499
Organic waste liq. treatment - 39159A/22
MITC 28.06.77 MITSUI PETROCHEM IND KK A81 D21 G03 (A14 A96) =US 4148-988
Hardenable adhesive compsn. - 04563B/03
MITN 30.10.75 MITSUBISHI GAS CHEM IND D16 =J7 9006-631
Aerobic culture of microorganisms - 42306Y/24
MITN 24.08.77 MITSUBISHI GAS CHEM IND A97 D13 E36 G04 =J5 4035-189
Two-component oxygen-absorbing compsn. for food preservation - 20271B/11
*MITN 26.08.77 MITSUBISHI GAS CHEM IND D13 E36 G04 *J5 4035-883
Oxygen adsorbent used in food containers etc. - 32443B/17
*MITO 24.08.77 MITSUBISHI HEAVY IND KK D22 *J5 4034-567
Deodorising waste gas from crematorium - 32241B/17
*MITP 20.08.77 MITSUBISHI PETROCH KK A97 D16 J04 *J5 4035-282
Synthetic resin membrane contg. enzyme, microbe etc. - 32369B/17
*MITR 24.08.77 MITSUBISHI RAYON KK A97 D16 F01 J01 (A14) *J5 4036-300
Acrylonitrile polymer fibre adsorbent - 32515B/17
*MLCW 28.12.77 BYK-MALLINCKRODT A96 B04 D16 (A26) *BE -872-879
Stabilised, insolubilised biochemical products - 31618B/17
*MMMM- 12.10.77 MMM MUNCHENER MEDIZ D22 *DT 2745-961
Gas sterilising system - 31728B/17
MNKN 30.09.77 MINAMINIHON RAKUNO KYODO D13 (D12) =NL 7809-952
Stable, elastic, chewable fibrous milk protein meat substitute - 28172B/15
*MOEN/ 12.09.77 MOEN C D15 *SW 7807-612
Toilet for biological decomposition - B/17
*MOHY= 05.01.77 MOSC HYGIENE INST B04 D16 *SU -610-863
Identification of gram-negative enterobacteria etc. - 33005B/17
MOLN 31.08.77 MOLNLYCKE AB D22 =SW 7709-792
Sanitary towel - 20286B/11
MOME= 08.09.77 MOSC MEAT DAIRY IND D16 (D12 D15) #NO 7703-103
Nutritious medium for fodder yeast mfd. from manure, etc. - 66864Y/38
*MONS 30.09.77 MONSANTO CO D25 E12 *US 4148-742
Detergent compsns. contg. chlorine bleach - 33195B/17
*MOPE= 16.04.76 MOSC PEDAGOG INST D23 E11 *SU -586-643
Lecithin derivs. and thione analogues prepn. - 32843B/17
*MORI/ 25.08.77 MORITA S A96 D21 *J5 4036-306
Dandruff and urticaria preventative shampoo prodn. - 32518B/17
MOSU 07.01.74 MOSCOW LOMONOSOV UNIV D16 =DS 2400-511
Continuous propagation of micro-organisms in a closed circuit - 47902W/29
MRSC 10.10.77 MARS LTD D13 (D12) =DT 2843-899
Reducing odour of fish-based food prods. - 27884B/15
MULL- 25.09.75 FA MULLER H D16 =US 4148-590
Fermentation vessel mixing device - 25495Y/15

NAAR 22.07.77 NAARDEN INT NV D22 E19 =FR 2397-832
Chemically active deodorant compsn. - 10235B/06
*NAAR 12.10.77 NAARDEN INT NV C03 D15 (D13 D17) *EP ---1-470
Treatment of waste water from wheat starch prodn. plant - 31944B/17
*NAKA/ 25.08.77 NAKAZAWA T D21 *J5 4035-223
Hair growing agent - 32355B/17
*NAKA/ 25.08.77 NAKAZAWA T D13 *J5 4035-234
Seasoning and enriching agent - 32359B/17
*NATR 04.07.77 NATIONAL RES DEV CORP A41 D16 E19 *J5 4017-184
Hydrocarbon oxidn. in culture medium - 32082B/17
NATY 21.07.70 NATIONAL BISCUIT CO D13 =IT 1028-510
Continuous roasting of cocoa - 08551T/06
*NELR 23.12.77 NELSON RES & DEV B05 D22 E11 *US 4148-878
Platelet aggregation inhibiting phosphate ester(s) - 33254B/17
*NELR 23.12.77 NELSON RES & DEV B05 D22 E11 *US 4148-879
Platelet aggregation inhibiting phosphorus derivs. - 33255B/17
NEST 10.06.74 SOC PROD NESTLE SA D13 =J7 9006-635
Soluble tea extract prepn - 84974W/52
NEST 11.09.74 SOC PROD NESTLE SA D14 =CA 1051-782
Lyophilization of solid, fluid or paste prods - 26726X/15
NEST 17.12.74 SOC PROD NESTLE SA D13 =J7 9006-628
Instantly soluble granules for drinks esp. coffee and tea - 39972X/22
NEWM/ 15.10.76 NEWMAN M E D15 #DT 2646-622
Heat reclamation from sewage disposal system - 82653X/44
*NICH- 08.07.77 NICHINAN KK D13 *J5 4035-230
Prepn. of dried gourd shavings - 32357B/17
NIEM- 23.10.72 NIHON EMULSION KK D21 E16 =NL -160-011
Aminocarboxylic acid diesters - 35799V/19
NIFI- 24.05.75 NIHON FILTER CO LTD D15 M28 =DS 2623-277
Recovery of heavy metals and water from effluent - 92875X/50
NIIG 24.08.77 NIIGATA ENG KK D15 =J5 4036-062
Purifying waste waters contg. cyanide ions - 69164A/39
*NIOF 24.08.77 NIPPON OILS & FATS KK A96 D21 (A25) *J5 4035-221
Cosmetic compsn. - 32353B/17
*NIOF 27.08.77 NIPPON OILS & FATS KK D13 (D11) *J5 4036-305
Highly emulsified fluid confectionery shortening - 32517B/17
*NIPA 12.07.77 NIPPON PAINT KK C03 D13 *J5 4020-889
Fish feedstuff prepn. - 32088B/17
NIPS 30.01.73 NIPPON SODA KK D15 E19 =CA 1052-021
Fixing heavy metals or their cpds in aqs. wastes - 43539V/24
*NISS 26.08.77 NISSHIN FLOUR MILL KK B04 C03 D16 *J5 4035-214
Antidiarrhoeal agent for calves - 32347B/17
*NISS- 19.08.77 NISSHIN SEITO D17 *J5 4035-224
Preventing caking of sugar - 32356B/17
*NISW 24.08.77 NISSHIN OIL MILLS KK D13 *J5 4035-240
Pasty food mfr. using soybean protein - 32362B/17
*NIYU- 23.08.77 NIPPON YUKON KK D13 *J5 4035-243
Quality-improving agent for food and drink contg. lactic and bacteria - 32363B/17
*NMHB 11.03.78 NORDISCH MASCH R BAADER D12 *DS 2810-574
Dispensing device for wooden spits - 31669B/17
*NMHB 04.05.78 NORDISCH MASCH R BAADER D12 *PT --67-991
Fish processing and canning equipment - B/17
*NORD- 26.09.77 NORDA INC D23 E15 *GB 2005-671
Diels-Alder adduct of methyl-pentadiene and methyl isopropenyl ketone - 32053B/17
NPDC 05.09.68 NATIONAL PATENT DEV CORP A16 D22 F06 (A14 A96 F09) =J7 9006-647
Entrapped essences in dry composite fibre - 21465S/12
NPDC 01.08.75 NATIONAL PATENT DEV CORP B07 D21 #CA 1051-698
Dental caries treatment fluid applicator - 24094X/13

OHTA/ 12.12.69 OHTA M A88 D15 F03 H04 =J7 9006-498
Oil-water mixture sepn - 60473T/38
*OLEI- 30.03.71 CENT OLEIFICI COOP D23 *IT 1028-509
Table olive oil industrial prepn. - B/17
OLIN 18.10.71 OLIN CORP B03 C01 D21 E12 (D22) =SW 7812-197
Bis(2-pyridyl-1-oxide) disulphide adducts with alkaline - 25913U/19
*ORCH= 05.01.77 ORCHARD VINE WINE A97 D16 (A14) *SU -610-862
Clarifying drinks, esp. cognac - 33004B/17
OREA 19.02.73 L'OREAL SA D21 E14 =CA 1051-921
Sulphonated benzylidene camphor derivs. - 61833V/35
OREA 08.06.73 L'OREAL SA A96 D21 (A14) =DS 2427-487
Fatty compn. for lipstick and eye shadow - 88665V/52
OREA 22.06.73 L'OREAL SA D21 E24 =DS 2429-967
Hair dye compn contg. para phenylene diamine - 01983W/02
OREA 30.08.74 L'OREAL SA A96 D21 E21 =CA 1051-875
Pyridine-azo dyes - 20716X/12
OREA 27.09.74 L'OREAL SA A96 D21 E21 =CA 1051-876
Hair dyeing compsn contg azo dyes from 3 aminopyridine cpds - 28294X/16
OREA 07.09.77 L'OREAL SA A96 D21 E19 =DK 7803-895
Hair dyeing compsn. contg. specified cationic polymer - 20012B/11
OREA 14.09.77 L'OREAL SA A23 D21 (A96) =GB 2005-705
Hair cosmetic compsns. contg. poly:aspartic acid derivs. - 26385B/14
OREA 12.01.78 L'OREAL SA D21 E12 =FR 2398-061
Bis(2-thio-(N)-oxy-pyridyl) aluminium sulphonate s) prepn. - 06053B/04
*OTSU- 05.10.77 OTSUKA CHEMICAL CO D15 J04 *DT 2843-535
Deoxidising gas with soln. contg. hydrazine, quinone and hydroquinon - 31849B/17
OXOI- 11.01.77 OXOID LTD D16 =GB 1544-995
Appts. for forming non-toxic atmospheres - 53794A/30

PARC- 14.02.74 PARCA NORRAHAMMAR D15 =IT 1028-883
Sewage purification using rotary discs - 42714W/26
PENN 10.03.70 PENNWALT CORP A96 D21 (A16) =J7 9006-838
Dental cements containing water-solubleacrylic acid - 62178S/39
PERS 04.04.75 PERSONAL PRODUCTS CO A96 D22 F07 (A11) =CA 1051-881
Hydrophilic crosslinked cellulose for absorbing body fluids - 61380X/32
PFIZ 17.10.73 PFIZER INC B02 C02 D13 (D22) =DK 7804-563
7-Amino-4-(tetrazol-5-yl or carbamoyl)-ceph-2 or 3-ems - 30564W/19
PFIZ 17.10.73 PFIZER INC B02 C02 D13 (D22) =DK 7804-564
7-Amino-4-(tetrazol-5-yl or carbamoyl)-ceph-2 or 3-ems - 30564W/19

PFIZ 16.04.74 PFIZER INC B04 C03 D16 =US 4148-880
Antibiotic mixtures from Actinoplanes auranticolor A.azureus - 55756Y/31
PFIZ 02.08.76 PFIZER INC D23 E13 (D13) =J5 4036-266
Gamma-pyrones prepn. esp. from furfuryl alcohol cpds. - 00033A/01
PFIZ 02.08.76 PFIZER INC D23 E13 (D13) =J5 4036-267
Gamma-pyrones prepn. esp. from furfuryl alcohol cpds. - 00033A/01
PFIZ 02.08.76 PFIZER INC D23 E13 (D13) =J5 4036-268
Gamma-pyrones prepn. esp. from furfuryl alcohol cpds. - 00033A/01
PFIZ 02.08.76 PFIZER INC D23 E13 (D13) =J5 4036-269
Gamma-pyrones prepn. esp. from furfuryl alcohol cpds. - 00033A/01
PFIZ 02.08.76 PFIZER INC D23 E13 (D13) =J5 4036-270
Gamma-pyrones prepn. esp. from furfuryl alcohol cpds. - 00033A/01
PFIZ 02.08.76 PFIZER INC D23 E13 (D13) =J5 4036-271
Gamma-pyrones prepn. esp. from furfuryl alcohol cpds. - 00033A/01
PFIZ 24 06 77 PFIZER INC B04 C03 D16 (D13) =US 4148-882
Poly:cyclic-ether antibiotics from Actinomycetes ATCC 31286 - 02359B/02
PFIZ 18.08.77 PFIZER INC B04 D16 =US 4148-883
Antibacterial antibiotic 47444 - 18411B/10
PHAS 24.02.75 PHARMASCIENCE LABS B05 C03 D22 E16 =GB 1544-935
Antimicrobial amino-substd. 2-alkanol derivs - 69038X/37
PHIP 29.03.77 PHILLIPS PETROLEUM CO D16 =US 4148-691
Fermentation plant to reduce monocellular protein from methanol etc. - 02417B/02
PIFF/ 12.11.75 PIFFERI P B07 D13 E24 (D21) =GB 1544-654
Extracting red anthocyan dye from litmus seeds - 58037Y/33
PINC/ 30.12.75 PINCON A J D15 E36 J03 K08 (D22) =GB 1544-827
Ozone prodn. - 48994Y/28
PINC/ 30.12.75 PINCON A J D15 E36 J03 K08 (D22) =GB 1544-828
Ozone prodn. - 48994Y/28
• PIND/ 05.02.76 PINDER J A D16 *CA 1051-804
Separate fermentation containers enclosed in single outer container - 31659B/17
• PISH= 17.02.76 PISHCHEPROMAVTOMATI D16 *SU -610-860
Malting process control system - 33002B/17
• PLAN- 08.09.77 PLAN-TEK A/S D15 *NO 7703-110
System for removing gas during a process - B/17
• POLI- 18.06.75 ING POLIN E C SAS D11 *IT 1028-669
Automatic removal of food prods. from baking oven - B/17
• POPU- 11.10.77 POPULATION RES INC A96 D22 E16 (A14 A17 A35) *EP ---1-452
Ampoule for long term storage of polymerisable substances - 31938B/17
• POUP/ 11.10.77 POUPARD M D11 *WP 7900-195
Treating and deep freezing of raised dough prods. - 33315B/17
PROC 27.06.68 PROCTER & GAMBLE CO D11 #NL -159-861
Preparation of crisps - 42837R/24
PROC 17.06.74 PROCTER & GAMBLE CO A97 D25 =CA 1051-744
Washing powder contg. alkoxylated surfactant - 00066X/01
PROC 30.12.74 PROCTER & GAMBLE CO D25 E34 (E33) #CA 1051-617
Free-flowing fluoride salt laundry sour - 86324W/52
PROC 23.06.75 PROCTER & GAMBLE CO B05 D21 E14 =GB 1544-977
Bis biguanides for use in compsns. for tooth care - 03257Y/02
PROC 23.06.75 PROCTER & GAMBLE CO B05 D21 E14 =GB 1544-978
Bis biguanides for use in compsns. for tooth care - 03257Y/02
PROC 14.07.75 PROCTER & GAMBLE CO D23 F06 =GB 1544-863
Conditioning compsn. for fabrics - 40818Y/23
• PROC 30.09.77 PROCTER & GAMBLE CO A97 D13 *EP ---1-460
Coffee prod. aromatisation article - 31940B/17

RABE/ 20.03.74 RABELER H D13 =IT 1028-783
Mfr. of crisps and flakes from foodstuffs - 52439W/32
RAFT 08.07.69 RAFFINERIE TIRLEMONTOISE D17 =J7 9006-616
Saccharose recovery from sugar refinery - 95748R/51
RAIK= 08.09.77 RAIKOLKHOZZHNPROM TRUST D16 (D12 D15) #NO 7703-103
Nutritious medium for fodder yeast mfd. from manure, etc. - 66864Y/38
REGC 27 05 77 UNIV OF CALIFORNIA B04 D16 =PT --68-082
Plasmid contg. gene from a higher organism - 70827A/40
• RENN/ 13.09.77 RENNER H D15 *DT 2741-142
Domestic sewage treatment - 31677B/17
REUT- 21 12 74 REUTER TECN GMBH A88 D14 J01 =US 4148-734
Filter material based on cross-linked elastomeric polyurethanes - 52423X/28
RHEH 26.08.77 VKI RHEINHOLD & MAH D15 H03 J01 =J5 4035-885
Removal of oil from contaminated surfaces - 20153B/11
RHON 13.05.68 RHONE-POULENC SA B04 C03 D16 =NL -160-033
Antibiotic 17967 r p - 40962F/00
RICH 07.11.73 RICHARDSON-MERRELL CANA B02 C02 D13 (D22) =CA 1051-872
2,4-Dioxo-pyrimidinyl cephalosporanic and penicillanic acids - 22544W/14
RIES/ 23.07.77 RIESS G A96 D21 =FR 2397-827
Artificial tooth root of plastic loaded with a bioactive phosphate - 47821A/27
• RIKV 22.08.77 RIKEN VITAMIN OIL KK D23 (D21) *J5 4035-220
Synthetic wax used as hardener for cosmetics - 32352B/17
• RODA- 26.09.72 RODA COSTR SPA D13 *IT 1028-511
Unloading of edible fruit - B/17
ROLN- 02.12.75 AKAD ROLNICZO-TECHN D13 =US 4148-789
Nontoxic albumen concentrate prodn. from rape seed - 42066Y/24
ROLN- 02.12.75 AKAD ROLNICZA D13 =US 4148-789
Nontoxic albumen concentrate prodn. from rape seed - 42066Y/24
ROSE- 04.10.74 OY ROSENLEW W AB D17 E13 F09 =CA 1051-884
Splitting polysaccharides contained in row matls by acid hydrolysis 28607X/16
• ROSP= 09.01.74 ROSPISHCHEPROMAVTOM D11 *SU -516-390
Pastry-confectionery articles prodn. line - 32776B/17
ROUR 16.02.72 ROURE-BERTRAND DUPO D23 E13 =J7 9006-614
Naphthopyrans prepn - 50206U/35
ROUS 17.10.77 ROUSSEL UCLAF D11 =BE -871-293
High protein cellular diet food, e.g. wafer - 31894B/17
• ROUS 17.10.77 ROUSSEL UCLAF D11 *DT 2844-992
High protein cellular diet food, e.g. wafer - 31894B/17
• RUBH 05.09.75 RUBENSTEIN, HELENA INC A96 D21 *US 4148-875
Gel toner compsn. for skin - 33253B/17

SAAR/ 12.09.77 SAARI R D15 J01 =SW 7710-213
Evaporation of liquids in multi-effect system - 29959B/16
• SADR- 04.05.77 SADRYM RACIONAL MEC D13 *PT --67-985
Automatic olive stoning and crushing machine - B/17
• SAEM- 19.07.77 SAEMI SARL D15 *FR 2398-026
Powered reciprocating rake to clear waste water screening grill 32001B/17
SAKA 30.06.77 OTSUKA PHARM KK B02 D16 =J5 4036-255
Deca:hydro-naphthalene-spiro-benzofuran derivs. - 84059A/47
SAKA 30.06.77 OTSUKA PHARM KK B02 D16 =PT --68-035
Deca:hydro-naphthalene-spiro-benzofuran derivs. - 84059A/47
SALV- 07.10.77 SALVE SA D22 =GB 2005-542
Surgical bandage pack - 29976B/16
SANT- 02.05.72 SANTORY CO LTD D16 =J7 9006-632
Accelerating microbial growth in submerge fermentation - 35326V/19
• SCAS- 04.04.75 OFF MECC SAN CASSIA D11 *IT 1028-749
Automatic metering hopper - B/17
SCFA 30.12.69 SCHOLTENS W.A. CHEM FAB D16 H03 J06 =NL -159-932
Pipeline transport deposition prevention - 45403S/27
SCHE- 08.09.77 L SCHEID SPEZI GMBH D12 =DK 7803-770
Injecting powdered salt to cure meat, fish etc. - 04097B/03
SCHU/ 28.07.76 SCHULTZ R D14 =US 4148-596
Press for high speed feedstuffs pelleting - 10670A/06
SCHZ 26.10.70 SCHWEIZER FERMENT AG B04 D16 (D17 D21) =DS 2152-620
Mutanase enzyme - 29598T/19
• SCMZ 17.04.78 SCM CORP D23 *BE -871-273
Hydrogenating crude glyceride oils using nickel catalyst - 31554B/17
SEBS- 26.02.76 SEB SA D14 =GB 1544-777
Automatic stop device for ice-pail - 50438Y/29
SEKI 24.12.75 SEKISUI CHEMI IND KK A88 D15 E19 J01 (A11) =J7 9006-507
Semipermeable membrane formed from cellulose deriv. - 56741Y/32
SEKI/ 29.00.73 SEKIYA Y D13 =J4 9092-262
Artificial chestnut powder used for cakes - 32645B/17
• SEKI/ 29.00.73 SEKIYA Y D13 *J7 9006-624
Artificial chestnut powder used for cakes - 32645B/17
• SEKP 23.08.77 SEKISUI PLASTICS KK A97 D14 *J5 4034-164
Cooling medium for storage of fish, vegetables or fruit - 32108B/17
• SHEF/ 08.12.75 SHEFER I A D14 (D12) *SU -597-106
Fish heat-treatment appts. - 32862B/17
SHIO 22.03.73 SHIONOGI KK B05 D16 =NL -159-990
2-keto-l-gulonic acid prodn. - 69910V/40
SHIO 14.05.75 SHIONOGI KK B02 D16 =GB 1544-844
Penicillins and cephalosporins prodn. - 90987X/49
SHIO 25.08.77 SHIONOGI KK B02 C02 D22 E13 =J5 4036-288
3-Thiadiazolyl-thiomethyl-oxa-de:thia-cephem derivs. - 01945B/02
SHIS 12.02.74 SHISEIDO KK D21 E17 =IT 1028-881
2,6,10,15,19,23-hexamethyl tetracosane for cosmetics - 56035W/34
SHIS 04.09.74 SHISEIDO KK D21 E19 =J7 9006-613
Odourless, stable, permanent wave compsn - 30997X/17
SHIS/ 13.09.77 SHISHKOVA Z P C03 D16 (D13) #SW 7710-264
Culture media contg. vegetable matter and peat hydrolysate 26539B/14
• SHIV 24.08.77 NEW JAPAN CHEM A97 D25 (A25) *J5 4034-307
Non-pollutant detergent compsn. - 32127B/17
SIFR 10 06 74 SOC FR SILICATES SPEC D25 E36 =CA 1051-635
Sodium metasilicate for use in washing up compsns. - 83583W/51
SIFR 10 06 74 SOC FR SILICATES SPEC D25 E36 =CA 1051-636
Sodium metasilicate for use in washing up compsns. - 83584W/51
• SIMM- 13 10 77 SIMMERING-GRAZ-PAUK C03 D13 *DT 2827-923
Activated feedstuffs prepn. - 31817B/17
• SMHL 20 07 77 SIMON HARTLEY LTD D15 *FR 2397-862
Overflows and edges for sludge decantation tanks - 31988B/17
• SMHL 22 12 78 SIMON HARTLEY LTD D15 *BE -873-021
Two-zone activated sludge tank to purify waste water - 31643B/17
SMIT/ 08 01.73 SMITH K C D15 =US 4148-726
Oxygen treatment of sewage - 52431V/29

*SNAM 02.07.76 SNAMPROGETTI SPA C03 D13 *US 4148-928
Removal of glucoside(s) from vegetable matter - 33270B/17
SNAM 14.09.77 SNAMPROGETTI SPA D15 =SW 7809-613
Multistage evapn. plant to desalinate sea-water, etc. - 18035B/10
SNAM 05.10.77 SNAMPROGETTI SPA C03 D16 (D13) =NL 7810-071
Novel strain of Candida valida yeast - 27860B/15
SNAM 13.10.77 SNAMPROGETTI SPA D16 J04 =DT 2844-688
Radial flow catalytic enzyme reactor for isomerisation of fructose - 29762B/16
*SNAM 20.10.77 SNAMPROGETTI SPA B07 D13 E13 (B03) *BE -871-421
2,5-Di:alkyl-4-hydroxy-di:hydro:furanone prodn. - 31582B/17
SNEE- 07.10.77 LANDUSTRIE SNEEK M D15 =NL 7711-017
Sewage aeration system - 30014B/16
*SNOW 19.08.77 SNOW BRAND MILK PRODUCTS D12 *J5 4035-238
Minced fish meat prodn. - 32361B/17
SOLV 25.06.74 SOLVAY & CIE A97 D25 (A14) =CA 1051-741
Washing and bleaching compsns. - 04900X/03
SQUI 28.07.70 SQUIBB E R & SONS INC B04 D22 E16 (E13) =J7 9006-556
Enzyme-inhibiting peptides - 10351T/07
SSIC 01.02.71 STRUTHERS SCI & INT CORP D13 =CA 1051-713
Soluble coffee extract plant - 56778T/36
STAU 04.10.77 STAUFFER CHEMICAL CO D13 E19 =GB 2005-681
Delaying ripening of picked fruit, vegetables, etc. - 33268B/17
*STAU 04.10.77 STAUFFER CHEMICAL CO D13 E19 *US 4148-926
Delaying ripening of picked fruit, vegetables, etc. - 33268B/17
*STAU 04.10.77 STAUFFER CHEMICAL CO D13 E19 *US 4148-927
N-Cyclohexenyl-N-di:alkylamino-ethyl amide derivs. - 33269B/17
STEI- 05.11.76 STEINER S S INC D21 =US 4148-873
Sun-screening compsn. contg. hop extract as UV absorbers - 35229A/20
STER 06.08.76 STERLING DRUG INC B03 D22 E13 G02 (B07 D15 D21 G03) =US 4148-905
Heterocyclic methylene-bis-aza-oxo- and -aza-thio cpds. - 12498A/07
STME- 27.09.75 STAND-MESSO DUISBUR B05 D16 E17 =DS 2543-307
Fermentation process for mfr. of citric acid - 86970X/47
STOP- 24.02.76 STOPPANI SPA D15 E34 M25 =GB 1544-882
Detoxication of residue obtd. in working chrome ores - 61449Y/35
*STTN 07.10.77 STATNI VU TEXTILNI A11 D22 (A96) *NL 7711-034
Oxidised cellulose prods. useful as haemostatic agents - 32684B/17
*SUGA/ 12.08.77 SUGA K A97 C03 D13 *J5 4035-088
Mfg. fish attractant - 32278B/17
SUGA= 19.07.77 SUGAR RES INST D17 J01 #FR 2397-859
Concn. and crystallisation appts. - 86277A/48
SULZ 18.03.77 GEBRUDER SULZER AG C04 D15 =DS 2712-933
Electron beam irradiation plant for fertiliser prodn. from sludge - 67084A/38
*SUME 26.08.77 SUMITOMO ELEC IND KK A11 B07 D15 J01 (A88 A96 A97 J04) *J5 4036-388
Water-insoluble polysaccharide porous materials - 32582B/17
SUMI- 19.08.76 SUMISHO FOODS KK D13 =J7 9006-620
Processed banana prepn. having excellent taste and flavour - 29349A/16
SUTU 12.04.74 SUTURES INC A96 D22 (A25) =IT 1028-550
Wound-cleansing solns contg detergent - 72784W/44
*SVPH= 27.10.76 SVERD PHYSIOTHERAPY D15 E13 J04 (E31) *SU -610-796
Photometric determn. of nickel in natural water etc. - 32938B/17
SVYG 10.02.69 STATNI VU GOTTWALD D18 =US 4148-947
Softening of leather - 58736R/33
SYNT 20.05.77 SYNTEX (USA) INC D13 =J5 4035-252
Dietetic compsn. contg. purified cellulose and pectin - 84056A/47
SYNT= 19.10.68 SYNTH FAT SUBSTITUT D25 F06 =SU -260-065
Dermophilic washing prepns - 53802S/33

TAKE 08.03.62 TAKEDA CHEMICAL IND KK D13 E13 =DS 1795-649
Mixed crystals of guanylic and inosinic acid disodium salts - 09822U/08
TAKS 31.03.70 TAKASAGO PERFUMERY KK D13 =NL -159-866
Expanding chocolate in thermoplastic condition - 66795S/42
TAKS 21.04.73 TAKASAGO PERFUMERY KK D13 =J4 9132-266
Drink prodn. from aloe - 32647B/17
*TAKS 21.04.73 TAKASAGO PERFUMERY KK D13 *J7 9006-627
Drink prodn. from aloe - 32647B/17
*TANI/ 23.08.77 TANI Y D16 *J5 4035-284
Choline oxidase prepn. - 32371B/17
TATL 16.03.73 TATE & LYLE LTD D17 E13 (D13) =J7 9006-526
Saccharose-triglyceride reaction prod. surfactants - 58430V/33
TECD 14.10.77 TECHNICON INSTRUME A89 D13 E13 J04 =DT 2844-233
Analytically determining uric acid esp. in food samples - 27851B/15
TECH- 21.07.77 TECHNIME SA D15 E33 J01 =FR 2397-863
Emulsion or suspension breaking compsn. - 10358B/06
TECN- 19.07.77 TECNICOMPLEX SPA D16 =FR 2398-033
Mechanised digester used to produce fertiliser from organic waste - 84173A/47
TENC 22.08.77 TENNECO INC D22 E13 G02 =J5 4034-331
Aq. pigment dispersion contg. polyoxymethylene oxazolidine biocide - 82193A/46
*TERE- 20.05.77 TECNICAS REUNIDAS D15 *PT --68-053
Purification of domestic and industrial waste water - B/17
TERP/ 09.09.77 TERPLAN G D13 =DK 7803-784
Preventing formation of harmful substances in molten cheeses - 04123B/03
TEXC 19.06.71 TEXACO DEV CORP D15 #DS 2130-476
Sewage and municipal refuse treatment - 26451T/17
THER- 06.11.67 THERACHEM THERAPEU D21 E23 =NL -159-880
Heterocyclic hair dyes - 12611S/07
*THOR/ 11.04.66 THOROGOOD D E A97 B05 C03 D22 (A25) *US 4148-884
Bactericidal compsn. contg. stable halogen complex - 33256B/17
TIVE- 14.09.77 TIVET DEV LTD D12 =SW 7809-659
Moulding sausages etc. with coherent skin-like surfaces - 22039B/12
TOKU 28.09.77 TOKUYAMA SODA KK D23 E17 F06 G02 =GB 2005-679
Direct aliphatic carboxylic acid esterification with ethylene - 28171B/15
*TOKU/ 23.08.77 TOKUTOMI K D16 *J5 4035-295
Caramel colour, viscous syoyu prepn. - 32378B/17
TORA 24.09.76 TORAY INDS INC A96 D22 J01 (A35 A88) =US 4148-606
Sterilising dialyser contg. semipermeable membrane - 25641A/14
*TOXN 23.08.77 TOYO BREWING KK B02 D16 J04 (B04) *J5 4034-293
Electrochemical determn. of cephalosporin cpd. - 32123B/17
TOXN 04.10.77 TOYO BREWING KK B04 D16 =GB 2005-689
Fermentative prodn. of sarcosine oxidase - 30022B/16
TOXO 05.10.76 TOYO SEIKAN KAISHA A97 D13 =J7 9006-619
Peeling fruit and vegetables in aq. alkali soln. - 39540A/22
TOXO 05.10.76 TOYO SEIKAN KAISHA D13 E17 (E36) =J7 9006-621
Peeling of apples or apricots - 43202A/24
TOYM 29.11.72 TOYOBO KK D16 J04 =J4 9077-887
Vertical fermentation reactor - 32665B/17
*TOYM 29.11.72 TOYOBO KK D16 J04 *J7 9006-989
Vertical fermentation reactor - 32665B/17
*TSVO= 10.11.76 TASHK VODOKANAL D15 *SU -590-263
Treatment of active sludge from urban sewage - 32849B/17

*UKRV= 27.12.76 UKRVODOKANALPROEKT D15 *SU -610-908
Water well mud cleaning pump - 33046B/17
UNDE- 19.07.77 UNDERBERG HANDELS D16 =FR 2398-112
Prepn. of bubbling, sparkling and champagne type wines - 84154A/47
UNIC 13.10.77 UNION CARBIDE CORP C04 D15 =DT 2844-498
Combined aerobic and anaerobic sludge digestion - 29750B/16
UNIL 09.08.68 UNILEVER NV D13 =NL -159-867
Proteinageous substance in the mesophase which may be - 09180R/06
UNIL 24.03.72 UNILEVER NV D13 E17 =DS 2314-607
Provolone cheese flavoured foodstuff - 31445U/22
UNIL 09.10.73 UNILEVER LTD D13 =CA 1051-715
Fat compsn. for plastic margarine - 26268W/16
UNIL 06.06.74 UNILEVER LTD A97 D13 (A11) =CA 1051-711
Stabilising system for ice-cream - 84977W/52
UNIL 06.09.74 UNILEVER LTD D24 E13 (D16 E11) =CA 1051-797
Soap compsn. including enzyme and hydrogen acceptor - 41517Y/23
UNIL 31.10.74 UNILEVER LTD D25 =CA 1051-742
Increasing bulk wt of granulated detergent compsns - 36393X/20
UNIL 28.02.75 UNILEVER LTD D13 =GB 1544-906
Textured protein food products prepn. from protein solns - 68741X/37
UNIL 24.09.76 LEVER BROTHERS CO D13 =US 4148-930
Water-in-oil margarine contg. proteose-peptone - 23360A/13
UNIL 15.09.77 UNILEVER NV D24 E17 =SW 7809-694
Soap tablets contg. at least one per cent free carboxylic acid - 20034B/11
UNIL 05.10.77 UNILEVER NV D25 E12 (D21 E17) =NL 7711-287
Liq. soap prod. contg. specified potassium soaps - 25934B/14
UNIL 06.10.77 UNILEVER LTD D18 E11 =GB 2005-717
Nourishing tanned leather - 27865B/15
UNIL 06.10.77 UNILEVER NV D18 E11 =NL 7810-085
Nourishing tanned leather - 27865B/15
UNIL 18.10.77 UNILEVER NV A96 D22 (A25) =BE -871-300
Particulate absorption material with improved wettability with blood - 31891B/17
*UNIL 18.10.77 UNILEVER NV A96 D22 (A25) *DT 2844-956
Particulate absorption material with improved wettability with blood - 31891B/17
UNIL 25.09.78 UNILEVER LTD D24 =GB 2005-587
Striped soap cake extrusion - 28147B/15
UNIS- 01.11.77 UNISCOPE INC A97 C03 D13 =PT --68-118
Lubricating binder for animal feeds - 65374A/37
UNIX 10.10.77 UNISEARCH LTD B01 D23 =GB 2005-714
Wool wax lanolin prepn. from wool degreasing extract - 14214B/08
UNTC 17.10.77 ECODYNE CORP D15 =DT 2845-185
Clarification tank with circumferential inlet trough - 89470A/49
UPJO 14.02.77 UPJOHN CO B02 D16 (B01) =J5 4035-292
4-Hydroxypropyl-hexa:hydro-1,5-indane-di:one - 60739A/34
UPJO 06.09.77 UPJOHN CO B03 D22 E13 F09 =GB 2005-664
Antibacterial deoxy-neamine derivs. and precursors - 22298B/12
UPJO 19.09.77 UPJOHN CO B04 C03 D16 (D22) =DT 2835-295
Antibiotic 354 and its salts and derivs. - 09910B/05

• UPJO 17.10.77 UPJOHN CO B04 C03 D16 H07 *DT 2841-361
Antibiotic CC-1065 - 31828B/17
• UPRO= 06.01.77 UKR PROVISION MACH D17 *SU -610-865
Sugar-beet juice sulphitation unit - 33007B/17
• URKI 27.10.76 URALS KIROV POLY D15 E13 J04 (E31) *SU -610-796
Photometric determn. of nickel in natural water etc. - 32938B/17
• USSA 27.12.77 US SEC OF THE ARMY D13 *US 4148-929
Stabilised frozen potato salad - 33271B/17
• USSH 13.03.78 US SEC OF HEALTH B02 D16 *US 4148-888
Antitumour and antiviral 3-de:aza:adenosine - 33257B/17
• UYMA- 30.09.77 UNIV MALAYA C03 D23 (D13) *GB 2005-713
Recovering protein and oil from coconut kernels - 32059B/17

VEHN- 21.07.77 VEHNA OY AB D17 F09 G03 =FR 2398-097
Unmodified starch adhesives for corrugated cardboard - 11280B/06
VEKE- 30.09.77 VER KESSELWERKE AG D15 =NL 7808-541
Packing for trickling water tower - 28032B/15
• VEND- 20.06.77 VENDO RES INC A88 D15 J01 M25 *J5 4017-381
Device for sepg. ions from aq. soln. - 32083B/17
VEOS 08.02.74 VER OSTERR EISEN & STAHL D15 J01 =IT 1028-849
Removing oil, esp, oil emulsions from factory effluents - 57417W/35
VERE 23.07.77 VER PAPIERW SCHICKEDANZ D22 =FR 2397-797
Absorbent device, esp. baby's nappy - 78440A/44
• VINC/ 28.05.75 VINCI A D14 *IT 1028-571
Plate press for food materials - B/17
VLKR 17.10.67 KONIN VOLKER A NV A97 D15 =NL -159-939
Thickening sludge using polyelectrolytes or cellulose - 24715Q/00
VOLK- 30.12.69 KONIN A VOLKER NV D16 H03 J06 =NL -159-932
Pipeline transport deposition prevention - 45403S/27
• VYRM- 12.10.77 VYRMETODER AB D16 H01 *WP 7900-201
Gas prodn. from earth formations - 33316B/17
• VZUI/ 21.10.77 VAN ZUILICHEM D D13 *BE -871-417
Shelling cocoa pods by IR irradiation - 31580B/17

• WATE= 09.03.76 WATER CONSERVATION D15 *SU -611-143
Detection of organic bodies in effluent by concentration - 33084B/17
• WEIN/ 11.02.76 WEINTRAUB M A89 B04 D16 J04 *US 4148-703
Electrophoretic sepn. of enzymes and peptide(s) - 33172B/17
WELL 01.03.78 BURROUGHS WELLCOME B04 D16 #US 4148-876
Antigenic prepns. contg. pathogen-derived protein - 21921Y/13
WESI 09.08.74 WEST LABORATORIES INC A96 D22 =CA 1051-776
Iodine-poloxamer antiseptic gels - 48255A/27
WESS 12.10.77 WESTFALIA SEPARATOR AG D12 (D15) =GB 2005-656
Abattoir waste treatment - 14269B/08
• WILL/ 26.02.75 WILLIAMSON W R D15 J01 *US 4148-693
Horizontal and compact cylindrical distn. appts. - 33168B/17
WINT- 15.09.77 WINTERHALTER K KG D14 =SW 7712-856
Washing machine to clean vegetables with circulated water - 40419A/23
• WYSS 21.12.77 ESCHER WYSS GMBH C03 D13 *BE -872-899
Treating whole grain cereals to obtain better animal feed - 31622B/17

YAMA- 11.12.73 YAMAHO KK D13 =J5 0089-573
Crisp rice cake prodn. - 32646B/17
• YAMA- 11.12.73 YAMAHO KK D13 *J7 9006-625
Crisp rice cake prodn. - 32646B/17

ZAID 01.07.74 ZAIDAN HOJIN BISEIB B05 D16 =CA 1051-801
Peptidase-inhibitor bestatin - 09548X/06
ZAID 22.07.77 ZH BISEIBUTSU KAGAKU KEN B04 D16 =FR 2398-048
Amastatine A1, A2, A3, B1, B2 aminopeptidase A inhibitors - 55160A/31
ZAID 25.08.77 ZH BISEIBUTSU KAGAKU KEN B04 D16 =J5 4036-201
Antibacterial and antitumour protein antibiotic auromomycin - 20269B/11
ZAID 25.08.77 ZH BISEIBUT B04 D16 =J5 4036-201
Antibacterial and antitumour protein antibiotic auromomycin - 20269B/11
• ZAID 25.08.77 ZH BISEIBUTSU KAGAKU KEN B04 D16 *J5 4036-202
De:chromone-carcinostatin - 32477B/17
ZELI 27.10.71 ZELINSKII ORG CHEM INST B05 D25 E16 #NL -159-953
Dialkylaminoalkylterpenylacetic acids - 30563T/19
ZIER- 06.10.77 VEB ZIERKERZEN DRES D23 M13 #NL 7710-971
Wax candles coated with decorative metal pattern - 28829A/16

32400-F BCD
NL 6716-196 Q00
GB 1200-906 R31
CH -509-771 S37
US 3869-539 W11
FR 1558-980 Q01
NL -159-586 B13
DS 1617-309 B17

40962-F BCD
NL 6906-827 Q00
FR 1588-807 R30
GB 1208-848 R40
CH -500-280 S14
J7 2000-037 T02
CA -892-000 T07
US 3657-420 T19
CS 6903-268 X14
BE -732-946 Q01
DT 1924-431 Q01
SU -544-385 A15
NL -160-033 B17

05775-H BCDH
FR 1554-353 Q00
AU 6832-883 Q01
DS 1642-598 B17

20825-Q ADE
GB 1143-219 Q00
CA -839-670 R17
J7 9006-617 B17+

24715-Q AD
NL 6714-110 Q00
DT 1918-332 R42
NL -159-939 B17

04275-R D
FR 2003-934 R05
CA -880-008 S37
US 3600-744 S38
GB 1268-207 T12
US 3691-591 T40
DS 1912-595 Y28
NL -159-862 B17

04276-R D
FR 2003-935 R05
DS 1912-090 Y38
NL -159-863 B17

04277-R D
FR 2003-936 R05
US 3538-541 R44
DS 1912-089 Y26
NL -159-864 B17

09180-R D
BE -737-277 R06
NL 6912-222 R07
DT 1940-561 R07
FR 2015-397 R33
ZA 6905-591 S16
GB 1265-661 T09
CA -917-495 U02
CH -530-761 U07
DS 1940-561 V42
US 3870-801 W12
J7 5025-534 W38
NL -159-867 B17

40732-R D
GB 1194-831 R23
CA -881-668 S39
DT 1658-052 T22
NL -159-938 B17

41827-R D
J7 0016-788 R23
US 3560-345 S14
GB 1233-744 S20
CH -508-724 S32
CA -884-861 S45
SU -290-542 S49
DS 1767-653 A25
NL -160-032 B17

42837-R D
GB 1195-137 R24
FR 1596-501 R43
SF 7502-026 W51
NL -159-861 B17+

58205-R DJ
GB 1202-718 R33+
US 3554-376 S02
J7 9006-501 B17+

58736-R D
NL 7001-513 R33
DT 2002-541 R35
FR 2032-332 S04
GB 1288-735 T37
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NL -158-549 A48
US 4148-947 B17

76112-R BD
BE -748-701 R41
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US 3594-276 S33
FR 2060-492 S37
J7 2026-283 T30
CA -907-515 T35
GB 1300-850 T51
CH -552-377 V39
DS 2016-274 B17

78576-R D
BE -749-281 R42
DT 2019-262 R45
FR 2041-400 S15
IT 1028-506 B17

94162-R D
DT 2015-604 R51
NL 7004-657 R51
US 3788-090 V06+
CA -963-680 W12
CA -978-907 W51
CA 1001-592 Y01
US 4148-334 B17+

95748-R D
BE -752-442 R51
NL 7009-938 S03+
DT 2032-744 S08
FR 2054-307 S32
DL --82-679 S36
US 3687-727 T37
GB 1310-255 U11
CA -924-714 U18
SU -479-301 X23
DS 2032-744 X52+
J7 9006-616 B17+

12611-S DE
GB 1223-270 S07
FR 1602-547 S16
US 3630-655 T05
CH -537-187 U35
DS 1804-066 X48
NL -159-880 B17

12950-S DE
J7 1006-383 S07
J7 9006-623 B17

17757-S D
GB 1225-273 S10
CA -870-850 S20
J7 2004-035 T06
NL -143-530 V45
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21465-S ADF
US 3567-118 S12+
J7 9006-647 B17

30061-S DE
BE -757-846 S17
NL 7015-560 S18
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CA -882-116 S40
FR 2066-377 S44
GB 1332-190 U40
US 3792-041 V08
J7 6014-485 X23
IT 1028-507 B17

45403-S DHJ
DT 2064-194 S27
NL 6919-600 S29
FR 2074-383 T02
GB 1340-690 U50
NL -159-932 B17

53802-S DF
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SU -260-065 B17

62178-S AD
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J4 6002-538 S42
FR 2084-344 T10
CA -909-414 T38
CH -529-559 U04
GB 1304-987 U05
J7 9006-838 B17

66795-S D
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CH -528-873 T50
GB 1311-609 U13
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08551-T D
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J4 7003-719 T10
CH -528-872 T50
US 3904-777 W38
IT 1028-510 B17

10351-T BDE
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J4 7003-327 T09
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FR 2100-959 T26
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CA -946-837 V21
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GB 1357-122 V25
CA 1002-518 Y03
J7 9006-556 B17

12122-T DE
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GB 1360-826 V30
US 3839-391 V41
J7 4048-409 W04
NL -159-943 B17

17249-T D
NL 7109-754 T11
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ZA 7104-796 T19
US 3699-972 T45
GB 1306-054 U06
CA -929-437 U29
CH -559-521 W17
NL -159-870 B17

25409-T DE
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NL 7112-246 T17
DT 2048-912 T17
J4 7008-161 T18
ZA 7106-662 T29
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GB 1371-038 V43
CH -557-386 W05
US 3899-496 W34
SU -441-709 W51
J7 9006-533 B17

26451-T D
US 3652-405 T17
GB 1300-887 T51
DT 2130-476 U01
FR 2145-748 U18
CA -954-810 V40
J7 7018-669 Y24+
DS 2130-476 B17+

29598-T BD
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NL 7114-567 T19
J4 7009-743 T21
ZA 7106-878 T29
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BE -774-420 U45
GB 1373-487 V46
CH -571-571 X12
CA -996-877 X40
NO 7602-862 X43
DS 2152-620 B17

30563-T BDE
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FR 2161-408 U38
J4 8057-913 U43
GB 1347-323 V08
CA -952-917 V35+
US 3840-571 V42
CH -562-197 W25
DS 2153-832 X21+
J7 6025-006 X34+
NL -159-953 B17+

40514-T DE
BE -776-390 T25
NL 7116-509 T26
J4 7011-926 T26
DT 2159-924 T27
ZA 7107-686 T36
FR 2117-541 T45
GB 1327-320 U34
CH -551-957 V36
US 3845-134 V45
CH -558-147 W09
CH -560-017 W17
US 3883-572 W21
CA -992-981 X31
J5 1079-738 X35
J7 7008-299 Y13
DS 2159-924 A07
NL -159-962 B17

50661-T DE
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US 4014-350 Y29+
CA 1011-758 Y38+
US 4029-108 Y38+
US 4029-107 Y38+
US 4029-106 Y38+
US 4031-902 Y38+
J7 7048-188 A07+
J7 8005-758 A18+
J7 8005-759 A18+
US 4092-989 A31+
J7 9006-640 B17+

56778-T D
DT 2204-732 T36
GB 1314-762 U17
DS 2204-732 A03
CA 1051-713 B17

60473-T ADFH
US 3689-406 T38
GB 1330-339 U38
J7 9006-498 B17

07405-U DE
NL 7209-993 U06
DT 2136-496 U07
BE -786-518 U07
FR 2146-489 U19
J4 8034-891 U28
GB 1377-290 V50
US 3856-815 W01
DS 2136-496 X34
CH -580-617 X47
CH -580-618 X47
J7 7017-027 Y23
NL -159-981 B17

09822-U DE
DT 1795-649 U08+
DS 1795-649 B17+

16019-U DE
DT 2144-425 U12
NL 7211-766 U12
BE -788-166 U12
FR 2151-126 U24
GB 1390-413 W15
CH -580-157 X42
DS 2144-425 Y08
NL -160-031 B17

25913-U BCDE
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NL 7214-067 U19
BE -790-244 U19
ZA 7205-742 U25
FR 2156-768 U33
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GB 1355-776 V23
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US 3890-434 W26
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CH -576-444 X29
CH -578-349 X39
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DS 2248-880 Y41
SW 7812-197 B17

31445-U DE
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DT 2314-607 U41
NL 7213-536 U42
FR 2176-650 V01
J4 9006-157 V12
GB 1400-592 W29
OE 7208-655 W31
CA -978-796 W51
US 3924-014 W51
CH -572-318 X15
DS 2314-607 B17

48900-U DE
DT 2229-971 U35+
US 3843-781 V44
J7 6033-973 X42
J4 8072-339 A17
J7 8008-778 A17
DS 2229-971 B17+

50206-U DE
BE -795-525 U35
NL 7301-464 U36
DT 2305-981 U36
ZA 7300-289 U48
FR 2171-925 U50
J4 8091-074 V06
US 3901-924 W36
GB 1415-046 W48
GB 1415-045 W48
US 3951-875 X18
SU -468-411 X22
CH -577-317 X34
CH -583-222 Y02
CH -583-221 Y02
CA 1008-458 Y17
DS 2305-981 A31
J7 9006-614 B17

53117-U D
NL 7211-720 U37+
DT 2208-476 U38
DT 2222-513 U49
DS 2222-513 V25+
DS 2208-476 V11
NL -159-865 B17+

62769-U ABD
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BE -797-501 U42
DT 2215-539 U44
ZA 7302-180 V06
FR 2186-479 V10
DL -108-099 V48
HU T009-884 W26
DL -114-083 W36
US 3910-825 W42
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GB 1413-383 W46
OE 7402-926 X03
IL --41-885 X18
OE 7410-089 X36
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CH -594-009 A02
SU -537-630 A03
CS 7302-221 A29
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CA 1036-746 A35
SU -589-930 A49
CA 1052-045 B17

69716-U DE
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BE -798-773 U46
DT 2319-429 U52
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DS 2319-429 V17
J4 9047-315 V28
GB 1419-991 X02
CA 1000-733 X51
US 4100-188 A37
DT 2366-216 A49
J7 9006-531 B17

70958-U DEF
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FR 2182-085 V05+
US 3822-205 V29+
J4 9004-684 V40
J4 9003-466 V26
GB 1392-676 W18+
J7 6006-026 X12
J7 8027-581 A35
DS 2320-912 B17+

74974-U D
NL 7306-659 U49
BE -799-675 U49
DT 2319-120 U51
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US 3883-393 W21
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CH -564-086 W34
J7 9006-634 B17

07516-V BDE
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BE -802-208 V05
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ZA 7304-620 V27
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CH -584-033 Y09
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32452-V D
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SU -345-711 V25
SU -282-050 B17

35326-V D
J4 9006-189 V19
J7 9006-632 B17

35799-V DE
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J4 9063-683 W08
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43539-V DE
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52071-V DE
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CA 1051-927 B17

52431-V D
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GB 1452-961 X43+
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CA 1042-568 A48+
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58430-V DE
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SW 7403-520 V46
DK 7401-451 V47
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PT --61-571 W14
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61833-V DE
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BE -811-185 V37
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CH -605-852 A48
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09497-W D
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J5 0024-306 W31
US 3925-226 W52+
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J7 9007-006 B17

19570-W BCDE
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FR 2242-360 W23
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US 3966-819 X28
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NL -159-951 B17

22544-W BCD
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J7 9006-633 B17

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26268-W D
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36172-W BD
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42714-W D
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DK 7500-368 W45
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OE 7500-915 X40
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GB 1480-126 Y29
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46116-W D
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NL 7502-049 W36+
SW 7501-768 W41+
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SF 7500-477 W51+

46116-W
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47902-W D
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CH -582-236 X52+
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51231-W ADE
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56190-W D
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J7 9007-149 B17

57417-W DJ
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57507-W BDE
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SF 7500-442 W51
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58496-W AD
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CA 1052-020 B17

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IT 1028-757 B17

68964-W BCD
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SW 7503-716 W47
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DK 7501-376 W52
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SF 7500-980 X04
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IL --46-971 A14
CH -596-305 A15
OE 7502-449 A31
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72545-W ABD
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FR 2272-670 X12
IT 1028-686 B17

72784-W AD
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J5 0132-119 W51
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63766-A DE
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CS 7506
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DK 7704
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DT 2845
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EP ---1
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FR 2397
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NL 7810
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=122 14201B D25E37

NO 7703
*078 B D12P3
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NO 7802
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OE 7707
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PT --67
=267 38809A B02C02D13
=268 36947A B02D16
*979 B D15H03Q4
*985 B D13
*991 B D12

PT --68
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=037 06200A A14D22F01+P3
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PT --68
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SU -145
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SU -260
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SU -282
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SU -392
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SU -509
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SU -516
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SU -580
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SU -584
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SU -585
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SU -586
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SU -590
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SU -595
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SU -597
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SU -610
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SU -611
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SW 7709
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SW 7710
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SW 7712
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SW 7806
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SW 7807
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SW 7812
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SW 7900
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US 3976
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US 4148
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US 4148
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WEEK B18
20 JUNE 79
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ABSTRACTS

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II - PATENTEE

V - BASIC NUMBER

VII - PATENT NUMBER

Section D:

FOOD
DETERGENTS

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Arrangement of Abstracts

See Appendix I for definition of 'Major' and 'Minor' Countries.

'MAJOR' COUNTRIES – An alerting abstract of every basic and examined equivalent document is provided except for equivalents from Canada, East Germany and Switzerland. The abstracts are arranged in CPI class order and within any one of the 135 classes are in country and patent number order.

'MINOR' COUNTRIES – Basic headings are included in sequence with the entries from the 'Major' countries.

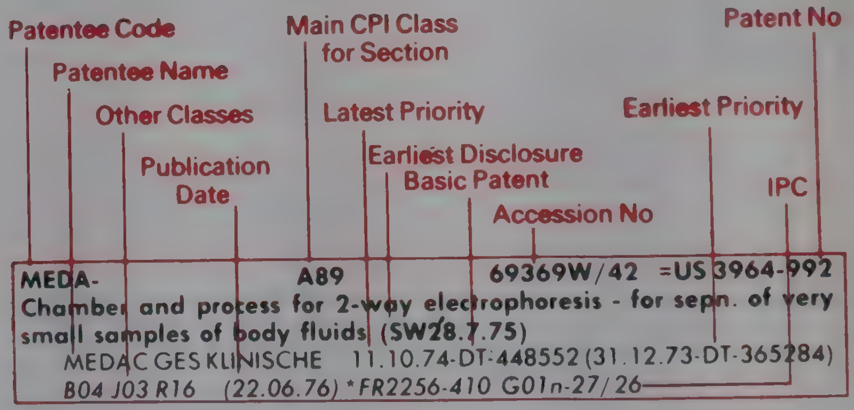
CPI Section Headings

See inside cover for further details.

A	Polymer Chemistry
A+	Polymer Applns.
AE	Polymer & General Chemistry
B	Pharmaceuticals
C	Agricultural Chemistry
D	Food, Disinfectants, Detergents
E	General Chemistry
E+	General Chemistry Applns.
F	Textiles, Paper, Cellulose
G	Printing, Coating, Photographic Chemistry
H	Petroleum
J	Chemical Engineering
K	Nucleonics, Explosives, Protection
L	Refractories, Ceramics
M	Metallurgy

Typical Abstract Heading

See CPI/WPI Instruction Manual No. 1A for explanation of the various flagged descriptors.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Patent No
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Latest Priority
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Publication Date
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Accession No

MEDA- **A89** **69369W/42** **=US 3964-992**
Chamber and process for 2-way electrophoresis - for sepn. of very small samples of body fluids (SW28.7.75)
MEDAC GES KLINISCHE 11.10.74-DT-448552 (31.12.73-DT-365284)
*B04 J03 R16 (22.06.76) *FR2256-410 G01n-27/26*

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D1: FOOD; FERMENTATION

D11 : BAKING

IPE- ★ D11 334048/18 ★BE-873-161
re-steaming hot air bread oven for industrial bakery - uses heat
ccumulator to produce steam for next batch
TIPE REVENT AB 28.12.78 BE-873161
(17.04.79) A21b

he oven is of the type in which hot air is passed in a clo-
ed circuit through the oven chamber and through a regen-
rative heat accumulator. Water is distributed on to the
eated accumulator to steam the loaves just before start-
ng the air circulation.
The accumulator now comprises a considerable number
f massive lumps or blocks of material of high thermal
onductivity, e.g. steel. The blocks are arranged in a
ertical plane which extends across the circulated air
urrent. The blocks are spaced and/or present inter-block
hannels so that the hot air can pass freely through.
Allows rapid steam prodn. in large quantities over a
hort period without using a separate boiler and without
mploying additional heat to that used in recirculated air.
The accumulator is inexpensive and raised the thermal
fficiency of the system. 28.12.78 as 873161 (12pp448)

COS/ ★ D11 B/18 ★BR 7706-301
oft mass compression and extruding machine - has pair of gears
orking with conveyor belt
DA COSTA C P 20.09.77-BR-006301
(17.04.79) A21c-11

ASP- D11 09482V/06 =DS 2234-099
ough elongation attachment - with two belt conveyors and
longation plate loops
FA KASPER J 12.07.72-DT-234099
(26.04.79) *DT2234-099 A21c-03/06

dough handling machine comprising a dough winder foll-
wed by a roll stretching arrangement gives a much more
fficient stretching of the roll of dough, esp. for the bak-
ng of pretzels, without increasing the amount of space
ecessary.
Behind a first roll stretcher there is a second, the
pace between the two being bridged by a steeply inclined
urface. This sloping suface may be formed by an endless
elt running in the opposite direction to the falling roll.
rom the second stretcher there is a conveyor bringing up
he rolls to the level of a worktable. 12.7.72 as 234099
4pp1945)

UNK- ★ D11 335188/18 ★DT 2747-091
nsold bread prepn. for recycling - using tanks with paddle mixers
nd fresh air circulation by exhauster(s)
KUNKEL J MUHLEN 20.10.77-DT-747091
(26.04.79) A21d-13

rocessing plant for recycling of unsold fresh bread inclu
des in each storage tank a conical funnel bottom in which
he stirrer of a paddle mixer is slowly rotated. An exha-
ster at the top of each tank produces a vacuum and causes
resh air to pass from the bottom through the charge in
he tank.
The ground fresh bread is kept in a re-usable condition
or a longer period and the formation of lumps or of mould
s prevented. 20.10.77 as 747091 (8pp39)

ARI- ★ D11 336508/18 ★DT 2845-555
iscuit shaping cutter - made of non-stick plastic with inserted pins
KARISA SPA 21.10.77-IT-028870
A88 (26.04.79) A21c-11/10

haper and cutter for biscuit dough consists of a polyam-
de block with a recess of the desired biscuit shape. The
utter surface is non-sticking for dough and sharp corners
nd pins combine the cutting and piercing action.

the dough from the recess. The cutter is light and the reciprocating masses require little power. 19.10.78 as 845555 (11pp39)

NEST ★ D11 33671B/18 ★DT 2846-045
Instant pasta prepn. with high liq. absorption capacity - by expanding gelatinised dough to form porous centre, cutting and drying
SOC PRODS NESTLE SA 25.10.77-US-844579
(26.04.79) A23l-01/16

Easily re-hydratable, so-called "instant" pasta is made by (i) preparing a layer out of a gelatinised cereal flour dough, (ii) expanding the dough under controlled conditions to impart a high degree of a uniformly porous structure to dough centre, (iii) dividing the expanded dough into pieces having the desired shape, thereby exposing the porous centre of the shaped pieces along their peripheral areas, and (iv) drying.

The pasta may consist of noodles, spaghetti, letters, etc., esp. for preparing instant noodle soups and casserole prods. The dried pieces are quickly re-constituted, e.g in <3 min. by adding boiling water, have high liq. absorption capacity and a high liq. absorption velocity. Their organoleptic properties correspond to those of standard pasta. 23.10.78 as 846045 (34pp200)

JOUL/ ★ D11 33679B/18 ★DT 2846-248
Bran bread prepn. - from dough contg. protein-rich wheat flour and millstone-ground bran prepd. from protein-rich wheat
JOULIN G 21.10.77-FR-031711
(26.04.79) A21d-13/02

The prepn. comprises baking a dough, contg. wheat flour, bran and water, after fermentation has taken place. Novelty consists in using a wheat flour which contains ⩾12-13 (14) wt.% proteins and preparing, the bran from flour which is ground, pref. dry-ground, with a millstone. Pref. after grinding, the bran is screened, to retain only particles having size 0.5-1mm.

The bread is appetising and can be used for diets, to aid and restore normal digestion. Millstone-ground bran is richer in protein and mineral and denser. 20.10.78 as 846248 (7pp200)

FABR/ ★ D11 33771B/18 ★FR 2398-459
Bakery tunnel oven partic. for rapid baked girdle cakes - uses indirect heat exchangers to obviate carcinogenic soot contaminating prod.
FABRE H S 26.07.77-FR-023012
(30.03.79) A21b-01

Both conveying strand and return strand of the belt are sandwiched between heat radiators supplied, with hot gas by burners. The radiators and belt are pref. made of refractory stainless steel to withstand a temp. of 650-750°C. The conveyor speed is about 5-8m/min. to give a baking time of about 60-80 secs.

The indirect heat exchangers obviate prod. contamination with carcinogenic soots which abound in ovens using direct heating. 26.7.77 as 023012 (4pp448).

BOSS/ ★ D11 33772B/18 ★FR 2398-460
Baker's dough dividing machine with volumetric depositing cylinder - uses hydraulic actuating system to obviate troublesome mechanisms
BOSSE J 29.07.77-FR-024436
R13 (30.03.79) A21c-05 G01f-11

The volumetric cylinder has a variable capacity and is pivotally oscillated about a horizontal axis. The outer end of the volumetric cylinder moves alternately to loading and discharging stations. A set of hydraulic power cylinders are used to oscillate the volumetric cylinder and to dis-th of volumetric piston stroke is pref. limited by a stop buffer which can be axially adjusted by rotation of a regulator screw.

The machine cycle operating sequence is pref. automatically programmed with micro-switches actuated by power cylinder motions. Alternatively, the sequencing can be carried out by mechanically tripped, hydraulic pilot valves. 29.7.77 as 024436 (6pp448).

JOUL/ ★ D11 33846B/18 ★GB 2005-980

Prodn. of partially baked bread products - by partially baking dough pieces and sterilising in evacuated packages

JOULIN G 21.10.77-FR-031720

(02.05.79) A21d-13

Partially baked bread prods. are produced by (a) kneading a dough based on flour, water and yeast, shaping the dough into pieces, and allowing to ferment; (b) partially baking the dough pieces and stopping baking after structuration but before coloration; (c) placing the partially baked dough pieces under vacuum and degassing them; and (d) packaging the products and sterilising them by heat treatment while they are in their packages.

The prods. can be stored for several months, after which baking can be completed just before consumption to give bread with a fresh appearance, consistency and flavour; this is esp. useful in the case of 'French' bread, which normally gets stale rapidly. 3.10.78 as 039093 (5pp367)

BREA= ★ D11 34879B/18 ★SU -612-672

Bread and confectionery baking oven - has main baking chamber with antechamber for admitting steam through valve-controlled pipes to even out flow

BREAD BAKING IND (SHEB=) 20.11.75-SU-191895

(16.06.78) A21b-01/46

Baking oven comprises adead-end baking chamber with four-strand conveyor, firebox, heating channels and steam-moistener. Steam and fuel consumption are reduced by installing another chamber in the front block and dividing it into sections by partitions. The steam-moistener comprises intermittently-operating pipes with valves, each of which connects to its own section. The pipes have varying cross-sectional holes to even out the steam supply.

Lavrov, V.N., Zavyalov, A.A., Popov, A.P. et.al. Bul. 24/30.6.78. 20.11.75. as 191895(4pp29)

MOFO= ★ D11 34880B/18 ★SU -612-673

Breadcrumb biscuits prodn. - by press-moulding breadcrumbs, salt soln. and flavouring material mixt.

MOSC FOOD IND TECHN 05.07.76-SU-381147

(16.05.78) A21d-13/08

Bread-crumb biscuits are prepd. by mixing with salt soln. press-moulding the mixt. and drying. The prod. quality is improved by mixing 60-80 wt.% of crumbs with satd. salt soln. and adding 0.5-10% flavouring materials.

Ginzburg, A.G., Zorin, G.I., Folomkin, A.A. et al. Bul. 24/30.6.78. 5.7.76. as 381147 (2pp938)

INGR- ★ D11 35114B/18 ★US 4150-016

Dry powdered gluten modified by a chelating agent - useful as additive for yeast leavened bakery goods

IND GRAIN PRODUCTS 27.02.78-US-881236 (12.02.75-US-549274)

E19 (17.04.79) A23j-01/12 A23l-01/19

Dry powder comprises vital gluten (I) modified by reaction with $\leqslant$ 5 wt.% (on dry gluten) EDTA (or its non-toxic meta salt), citric acid or a non-toxic alkali metal citrate.

The chelating agent is pref. 0.5-3 (esp. 1.25-2) wt.% and the powder has moisture content $\leqslant$8 (esp. 4-6)%. Specified chelating agents are Na_2EDTA salt; NH_4, K or N citrates. The components are blended together in the presence of water at a pH at which the chelating agent is effective, then the homogeneous mixt. dried and ground to powder.

Modified (I) hydrates readily under normal mixing conditions, can absorb more water; and is at least as effectiv in functionality as rehydrated or fresh wet (I). It is esp. useful in rapid baking processes. 27.2.78 as 881236 C.i. 4076845 (+12.2.75, 21.4.76, 29.6.77-US-549274, 679077 811384) (11pp1251)

WILL/ ★ D11 B/18 ★ZA 7702-99

Appts. for prepn. of foodstuffs - comprises die plate with aperture sepd. by ribs for mfr. of sticks from dough material

WILLEMSEN W H 18.05.77-ZA-002996

(19.02.79) A21c-11/18

Die plate is provided with apertures sepd. from each oth by sepg. ribs for use in the mfr. of sticks from dough ma erial, $\geqslant$1 of the opposite walls of the sepg. ribs having a zig-zag formation extending along its length. 18.5.77 as 002996 (14pp)

D12: MEAT; FISH PROCESSING

UNIL D12 81270S/51 =DS 2128-463

Reconstitution of meat - by extrusion in the form of irregularly - located fibres

UNILEVER NV 15.06.70-GB-028882

*(26.04.79) *BE-768-547 +A23j-03 A23l-01/31*

Meat is reconstituted by extruding fibres together with a binding agent, so that at least part of the fibres are aligned in the direction of extrusion. After lateral densification, the end product has an appearance which resembles natural meat very much more. Fibrous, ground meat is extruded in a number of strands simultaneously with an edible binding agent, whilst being separated from it.

After cooking, the binding agent has a different colour from that of the ground meat and the appearance of natural meat is maintained by adjusting the quantity and distribution of the strands of ground meat, relatively to the flow of the binding agent, and the extrudate is densified laterally. 8.6.71 as 128463 (8pp1045)

HART/ D12 58798A/33 =DS 2715-

Two/stage press/cutting of frozen fish blocks - in which block forced through successive perpendicularly orientated horizon ladder grills

HARTMANN K 07.04.77-DT-715535

*P62 (26.04.79) *BE-865-767 A22c-25/18*

A block of a deep-frozen foodstuff, esp. of fish fillets, slit into separate portions, by applying a pressure of at least 100 bar, at a temperature for pref. in the range o -15 to -20°C. The foodstuff is forced through openings formed by a knife grid, which narrow towards their outlets, and it is unnecessary to trim the conventionally si ed fish fillets blocks, so that waste is eliminated.

The pressure ratio used is so low that any loss of qu ity whatever is ruled out and the separate portions produced correspond to those of the usual fish fingers. Wh being simultaneously jumped up in the direction of its height, the block is slit first of all at right angles to it largest face, into a row of plates having the same thickness, the height of which is greater than that of the ori nal block.

On leaving the cutter grid, the plates are pressed i chambers immediately behind the grid, which are clos at their back ends, and the plates remain there until a pressure has built up in them. 7.4.77 as 715535 (7pp1045)

SZCZ/ ★ D12 33525B/18 ★DT 2747-213
Sweet, juicy roast chicken piece prodn. - by roasting in microwave oven, covering in batter and corn flakes and roasting in hot fat
SZCZESNY A 21.10.77-DT-747213
*(26.04.79) A23l-01/**

Roast spring-chicken (or poussin) prepn. comprises (a) dividing the chicken into sections, (b) roasting the sections in a microwave oven, pref. in 10-11 min. (c) surrounding with a batter of dough prepd. from flour, eggs, honey, milk, germ oil and spices, and adding partly crushed cornflakes, and (d) roasting the 'crumbed' pieces in a chip-pan, while swimming in hot fat, pref. in 3 min. at 175-190°C, until batter turns golden-brown.

Over-roasting may be effected in a place other than that for first microwave oven-roasting. Process is partic. suitable for restaurants, deep-frozen convenience foods or take-away foods. Loss of juices is prevented. The chicken pieces have a characteristic, sweetish, new attractive taste and a crunchy, attractive appearance. 21.10.77 as 747213 (10pp200)

MATC- ★ D12 33640B/18 ★DT 2845-208
Small fish processing method - using tailpiece from cross:cut near ventral cavity end for human consumption
MATCON RAADGIVENDE 19.10.77-DK-004651
(26.04.79) A22c-25/16

Small types of round fish, such as Gadus Poutassou, are processed by cutting the fish in two by a cross cut near rear of the ventral cavity. The tail end is processed for human consumption and the front end is turned into fishmeal and other industrial prods.

The processing machines are able to deal with the great masses of caught small fish without wasting parts which are fit for human consumption. The mechanical prepn. of the tailpiece is greatly facilitated and many manual operations are saved. The tailpiece can be filleted by two simple cuts. A higher yield can be obtd. by treating the tailpiece in a separator. Either process can be carried out on board a fishing vessel, including the cutting to fish fingers. 17.10.78 as 845208 (6pp39)

FARH ★ D12 33689B/18 ★EP ---1-545
Cellulose hydrate hose used as sausage skin - is coated externally with permeable elastic copolymer and internally with impermeable film (SF 30.3.79)
HOECHST AG 16.05.78-LU-079665 (05.08.77-LU-077930)
A97 (A11 A14) (02.05.79) A22c-13 B29d-09/08
D/S: E(BE, DT, FR, LU).

Tubular esp. fibre-reinforced sheath consists of an opt. plasticiser-contg. cellulose hydrate coated internally with a water- and water vapour-impermeable thermoplastic film and externally with a layer of permeable elastic copolymer.

The permeable layer pref. consists of (1) a copolymer, (I), contg. major proportions of acrylate- and/or methacrylate ester and smaller proportions of acrylic- and/or methacrylic acid, and/or (2) a copolymer, (II), contg. major proportions of aliphatic diene, e.g. butadiene, isoprene and/or chloroprene and opt. smaller proportions of (meth)acrylate, (meth)acrylic acid, acrylonitrile and/or styrene. The impermeable layer is pref. a vinylidene chloride copolymer.

The sheath is used as a packaging material, partic. as an artifical sausage skin. The sausage skin resists impact and does not tear on cutting.

31.7.78 as 100556 (57pp200)
(G) ISR: DT2512994; DT2512995; FR2212098; DS1302384; FR2224088; GB1444442; US3887713; DT2162204.

BURN- D12 19718A/11 =GB 1545-125
Food product similar to bacon prepd. by extrusion - of fat and lean meat or vegetable protein components to form layers
BURNS FOODS LTD 02.08.77-CA-283885
*(02.05.79) *BE-860-463 A23j-03 A23l-01/31*

Bacon analogue is formed by preparing a comminuted fat component of edible material such as pork, beef, other meats, poultry, fish and vegetable protein; poultry, fish and vegetable protein, preparing a comminuted lean component from similar sources; passing the fat component under pressure through a die and extruding the lean component under pressure at selected locations within the die to form a slab. Orientation of the fat and lean components simulates the orientation of fat and lean portions of a natural bacon slab. The resultant slab is processed.

Prod. has appearance and taste similar to bacon, but is derived from prods. other than pork bellies. A consistent lean/fat ratio is maintained. 5.10.77 as 041422 (4pp931)

KYOK- ★ D12 34102B/18 ★J5 4037-856
Alkaline bleached fish meat prepn. - by filleting fish and spraying fillets with weak aq. alkaline soln, e.g. of sodium hydroxide
KYOKUYO KK 31.08.77-JA-104374
(20.03.79) A23l-01/32

Fish is cut into fillets and their surfaces are sprayed with weak aq. alkaline soln. of pressure 2 to 30 kg./cm.^{2} so that the meat is sepd. from skin, subcutaneous fat and blood coloured flesh. Alternatively the bone portion is sprayed with alkaline soln. under pressure, so that meat adhered to the bone is sepd.

The obtd. bleached meat is of good quality and can be used for prepn. of minced fish flesh.

The alkaline soln. used includes aq. soln. of sodium hydroxide, sodium carbonate, sodium bicarbonate, various kinds of phosphates. The concn. of the soln. is 0.001 to 1.0 wt.%. Typical fishes treated by the present method include scombroid, sardine, etc. 31.8.77 as 104374 (3pp22)

FARE= ★ D12 34629B/18 ★SU -611-600
Automatic adjuster for cutters of fish processing machine - includes additional control circuits for working elements, to extend functional possibilities.
FAR EASTERN POLY 20.12.74-SU-089404
(23.05.78) A22c-25/14

Cutters automatic adjuster for fish processing machines comprises fish length monitor, memory, stepping motors, phototransducers, commutator and amplifier. Additionally the system uses pulses generator, triggers, delay line, limit switches and pulse distributor.

Wider range of applications is made possible by providing the fish processing machine with additional memory, fish presence monitor, data recording pulses distributor, counter and reset units which monitor passage of unprocessed fish.
Sobchenko, V.V., Tokmakov, V.M., Tokmakova, L.I. et al. Bul. 23/25.6.78. 20.12.74. as 089404 (4pp847)

BAKU/ ★ D12 34866B/18 ★SU -612-173
Sausage-meat products mechanical properties tester - has ball on end of vertical rod which is immersed into moving meat sample, creating measured torque
BAKUNTS G V 01.03.76-SU-328198
R16 (26.05.78) G01n-33/12

Device to determine the structural properties of sausage-meat-like products as in Parent Cert. No. 232589, where the apparatus consisted of a ball in a V-shaped shell. The ball was attached to the bottom end of a vertical shaft, which also had a recording scale with a pointer connected by a gear transmission to the vertical shaft, the top end of which was fitted with a compensating spring. Operational reliability of the device is increased by adding a freely-rotating disc on which are spring-loaded contacts and a plate with an electromagnet.
Bakunts, G.V., Seryi, V.S., Khachaturov, B.Kh. Bul. 23/25.6.78. 1.3.76. as 328198 Add to 232589 (5pp29)

TEKH= ★ D12 34881B/18 ★SU -612-674
Fish internal organs removal device - includes hydraulic heads connected to rotor with controlled water supply
TEKHRYBPROM EXP PRD 05.07.76-SU-381548
(21.06.78) A22d-25/14

Device for removing the internal organs from fish, for use in filletting machines which process fish of different types and sizes. A conveying unit has troughs with a rotor connected to a horizontal shaft. The rotor has channels and pipes to supply water, plus radially positioned hydraulic heads with attachments.

Water consumption is reduced, while retaining removal quality, by making each hydraulic head as a hollow cylinder with a cover having guides, a one-way valve and water-supply channels. A plunger is mounted in the guides and has a container with a spring-loaded piston fastened to it.. This is actuated from a template.
Kharibov, L.A., Semyanov, A.P., Lavrentev, B.F. et al. Bul. 24/30.6.78. 5.7.76. as 381548(4pp29)

LEME= ★ D12 34961B/18 ★SU -612-864
Overhead conveyor for moving and weighing animal carcasses - has weighing beam with hollow to which trolley is fed, and rods to remove trolley after weighing
LENGD MEAT IND REG 20.02.76-SU-326375
Q35 (15.06.78) A22b-07 B65g-37/02

The conveyor system for conveying and weighing, e.g. animal carcases hung from trolleys.

The trolleys run along the guide rails and there is an additional conveyor made of endless chains with horizontal pusher rods to feed the trolleys on to the weighing beam. The latter operation is more completely mechanised by installing a rod above the balance beam to remove the trolleys from it after weighing. The drive for the rod and the conveyor operates through a single-turn clutch electromagnet. The number of horizontal pusher rods on the additional conveyor equals the number of trolleys.
Aleksandrov, B.N., Lurakina, L.A., Pavlov, M.S. Bul. 24/30.6.78. 20.2.76. as 326375(4pp29)

STAN/ ★ D12 34970B/18 ★US 4149-296
Fish scraping and gutting glove - with transversely corrugated finger stalls and arcuate scraping edges at finger ends
STANFORD E 02.09.77-US-830100
(17.04.79) A22c-25

A glove has four finger and a thumb stall extending from a palm, at least one stall having a moulded-in sleeve with transverse corrugations for gripping a fish and one end of one or more stalls having arcuate non-resilient scraping edges fixed to it in radially projecting planes.

A hardened blade is pref. insertable from the interior through a longitudinal slot in a stall and has a base ring fitting around a finger or thumb. There is p able wrist band. 2.9.77 as 830100 (4pp1358)

UNEL- ★ D12 34984B/18 ★US 4149-414
Multiple sample extn. from frozen meat block - for testing by advancing carriage with multiple drill heads
ELEC SERVICE 12.12.77-US-859938
R16 (17.04.79) G01n-01/08

A block of frozen meat is placed on a table and clamped against a vertical plate. A carriage assembly is advanced towards the meat block and rotating drills carried by the carriage penetrate the meat to remove meat samples. The drill extend horizontally from the carriage and pass throug apertures in the vertical plate to enter the meat block, while the meat samples extracted by the drills are collected in a box attached to the carriage.

The meat clamp comprises a pair of arms which fit loo sely on horizontal rods. When the arms are rotated to their clamping condition they bind against the rods to prevent horizontal movement of the meat block during drilling.

The appts. simultaneously removed typically five samples from a frozen block of meat so that testing can be carried out prior to processing the meat, e.g. grinding into hamburgers. 12.12.77 as 859938 (11pp295)

NMHB ★ D12 B/18 ★ZA 7801-59
Fish (fillet) skinning machine - comprises roller, skinning knife an guide
NORDISCH MASCH R BAADER 20.03.78-ZA-001596
(30.01.79) A22c-25

A machine for skinning fish (fillets), comprises a skinning roller, a skinning knife, a cutting edge on the skinning knife formed by an acute angle between the two faces of the skinning knife. One of the two faces is provided to press the skin of fish (fillets) against the skinning roller while the other face forms a back face. A guide surface arranged above the back face adjacent the cutting edge an is resiliently displaceable in the conveying direction of fish (fillets). 20.3.78 as 001596 (15pp)

See Also

D13 SU 612677

D13: OTHER FOODSTUFFS

SCHO- ★ D13 33364B/18 ★BE -871-672
Continuous tempering of chocolate mass - involves heating to above m.pt., cooling until crystallisation begins, then reheating
VEB SCHOKOLADEN VER 02.11.77-DL-201811
(30.04.79) A23g

A chocolate mass is tempered by means of a continuous treatment appts. consisting of a buffer vessel pref. equipped with an agitator, followed by a three stage heat exchanger comprising a cylindrical passage with double walls.

The heating/cooling medium flows through the outer skin which is divided into three stages. The tempering consists of heating the chocolate to above its m.pt. cooling it to the point where crystals start to form and then reheating it to the working temp. before passing it on to the forming stage.

The heat exchange vessel is equipped with a combined agitator and conveyor and the duration of each phase is determined by the diameter or trajectory of each stage. The vessels are pref. equipped with wall scrapers which prevent the formation of coagulates of crystals.

The appts. is capable of maintaining the precise degree of crystallisation required without local areas of conglomeration. 31.10.78 as 871672 (F1)(12pp1370)

OLSS/ D13 ✓ 94523R/51 =DS 1767-
Butter like spread from cream separated - from cow's milk
OLSSON I T H (OLS /) 31.03.67-SW-004448
*(26.04.79) *GB1217-395 A23c-15/12*

An edible fat is made by adding to cream 5-30 (15-25)% a refined, vegatable triglyceride oil pref. soyabean oil, before making into butter. The fat is easily spread.
25.3.68 as 767049 (2pp068)

FROL/ D13 83320R/45 =DS 2020-
Sterilisation of apparatus for thermal - treatment of liquids
FROLICH M (FRO /) 28.04.69-CH-006421
*P34 (D22) (26.04.79) *DT2020-303 A23c-03/02 A61l-03*

A plant in which fluids, esp. bacterially acidified milk products, are heat treated in a circuit leading from the product inlet through a heat exchanger to the outlet, an having valves at each end of the line, whilst between in and outlet there is at least one processing vessel, is e -ped with a sterilisation circuit for use when the plant emptied.

The sterilisation circuit ensures that the product tr ment circuit can be sterilised throughout, and allows th plant to be drained completely after cleaning and maint ed in the sterile condition. In addition only a relativel small amount of sterilising liquid is necessary.

Steam and sterile air are fed to the top end of each sel through shut-off and pressure reducing valves, and spray nozzles are connected to a line from a pump. T at their back ends, and the plates remain there until a pressure has built up in them. 7.4.77 as 715535 (7pp1045)

SZCZ/ ★ D12 33525B/18 ★DT 2747-213
Sweet, juicy roast chicken piece prodn. - by roasting in microwave oven, covering in batter and corn flakes and roasting in hot fat
SZCZESNY A 21.10.77-DT-747213
*(26.04.79) A23l-01/**

Roast spring-chicken (or poussin) prepn. comprises (a) dividing the chicken into sections, (b) roasting the sections in a microwave oven, pref. in 10-11 min. (c) surrounding with a batter of dough prepd. from flour, eggs, honey, milk, germ oil and spices, and adding partly crushed cornflakes, and (d) roasting the 'crumbed' pieces in a chip-pan, while swimming in hot fat, pref. in 3 min. at 175-190°C, until batter turns golden-brown.

Over-roasting may be effected in a place other than that for first microwave oven-roasting. Process is partic. suitable for restaurants, deep-frozen convenience foods or take-away foods. Loss of juices is prevented. The chicken pieces have a characteristic, sweetish, new attractive taste and a crunchy, attractive appearance. 21.10.77 as 747213 (10pp200)

MATC- ★ D12 33640B/18 ★DT 2845-208
Small fish processing method - using tailpiece from cross:cut near ventral cavity end for human consumption
MATCON RAADGIVENDE 19.10.77-DK-004651
(26.04.79) A22c-25/16

Small types of round fish, such as Gadus Poutassou, are processed by cutting the fish in two by a cross cut near rear of the ventral cavity. The tail end is processed for human consumption and the front end is turned into fishmeal and other industrial prods.

The processing machines are able to deal with the great masses of caught small fish without wasting parts which are fit for human consumption. The mechanical prepn. of the tailpiece is greatly facilitated and many manual operations are saved. The tailpiece can be filleted by two simple cuts. A higher yield can be obtd. by treating the tailpiece in a separator. Either process can be carried out on board a fishing vessel, including the cutting to fish fingers. 17.10.78 as 845208 (6pp39)

FARH ★ D12 33689B/18 ★EP ---1-545
Cellulose hydrate hose used as sausage skin - is coated externally with permeable elastic copolymer and internally with impermeable film (SF 30.3.79)
HOECHST AG 16.05.78-LU-079665 (05.08.77-LU-077930)
A97 (A11 A14) (02.05.79) A22c-13 B29d-09/08
D/S: E(BE, DT, FR, LU).

Tubular esp. fibre-reinforced sheath consists of an opt. plasticiser-contg. cellulose hydrate coated internally with a water- and water vapour-impermeable thermoplastic film and externally with a layer of permeable elastic copolymer.

The permeable layer pref. consists of (1) a copolymer, (I), contg. major proportions of acrylate- and/or methacrylate ester and smaller proportions of acrylic- and/or methacrylic acid, and/or (2) a copolymer, (II), contg. major proportions of aliphatic diene, e.g. butadiene, isoprene and/or chloroprene and opt. smaller proportions of (meth)acrylate, (meth)acrylic acid, acrylonitrile and/or styrene. The impermeable layer is pref. a vinylidene chloride copolymer.

The sheath is used as a packaging material, partic. as an artifical sausage skin. The sausage skin resists impact and does not tear on cutting.

31.7.78 as 100556 (57pp200)
(G) ISR: DT2512994; DT2512995; FR2212098; DS1302384; FR2224088; GB1444442; US3887713; DT2162204.

BURN- D12 19718A/11 =GB 1545-125
Food product similar to bacon prepd. by extrusion - of fat and lean meat or vegetable protein components to form layers
BURNS FOODS LTD 02.08.77-CA-283885
*(02.05.79) *BE-860-463 A23j-03 A23l-01/31*

is formed by preparing a comminuted fat component of edible material such as pork, beef, other meats, poultry, fish and vegetable protein; poultry, fish and vegetable protein, preparing a comminuted lean component from similar sources; passing the fat component under pressure through a die and extruding the lean component under pressure at selected locations within the die to form a slab. Orientation of the fat and lean components simulates the orientation of fat and lean portions of a natural bacon slab. The resultant slab is processed.

Prod. has appearance and taste similar to bacon, but is derived from prods. other than pork bellies. A consistent lean/fat ratio is maintained. 5.10.77 as 041422 (4pp931)

KYOK- ★ D12 34102B/18 ★J5 4037-856
Alkaline bleached fish meat prepn. - by filleting fish and spraying fillets with weak aq. alkaline soln, e.g. of sodium hydroxide
KYOKUYO KK 31.08.77-JA-104374
(20.03.79) A23l-01/32

Fish is cut into fillets and their surfaces are sprayed with weak aq. alkaline soln. of pressure 2 to 30 kg./cm.^{2} so that the meat is sepd. from skin, subcutaneous fat and blood coloured flesh. Alternatively the bone portion is sprayed with alkaline soln. under pressure, so that meat adhered to the bone is sepd.

The obtd. bleached meat is of good quality and can be used for prepn. of minced fish flesh.

The alkaline soln. used includes aq. soln. of sodium hydroxide, sodium carbonate, sodium bicarbonate, various kinds of phosphates. The concn. of the soln. is 0.001 to 1.0 wt.%. Typical fishes treated by the present method include scombroid, sardine, etc. 31.8.77 as 104374 (3pp22)

FARE= ★ D12 34629B/18 ★SU -611-600
Automatic adjuster for cutters of fish processing machine - includes additional control circuits for working elements, to extend functional possibilities .
FAR EASTERN POLY 20.12.74-SU-089404
(23.05.78) A22c-25/14

Cutters automatic adjuster for fish processing machines comprises fish length monitor, memory, stepping motors, phototransducers, commutator and amplifier. Additionally the system uses pulses generator, triggers, delay line, limit switches and pulse distributor.

Wider range of applications is made possible by providing the fish processing machine with additional memory, fish presence monitor, data recording pulses distributor, counter and reset units which monitor passage of unprocessed fish.

Sobchenko, V.V., Tokmakov, V.M., Tokmakova, L.I. et al. Bul. 23/25.6.78. 20.12.74. as 089404 (4pp847)

BAKU/ ★ D12 34866B/18 ★SU -612-173
Sausage-meat products mechanical properties tester - has ball on end of vertical rod which is immersed into moving meat sample, creating measured torque
BAKUNTS G V 01.03.76-SU-328198
R16 (26.05.78) G01n-33/12

Device to determine the structural properties of sausage-meat-like products as in Parent Cert. No. 232589, where the apparatus consisted of a ball in a V-shaped shell. The ball was attached to the bottom end of a vertical shaft, which also had a recording scale with a pointer connected by a gear transmission to the vertical shaft, the top end of which was fitted with a compensating spring. Operational reliability of the device is increased by adding a freely-rotating disc on which are spring-loaded contacts and a plate with an electromagnet.

Bakunts, G.V., Seryi, V.S., Khachaturov, B.Kh. Bul. 23/25.6.78. 1.3.76. as 328198 Add to 232589 (5pp29)

TEKH= ★ D12 34881B/18 ★SU -612-674
Fish internal organs removal device - includes hydraulic heads connected to rotor with controlled water supply
TEKHRYBPROM EXP PRD 05.07.76-SU-381548
(21.06.78) A22d-25/14

Device for removing the internal organs from fish, for use in filletting machines which process fish of different types and sizes. A conveying unit has troughs with a rotor connected to a horizontal shaft. The rotor has channels and pipes to supply water, plus radially positioned hydraulic heads with attachments.

Water consumption is reduced, while retaining removal quality, by making each hydraulic head as a hollow cylinder with a cover having guides, a one-way valve and water-supply channels. A plunger is mounted in the guides and has a container with a spring-loaded piston fastened to it.. This is actuated from a template.
Kharibov, L.A., Semyanov, A.P., Lavrentev, B.F. et al. Bul. 24/30.6.78. 5.7.76. as 381548 (4pp29)

LEME= ★ D12 34961B/18 ★SU-612-864
Overhead conveyor for moving and weighing animal carcasses - has weighing beam with hollow to which trolley is fed, and rods to remove trolley after weighing
LENGD MEAT IND REG 20.02.76-SU-326375
Q35 (15.06.78) A22b-07 B65g-37/02

The conveyor system for conveying and weighing, e.g. animal carcases hung from trolleys.

The trolleys run along the guide rails and there is an additional conveyor made of endless chains with horizontal pusher rods to feed the trolleys on to the weighing beam. The latter operation is more completely mechanised by installing a rod above the balance beam to remove the trolleys from it after weighing. The drive for the rod and the conveyor operates through a single-turn clutch electromagnet. The number of horizontal pusher rods on the additional conveyor equals the number of trolleys.
Aleksandrov, B.N., Lurakina, L.A., Pavlov, M.S. Bul. 24/30.6.78. 20.2.76. as 326375 (4pp29)

STAN/ ★ D12 34970B/18 ★US 4149-296
Fish scraping and gutting glove - with transversely corrugated finger stalls and arcuate scraping edges at finger ends
STANFORD E 02.09.77-US-830100
(17.04.79) A22c-25

A glove has four finger and a thumb stall extending from a palm, at least one stall having a moulded-in sleeve with transverse corrugations for gripping a fish and one end of one or more stalls having arcuate non-resilient scraping edges fixed to it in radially projecting planes.

A hardened blade is pref. insertable from the interior through a longitudinal slot in a stall and has a base ring fitting around a finger or thumb. There
able wrist band. 2.9.77 as 830100 (4pp1358)

UNEL- ★ D12 34984B/18 ★US 4149-414
Multiple sample extn. from frozen meat block - for testing by advancing carriage with multiple drill heads
ELEC SERVICE 12.12.77-US-859938
R16 (17.04.79) G01n-01/08

A block of frozen meat is placed on a table and clamped against a vertical plate. A carriage assembly is advanced towards the meat block and rotating drills carried by the carriage penetrate the meat to remove meat samples. Th drill extend horizontally from the carriage and pass throug apertures in the vertical plate to enter the meat block, while the meat samples extracted by the drills are collected in a box attached to the carriage.

The meat clamp comprises a pair of arms which fit loosely on horizontal rods. When the arms are rotated to their clamping condition they bind against the rods to prevent horizontal movement of the meat block during drilling.

The appts. simultaneously removed typically five samples from a frozen block of meat so that testing can be carried out prior to processing the meat, e.g. grinding into hamburgers. 12.12.77 as 859938 (11pp295)

NMHB ★ D12 B/18 ★ZA 7801-59
Fish (fillet) skinning machine - comprises roller, skinning knife an guide
NORDISCH MASCH R BAADER 20.03.78-ZA-001596
(30.01.79) A22c-25

A machine for skinning fish (fillets), comprises a skinning roller, a skinning knife, a cutting edge on the skinning knife formed by an acute angle between the two faces of the skinning knife. One of the two faces is provided to press the skin of fish (fillets) against the skinning roller while the other face forms a back face. A guide surface arranged above the back face adjacent the cutting edge an is resiliently displaceable in the conveying direction of fish (fillets). 20.3.78 as 001596 (15pp)

See Also

D13 SU 612677

D13: OTHER FOODSTUFFS

SCHO- ★ D13 33364B/18 ★BE-871-672
Continuous tempering of chocolate mass - involves heating to above m.pt., cooling until crystallisation begins, then reheating
VEB SCHOKOLADEN VER 02.11.77-DL-201811
(30.04.79) A23g

A chocolate mass is tempered by means of a continuous treatment appts. consisting of a buffer vessel pref. equipped with an agitator, followed by a three stage heat exchanger comprising a cylindrical passage with double walls.

The heating/cooling medium flows through the outer skin which is divided into three stages. The tempering consists of heating the chocolate to above its m.pt. cooling it to the point where crystals start to form and then reheating it to the working temp. before passing it on to the forming stage.

The heat exchange vessel is equipped with a combined agitator and conveyor and the duration of each phase is determined by the diameter or trajectory of each stage. The vessels are pref. equipped with wall scrapers which prevent the formation of coagulates of crystals.

The appts. is capable of maintaining the precise degree of crystallisation required without local areas of conglomeration. 31.10.78 as 871672 (F1)(12pp1370)

OLSS/ D13 94523R/51 =DS 1767-
Butter like spread from cream separated - from cow's milk
OLSSON I T H (OLS /) 31.03.67-SW-004448
*(26.04.79) *GB1217-395 A23c-15/12*

An edible fat is made by adding to cream 5-30 (15-25)% a refined, vegatable triglyceride oil pref. soyabean oil, before making into butter. The fat is easily spread.
25.3.68 as 767049 (2pp068)

FROL/ D13 83320R/45 =DS 2020-
Sterilisation of apparatus for thermal - treatment of liquids
FROLICH M (FRO /) 28.04.69-CH-006421
*P34 (D22) (26.04.79) *DT2020-303 A23c-03/02 A61l-03*

A plant in which fluids, esp. bacterially acidified milk products, are heat treated in a circuit leading from the product inlet through a heat exchanger to the outlet, an having valves at each end of the line, whilst between in and outlet there is at least one processing vessel, is e -ped with a sterilisation circuit for use when the plant emptied.

The sterilisation circuit ensures that the product tr ment circuit can be sterilised throughout, and allows th plant to be drained completely after cleaning and maint ed in the sterile condition. In addition only a relativel small amount of sterilising liquid is necessary.

Steam and sterile air are fed to the top end of each sel through shut-off and pressure reducing valves, an spray nozzles are connected to a line from a pump. T other end of the circuit is connected through a valve to the product outlet and a hot water supply and drain are linked in. 25.4.70 as 020303 (4pp1045)

ROHG ★ D13 33497B/18 ★DT 2746-884
Clear or cloudy flocculation- resistant citrus juice prepn. - by treatment with polygalacturonase pectin esterase pectinase and decanting after settling
ROHM GMBH 19.10.77-DT-746884
(26.04.79) A23l-02/34

Naturally clouded citrus juice having pH < 2.5 is (i) treated with a polygalacturonase-pectinesterase-type pectinase at 30 (15-25)°C until the alcohol test on pectin is negative e.g. > 4 (12-24) hrs., and (ii) decanted after settling, to leave a juice stable to further flocculation.

Only pectin-dependant sedimenting materials are de-stabilised. Stable cloudy or clear lemon, lime, bergamotte or grapefruit juice can be obtd. and clarified for lemonade, aroma- or sweet mfr. The clear juices can be conc. from 7-9° Bx to > 70° Bx. 19.10.77 as 746884 (10pp200)

GRAN/ ★ D13 33600B/18 ★DT 2842-419
Water-soluble calcium saccharin salt - for treating calcium deficiency, is prepd. by reacting saccharin acid with calcium cpd.
CAMPAS GRANJA M C 22.10.77-ES-463478
B02 E13 (26.04.79) A23l-01/23

A water-soluble saccharin compsn. is prepd. by reacting acid saccharin with a cpd. contg. non-toxic Ca ions, to form a crystalline saccharin Ca salt. The salt or salt mixt. obtd. can be worked to pills and tablets. Sweetening power of saccharin is retained. In the body, Ca present can be utilised by tissues and bone structure, to overcome Ca deficiency. 29.9.78 as 842419 (6pp200)

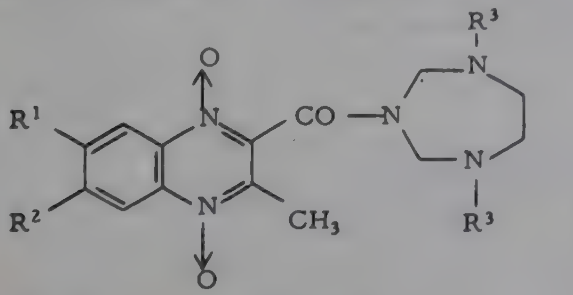
BONG- ★ D13 33645B/18 ★DT 2845-430
Hydrolysed conc. lactoserum for human nutrition - is prepd. by heating hydrolysate to ppte. fine protein and concn. of milky serum in vacuo
GROUPE BONGRAIN 19.10.77-FR-031424
(26.04.79) A23c-23 A23j-01/20

Hydrolysed, conc., non-deproteinated lactoserum is prepd by demineralising the lactoserum to demineralisation degree 60-70% and subsequent hydrolysis to hydrolysis degree 70-90%. Novelty consists in pptg. the lactoserum proteins, in very fine form, by heating > 85°C, while continuously stirring, pref. at pH 5.6-6.4. The milky serum obtd. is then conc. in vacuo to the desired dry solids content, pref. 55-75%.

The prod. can be used in human nutrition, e.g. in sweets or desserts, and can form a fatty, spreadable prod. without adding gums. Prod. retains the gel consistency in the presence of water and has improved preservative properties. 18.10.78 as 845430 (15pp200)

FARB ★ D13 33712B/18 ★EP ---1-618
Quinoxaline-di-(N)-oxide derivs. - antibacterials prepd. from a 2-methyl-3-carbamoyl quinoxaline di-(N)-oxide deriv. with formaldehyde and an imidazolidine
BAYER AG 25.10.77-DT-747700
B02 C02 (02.05.79) A61k-31/55 C07d-241/52 C07d-403/06
D/S: E(BE, CH, DT, FR, GB, NL).

Quinoxaline-di-N-oxides of formula (I) are new



(I)

(R^1 and R^2 are each H, halogen, alkyl or alkoxy; and R^3 is alkyl).

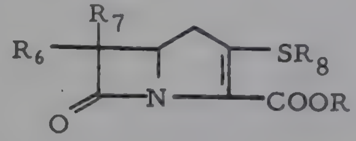
(I) have powerful antibacterial properties. E.g. (I; $R^1 = R^2 = H$ and $R^3 = Me$) administered subcutaneously to mice infected with E. coli Neumann has an ED_{100} of 5-10 mg./kg. Suitable doses are 5-150 (pref. 25-75) mg./kg.

to promote growth and increase the food utilisation, esp. for cattle, pigs and poultry.

13.10.78 as 101134 (15pp1401).
(G) ISR: DT1670935; DT2542899; DT2631520; DT2638732; DT2639429; DT2656783; DT2316765.

MERI ★ D13 33719B/18 ★EP ---1-628
3-Substd.-7-oxo-aza-bi:cycloheptene-2-carboxylic acids - useful as broad spectrum antibacterials
MERCK & CO INC 19.10.77-US-843378
B02 C02 E13 (D22) (02.05.79) A61k-31/40 C07d-205/08 C07d-209 C07d-487/04
D/S: E(BE, CH, DT, FR, GB, LU, NL, SW).

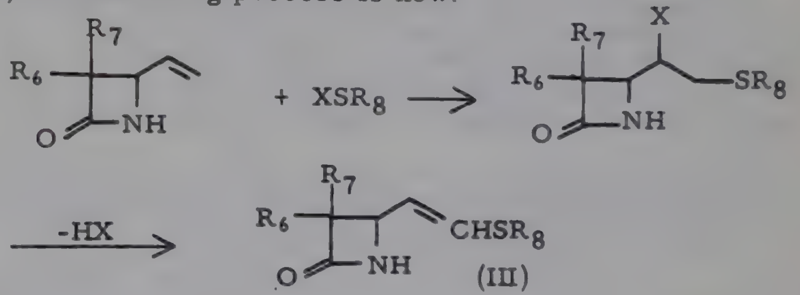
(A) 3-Substd.-7-oxo-1-azabicyclo[3.2.0]hept-2-ene-2-carboxylic acids and derivs. of formula (I) and their salts are new:



(I)

(R is H, a cation or an ester moiety; and R_6-R_8 are H, or the following gps. opt.substd. (a) alkyl, alkenyl or alkynyl contg. up to 10C; (b) cycloalkyl, cycloalkylalkyl or alkylcycloalkyl contg. 3-6C in the ring and 1-6C in the alkyl; (c) Ph, phenylalkyl, phenylalkenyl or phenylalkynyl, the aliphatic gps. having 1-6C in the linear chain; or (d) heteroaryl, heteroaralkyl, heterocyclyl or heterocyclylalkyl, the heterocyclic gps. contg. 1-4 N, O or S;
the substituents are mono-, di- or tri-(1-6C)alkylamino, OH, 1-6C alkoxy, SH, 1-6C alkylthio, PhS, sulphamoyl, amidino, guanidino, NO_2, Cl, Br, F, CN or COOH.
Provided that when (a) one of R_6 and R_7 is H, the other is not 1-hydroxyethyl and (b) when R_8 is $CH_2CH_2NH_2$ and one of R_6 and R_7 is H, the other is not Et).

(B) The following process is new:



(III)

(X = halogen).

(I) are broad-spectrum antibacterials useful as therapeutic agents, additives to animal feedstuffs, for preserving foodstuffs, as disinfectants etc. Dose is 5-600 mg/kg. daily orally. Other derivs. of (I) are disclosed, such as the amides, having similar activity.

16.10.78 as 101157 (93pp1248).
(E) ISR: DT2652676; DT2751597; DT2751624; DT2552638.

STAM D13 34621B/18 =EP ---1-660
Pure benzaldehyde prodn. - by treating contaminated benzaldehyde with an oxidising agent and distilling
STAMICARBON BV 18.10.77-NL-011393
*E14 (D23) (02.05.79) *NL7711-393 C07c-45/24 C07c-47/54*
D/S: E(BE, DT, FR, GB).

Pure benzaldehyde is made by treating contaminated benzaldehyde with an oxidising agent and distilling the mixt.

Process gives high purity benzaldehyde suitable as a starting material for the prodn. of aromatising and flavouring agents. The purified prod. has a much reduced tendency to discolouration cf. prods. purified by prior art methods.

11.10.77 as 200237 (10pp513).
(E) ISR: DS1236493; J49424467; 3 Journal References.

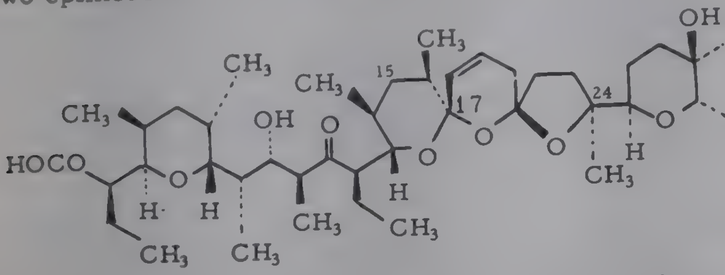
ELIL D13 19939B/10 =EP ---1-709

Antibiotics 20-deoxy-narasin and 20-deoxy-epi-17 narasin - useful as antibacterials, anticoccidials, antivirals, feed utilisation improvers, cardiotonic agents etc.

ELI LILLY & CO 20.10.77-US-844087
*B03 C02 E13 (02.05.79) *US4141-907 C07d-307 +A23k-01/17 C07d-311 C07d-493/20 C12d-09/14*

D/S: E(DT, GB, NL, SW).

20-Deoxynarasin (I), its 17 epimer, the complex of the two epimers and their salts are novel.



(I)

(I) are coccidiostats, animal feed conversion improvers, antibacterial agents, ion binding agents for removal of toxic cations from industrial waste water and desalination of water, APTase inhibitors, cardiotonic agents and antiviral agents and for treating enterotoxaemia in ruminants.

17.10.78 as 300514 (56pp916).

(E) ISR: GB1512568; GB1378414; 2 Journal References.

SOUL/ ★ D13 33773B/18 ★FR 2398-462

Making cheeses with firm paste from goats milk - including two/stage mixing and premoulding with pressing

SOULIE Y A H 28.07.77-FR-023291
(30.03.79) A23c-19/02

The process comprises, after pasteurisation, inoculating with lactic ferment and then treating the milk with rennet, the following. The clot is cut up and then submitted to a two-stage mixing, then to a pre-moulding before final moulding during which a light pressing is effected to control the final acidity. The products are then brined followed by an anti-fungal surface treatment. The crust is then dried followed by coating with wax prior to storage and ripening.

Process gives prod. which may be stored for long periods without adversely affecting quality or appearance.

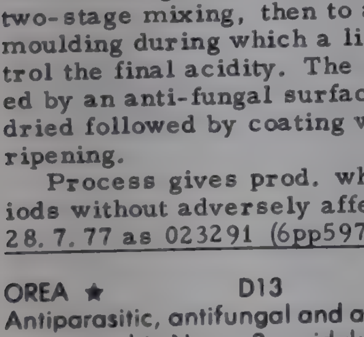
28.7.77 as 023291 (6pp597).

OREA ★ D13 33778B/18 ★FR 2398-501

Antiparasitic, antifungal and antibacterial pharmaceutical compsns. - contain bis-N-oxy-2-pyridyl:thio-aluminium sulphonate cpds. as active ingredient

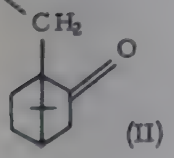
L'OREAL SA 25.07.77-LU-077839
B03 C02 (30.03.79) A61k-33/06

Pharmaceutical compsns. for human or veterinary medicine and animal feedstuff additives comprise, as active agent(s), cpd(s). of formula (I).

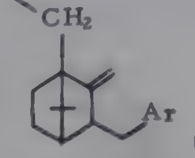


(I)

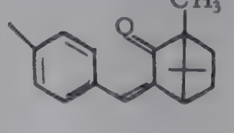
In (I) R_1 is 1-4C alkyl; phenyl substd. by CH_3, Cl or OH; 3-pyridyl, 8-quinolinyl; or a gp. of formulae (II)-(VI) where Ar is Ph or p-tolyl; and R" is H or I.



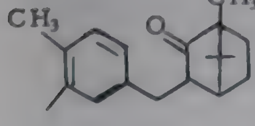
(II)



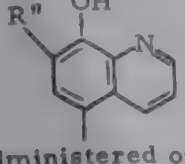
(III)



(IV)



(V)



(VI)

The compsns. are administered orally or parenterally and are partic. useful against parasitic infections of the pulmonary and gastrointestinal tracts. Doses are pref. 0.001-200mg/kg. 25.7.78 as 021914 (10pp949).

LIQF D13 29103Y/17 =GB 1545-046

Liquid animal feed for prevention of hypomagnesiemia - contains a sugar syrup, magnesium chloride and a thickener and/or emulsifier

LIQUIFEEDS LTD 21.10.75-GB-043145
*C03 (02.05.79) *BE-847-476 A23k-01/17 +A61k-31/71 A61k-33/06*

A liq. feed for animals, esp. ruminants, contains a sugar syrup forming 40-80% of the liq. feed and with a sugar content such that feed contains 20-40% sugar; a Mg-salt soln. forming 20-60% of the liq. feed and with a Mg-content such that the feed contains 1.6-4.8% Mg calculated as elemental Mg; and a thickener other than a syrup; and/or a dispersant.

Pref. the Mg-salt is magnesium chloride, the thickener is a heteropolysaccharide and the dispersant is an alginate. Feed pref. further contains sodium chloride or bicarbonat and phosphoric acid.

Esp. useful in the prevention of hypomagnesaemia.

21.10.76 (3pp931)

CASM D13 42127A/23 =GB 1545-168

Prepn. of food prod. from mushroom stumps - by removing loose dirt, washing and forming a puree

CASTLE & COOKE INC 01.02.77-US-764703
*(D16) (02.05.79) *US4085-233 A23l-01/28 +A23n-13 A23n-15*

A useful food prod. is produced from a waste mushroom material contg. mushroom stumps. Prepn. comprises cleaning the dry material to remove loose dirt, washing the cleaned material under pressure to remove further dirt, breaking down the material to small particle size to form a puree, and removing the remaining dirt from the puree.

Pref. the puree is pasteurised, then concentrated. Cleaning step includes sending the material through a perforated or apertured drum rotating at 5-50 r.p.m., while dirt drops out through the drum.

Mushroom stumps are used in food prods. as flavourin agents in soup bases and in bauillon cubes, protein-flavou potentiators, dips, gravies, and pet foods. 20.9.77 as 039207 (5pp931)

MATH/ D13 63473X/34 =GB 1545-20

Stripping Brussels-sprouts from stalks - with spring-loaded rotatin plates defining a variable diameter frusto-conical opening for th stalk

MATHEWS R W 27.03.75-GB-012986
*+P12 (02.05.79) *BE-840-102 A23n-15/**

Brussel sprouts are removed from stalks by appts. whic has a rotatable blade assembly defining an aperture for t stalk. The assembly has ≥ 2 blades arranged in pyrami dal form to define the aperture. The blades are displace able in response to pressure from a stalk to alter the shape of the aperture.

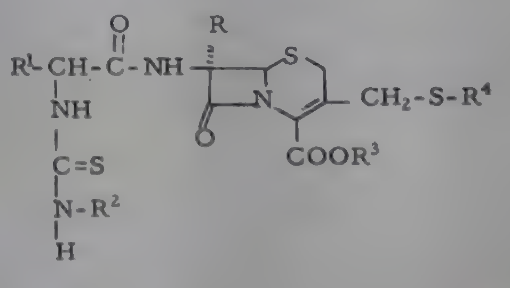
The blades are pref. displaceable laterally and angula ly w.r.t. the rotational axis of the assembly. Pref. thr blades are freely mounted on the assembly. Mechanised harvesting of sprouts can be achieved. 23.3.76 (11pp137

SQUI D13 11549Y/07 =GB 1545-2

Antibacterial (alpha)-thioureido cephalosporins - prepd. e.g. reacting (alpha)-amino cephalosporins with isothiocyanates

SQUIBB E R & SONS INC (CHEB) 30.07.75-US-600341
*B02 C02 (02.05.79) *DT2634-431 A61k-31/54 C07d-501/ +C07f-07/22*

New 7-a-thioureido-acetamido-cephalosporins are of fo ula (I).



(I)

In the formula R is H or OCH_3. R^1 is H, lower alkyl cyclo-lower alk(en)yl, cyclo-lower alkadienyl, thienyl, furyl, phenyl-lower-alkyl or phenyl opt. substd. by hal gen, OH, NH_2, lower alkyl, or lower alkoxy. R^2 is H, lower alk(en)yl, cyclo-lower alkyl or lower alkanoyl. R^3 is H, lower alkyl, (di)phenyl-lower alkyl, tri(lower alkyl) silyl, a salt-forming ion, or $-CH(R^6)-O-CO-R^5$ (where R^5 is lower alkyl, phenyl or phenyl-lower alkyl, and R^6 is H or lower alkyl) R^4 is a 5- or 6-membered heterocyclic ring contg. C and 1-4 atoms selected from N, S and O opt. substd. with 1 lower alkyl, lower alkoxy, halogen or exocyclic O, provided that when R^4 is a 5-membered heterocyclic ring, the ring contains $\leq$ 4N atoms and/or $\leq$3 O or S atoms.

The new cpds. have a broad spectrum of antibacterial activity against both gram positive and gram negative organisms, and can also be used as nutritional supplements in animal feeds. 5.7.76 as 027897 (26pp990)

MITN ★ D13 33954B/18 ★J5 4037-088

Oxygen absorbent used in enclosed environment with moist food - comprises metal halide mixed with iron cpd. and opt. water

MITSUBISHI GAS CHEM IND 30.08.77-JA-103788

A92 E36 G04 (19.03.79) A23l-03/34 B01d-53/16

Agent consists of a mixt. of metal halide and cpd(s) from iron carbide, or carbonyl, and ferrous (hydr)oxide, opt. water is added to the mixt. Pref. the metal halide is fluoride, chloride, bromide, or iodide of Na, K, Mg, Ca, Ba, Fe, Al, Co, Ni, Sn, Zn, or Cu.

In an example, 4 g. iron carbide was mixed with 2 g. KCl and packed in a porous bag made of a polyethylene film to obtain an oxygen absorbing agent. The agent was set with 20 g. of bread in an enclosed vessel of 500 ml. of volume. After 24 hrs., oxygen concn. of the enclosed vessel was 4.2% and after 48 hrs. 0.01%. 30.8.77 as 103788 (5pp51)

KAOS ★ D13 34098B/18 ★J5 4037-843

Emulsifier prodn. for foodstuffs - by melting mixt. of sorbitol or sorbitan fatty acid mono:ester and glycerine and/or propylene glycol fatty acid ester, cooling etc.

KAO SOAP KK 26.08.77-JA-102452

E17 (20.03.79) A21d-02/16 A21d-13/08 A23l-01

2-30 wt.% Sorbitol (12-18C) fatty acid monoester having HLB of $\geq$10, the fatty acid or sorbitan (12-18C) fatty acid monoester having HLB of $\geq$10, and 98.70 wt.% of glycerine fatty acid ester, propylene glycol fatty acid ester or their mixt. are melted under heating, and cooled to solidify and crushed into powder or flake.

The agent can easily be dispersed into water, has no bad influence upon taste of foodstuffs and has high emulsifying ability. In an example, commercially available sorbitan monooleate is distilled to collect main fraction which has HLB of 10.8. 55 Grams of this fraction is mixed with 80 g. of glycerine stearate and heated at $\geq$70°C. and then cooled and crushed to give fine powder. 26.8.77 as 102452 (5pp22)

FUKO ★ D13 34099B/18 ★J5 4037-846

Frozen protein prepn. - by washing and neutralising acid-pptd. soybean protein curd, heating, cooling and freezing

FUJI OIL KK 29.08.77-JA-103886

(20.03.79) A23j-03 A23l-01/20

Acid-pptd. curd of soybean protein is washed with water, and neutralised, to give a prod. of solid content $\geq$15%. This is homogeneously heated at 70-160°C., followed by cooling and freezing to give frozen protein.

Prod. has high elasticity and whiteness and can be used as a substitute for minced fish meat in paste foodstuffs, such as Kamaboko, Chikuwa, etc.

In an example, defatted soybean was extracted with dilute aq. alkaline soln. to give protein a component, mixed with acid to give curd, which was then washed with water. The prod. was dried and neutralised to pH 7.0 and heated at 80°C. for 120 secs., followed by cooling to 55°C. and then freezing to -40°C. The prod. could be used as a substitute for minced fish meat after defrosting. 29.8.77 as 103886 (8pp22)

NIKO- ★ D13 34100B/18 ★J5 4037-847

Frozen bean curd prepn. - includes mixing devil's tongue with protective colloid and adding soya bean juice and coagulating agent

NIPPON KONNYAKU KYO (MIYA-) 30.08.77-JA-103826

(20.03.79) A23l-01/20

One wt. part of devil's tongue or its deriv. powder is mixed with a suitable amt. of protecting colloidal agent and water, followed by agitation, and the resulting protecting colloidal swelled soln. is mixed with 0.1-80 wt. pts. of soya-bean juice with addition of coagulating agent for devil's tongue and that for soya-bean juice at the same time or separately, followed by agitation, and the resultant is then boiled, shaped, cut, frozen, aged, de-frozen, dehydrated and dried, whereby there is obtd. frozen bean curd.

The curd has good taste, touch and appearance and contains high quantity of protein, and thus can be used as substitute for frozen bean curd prepd. only from soybean as an important vegetable protein source. The protecting colloidal agent and the coagulating agents may be conventional. 30.8.77 as 013826 (5pp22)

NAKA/ ★ D13 34101B/18 ★J5 4037-850

Alkaline refreshing drink with therapeutic properties - contains extracts of tangle and green sea weed or Myxophyceae, sweetening agent and organic acid

NAKAZAWA T 25.08.77-JA-102048

B04 (20.03.79) A23l-01/33 A23l-02/38

Extract of tangle is mixed with extract of green sea weed or Myxophyceae homogeneously, and the mixt. is further mixed with sweetening agent and organic acid.

For example, 4 g. of equivolume mixt. of tangle and Spirulina is extracted with 30 ml. of ethanol by keeping the mixt. standing for 50 hrs. with agitation 5-6 times during this period. The extract is subjected to filtration, and the filtrate is warmed on a water bath heated at 30-40°C. to evaporate ethanol. This soln. contains the active ingredients, and the soln. is then diluted with water 20 times as much volume. To the soln. are added sugar, citric acid and antiseptics. Thus obtd. compsn. has good taste and flavour and is effective for curing various kinds of illnesses. 25.8.77 as 102048 (2pp22)

NIOF ★ D13 34103B/18 ★J5 4037-858

Storage stable whipped cream prepn. - by mixing butter or oil with fat or oil higher m.pt. and adding a non-fat solid milk component

NIPPON OILS & FATS KK 31.08.77-JA-104407

(20.03.79) A23c-09 A23c-13 A23g-09

In prepn. of whipped cream using butter or oil as the fat source, butter or oil is mixed with fat or oil having m.pt. higher than that of the butter or oil, whereby the m.pt. is increased 2-5°C., and no-fat solid milk component is added so that the total content of non-fatty milk component in the compsn. is increased by 2-5 wt.%. The cream has good taste, good processability, good storage stability, etc.

In an example, 47 pts. of butter oil, 53 pts. of milk and 0.1 pt. of Na hexametaphosphate are blended with one another, and the compsn. is mixed with 0.7 pt. of soybean lecithin, and 0.8 pt. of sugar fatty acid ester, as emulsifiers, followed by heating at 70-75°C. for 15 mins., homogenising under pressure of 40 kg./cm.^{2} and cooling to $<$10°C. 31.8.77 as 104407 (8pp22)

SUMO ★ D13 34104B/18 ★J5 4037-860

Preserving eggs during storage by application of a coating agent - consisting of gelatin or a mixt. of inorganic material e.g. calcium carbonate and gelatin or starch e.g. wheat starch and gelatin

SUMITOMO CHEMICAL KK 29.08.77-JA-103916

(20.03.79) A23b-05/06 A23l-03

Coating agent for egg storage, comprises gelatin, or a mixt. of gelatin and inorganic material or a mixt. of gelatin and starch. By coating the surface of the egg with the compsn. the freshness of the egg can be kept for a long period, without impairing taste or quality.

The gelatin may be any one, the inorganic material includes calcium carbonate, talc, diatomaceous earth, etc., which is pref. of particle size $\leq$10 μ. (pref. $\leq$1 μ). The starch includes wheat starch, potato starch, soluble starch, oxidised starch, etc. The amt. of starch used is 10 to 300

D 13: OTHER FOODSTUFFS -p. 8

organic material used is 1 to 100 wt. pts. relative to 100 wt. pts. of gelatin. The compsn. is made into a 1 to 20 wt.% aq. suspension, and coated on the surface of egg by spraying or immersion, followed by drying at 30 to 70°C. 29.8.77 as 103916 (3pp)

AOKI/ ★ D13 34116B/18 ★ J5 4037-896
Enhancing flavour of soybean paste - by adding Chlorella extract
AOKI S 29.08.77-JA-102631
(20.03.79) A23l-01/20

Process comprises adding >0.2% on the wt. of soybean paste of a soln. extracted from Chlorella in the presence of lactic acid bacteria or extraction soln. with hot salt water. Addn. is made during prepn. of raw material for s soybean paste, or to semi-finished soybean paste or finished soybean paste.

The lactic acid bacteria is e.g. lactobacillus Brugaricas and/or yugrti. The extn. soln. of Chlorella is produced e.g. by extracting in the presence of lactic acid or lactic acid bacteria, or by dissolving Chlorella powder in water and adding salt. Extn. soln. contains growth accelerating factors such as vitamins and aminoacids. 29.8.77 as 102631 (6pp43)

KASH- ★ D13 34177B/18 ★ J5 4038-282
Scorching inhibitor for cooking utensils - is prepd. by mixing edible oil, lecithin and water with a poly:ol, and adding to LPG as jetting agent
KASHIWA KAGAKU KOGY 01.09.77-JA-104213
G04 P28 (22.03.79) A47j-27 C09k-03/30 C10m-01/06

A scorching inhibitor is mfd. by making up a base prepn. comprising 100 pts. of the emulsion of 6-55% edible oil, 1-48% lecithin, and 40-94% water and 0.1-4 pts. of a polyhydric alcohol, and packing 9-7 pts. of the base prepn. and 1-3 pts. of LPG as a jetting agent into a pressure container with accessories, e.g., sprayer, etc. The edible oils used include sorbitan fatty acid esters, glycerol fatty acid esters, propyleneglycol fatty acid esters, etc.

The scorching inhibitor prevents the scorching of foods upon cooking without causing the deterioration of foods being cooked, and reduces the amt. of edible oil used. 1.9.77 as 104213 (4pp117)

NISS ★ D13 34504B/18 ★ J5 4039-693
Checking state of minor constituents in blended animal feed - by mixing copper chlorophyllin sodium with other minor constituent and spectrophotometric or visual determn.
NISSHIN FLOUR MILL KK 05.09.77-JA-106453
C03 J04 R16 (27.03.79) A23k-01 G01n-09

Method comprises mixing copper chlorophyllin sodium with other minor constituents, blending the mixture as minor consistuent into blended food, and checking the blended state of minor constituents by detecting the copper chlorophyllin blended.

The blended state of minor constituents in blended animal feed can be rapidly and surely checked by simple and safe process.

Specifically the amt. of Cu chlorophyllin sodium added is $\geqslant$0.005-0.03% or more based on total amount of blended animal feed. Copper chlorophyllin sodium colours very sensitively and can be determined precisely by spectrophotometer (at 630 nm. and 405 nm.) or be detected visibly by eyes. Minor constituents to be checked are vitamins, antibiotics, etc. 5.9.77 as 106453 (5pp50)

TONO/ ★ D13 34537B/18 ★ J5 4040-176
Granular feedstuff prepn. - by granulating mixt. of fish meal, seaweed powder, humus and dry powder of gramineous plant
TONO-OKA K 02.09.77-JA-104755
C03 (28.03.79) A23k-01/20

Prepn. of granular feed-stuff comprises mixing fish meal, marine weed powder and humus soil with dry powder of gramineous plant such as grass, and then pressure-formulating the mixt. as granules.

The feed-stuff gives resistance against disease and a high unit of nutrition, to domestic animals such as cows, pigs, and hens, and increases the birth ratio, further promotes the growth. Since it contains humus soil, it keeps the acidic property. It can be easily digested. Since it is compressed and dried, it has a small volume, and therefore, it can be easily stored and transported. Since i contains humus soil, there does not occur the generation of fungi or putrefication. 2.9.77 as 104755 (3pp108)

ORIY ★ D13 34538B/18 ★ J5 4040-197
Feedstuff for plankton - obtd. by dispersing fat and oil in water as fine particles
ORIENTAL YEAST KK 06.09.77-JA-106353
C03 P14 (28.03.79) A01k-61 A23k-01/18

Feed-stuff for plankton, is obtd. by dispersing fat-and-oil in water as particles of size 1-20 µ. In the cultivation of plankton which takes as food baker's yeast, the feed-stuff in an amt. of 0.003-0.012% (calculated as the weight of fat-and-oil) is added to the culture liquid.

The fat-and-oil is taken by plankton and is accumulated in the body. The obtd. plankton is used as feed-stuff for c tivated fish.

As fat-and oil there is pref. used one which is liquid at 20-30°C. The used amount of fat-and-oil is 0.003-0.01 % of the culture liquid of plankton. 6.9.77 as 106353 (4pp108)

RALS D13 41028W/25 = J7 9007-70
High moisture content meat/expanded protein petfood - with th meat stabilised with org acids and anti mycotic agents afte pasteurisation
RALSTON PURINA CO 18.09.74-US-504795
*C03 + P15 (09.04.79) *BE-825-092 A23k-01/10*

Process for preparation of a feedstuff for family pets which has a moisture content of more than 40%, a sheari index of at least 1.106 kg. cm/g and is stable to attack by bacteria and moulds comprises (a) grinding of the raw a mal meat to give particles of effectively uniform size, pref. 9.5-15.9 mm, (b) heating the ground raw meat at temp. sufficient to pasteurise and attentuate any bacteri present pref. 73.9-79.4°C, (c) impregnating the pasteu sed particles with a preservation composition which is absorbed in sufficient quantity to inhibit animal food bac eria and moulds and contains a mixt. of organic acids o their salts and a edible antimycotic agent, (d) mixing the impregnated meat particles with acid-stabilised, expan fibrous particles of protein material in amts. of 25-90 vol.% based on the animal feed and (e) forming the mixt into a feedstuff stable to bacteria and moulds and having a shearing-index of at least 1.106 kg. cm/g.

The high-moisture feedstuff is attractive to animals, stable and convenient to use and has a meat-like textur 28.11.74 as 135972 (clg. 18.9.74-US-504795) A23k-1/1 1/16 (9.4.79) RALSTON PURINA CO. (11pp) (J51039279

KYOD D13 50869X/27 = J7 9007-
Dry, porous feed for silkworms - obtd. without decomposition nutrient components by freeze drying or microwave heating
KYODO SHIRYO KK 00.00.75-JA-106419
*C03 P14 (09.04.79) *J51057-578 A23k-01/18*

The moisture of the feed contg. nutrient components required for the growth of silkworm is adjusted. The mo tened combination feed is dried by freezing or heating the irradiation of microwaves. Because the feed is dr it can be preserved at room temp. for long periods. B cause the feed is porous, the absorption of moisture is easy without it getting out of shape. 28.2.72 as 10641 A23k-1/18 (9.4.79) KYODO SHIRYO KK (3pp)(J5105757

GRFJ D13 84477R/45 = J7 9007
Vegetable protein concentrate for human - consumption
GRIFFITH LABS INC 12.05.69-US-823969
*(10.04.79) *BE-750-310*

EISA D13 12253V/07 = J7 900
Food preservation with enzymes - significantly increasing leng preserv-ing time
EISAI KK (EIDA) 02.03.72-JA-021038
*(D16) (10.04.79) *J48088-225 + A23l-03/34*

Enzymes, which degrade microbial cell walls, in com ation with one or more cpds. selected from glycine, tine, cysteine, propylene glycol, caprylic acid monoglyceride, invertase, vitamin B_1-HCl, and citric acid be used as food preservatives. The examples of the mes are lysozyme or lysozyme salts and cell-wall de ing enzymes produced by Bacillus subtilis, Streptomyces griseovilens, and Brevibacterium lyticum.

The combinations are effective in preserving foods such as milk, meat, fruit juice, bean curd and flour. In an example, the addn. of a soln. contg. egg white lysozyme 10 ppm, citric acid 0.1, glycine 0.5 and cystine 0.005% to a bean curd prepn. preserved the food for a period equiv. to double the preserving time of the control. 2.3.72 as 021038 A23b-3/34 (10.4.79) EISAI CO. LTD. (5pp) (J48088225)

TSUK D13 50975W/31 =J7 9007-862
Preservative compsn. for agricultural prods. - contg. a dispersion of hydrophobic microparticles in an aq. medium contg. water soluble high polymer
TSUKIBOSHI RUBBER 26.10.74-JA-124123
*A97 (10.04.79) *BE-826-614 A23b-05/06 A23b-07/16 A23b-09 A23l-03*

Novel compsn. for preservation of agricultural prods. contains a dispersion of microparticles of a hydrophobic substance, which is solid, liq. or non-volatile, in an aq. medium in which is dispersed a water-sol. high-polymer, the compsn. being applied in the form of a layer covering the surface of the agricultural prod. and is dried to form a membrane covering composed of microparticles dispersed in a matrix.

The membrane has fine microbubbles continuing situated between the microparticles and the matrix and suppresses, in a controlled manner, the respiration of the agricultural prod. The difference between the solubility parameters of the hydrosoluble and hydrophobic matter is pref. 3-15. The microparticles are pref. 0.1-10 microns and are of natural waxes, fatty vegetable oils, hydrogenated fatty oils and mineral oils. The hydrosoluble polymer may be a polysacchoriate, or a deriv. a protein an alginate or PVA.

The compsn. may be used for preservation of fresh food for storage purposes. 26.10.74 as 124123 A231-3/00; A23b-5/06; 7/16; 9/00 (10.4.79) TSUKIBOSHI RUBBER KK (11pp) (J51051537)

PROC D13 43245T/27 =J7 9007-865
Synthetic meat - by cutting moist protein dough sheet into fibre strands, combining strands and stabilising to cohesi
PROCTER & GAMBLE CO 21.12.70-US-100549
*(10.04.79) *NL7117-540 A23j-03*

Synthetic meat product is produced by (a) forming a dry protein mixt. (b) adjusting the moisture content of the dry mixt. so that it is converted into a dough, (c) converting the dough into a kneadable cohesive sheet, (d) cutting the sheet to form fibrous strands, (e) combining the strands to a desired fibre alignment, and (f) stabilising the fibres to form a cohesive fibrous mass which resembles meat in appearance, structure and consumption quality.

Gives a synthetic meat product with properties giving a quality closely resembling natural meat. The method is economical and uses cheap readily available e.g. vegetab- e protein. 21.12.71 as 104054 (clg. 21.2.70-US-100549) A23j-3/00 (10.4.79) PROCTER & GAMBLE CO. (12pp) J47014353)

GENO D13 09092U/07 #J7 9007-867
Sausage analog prodn - using a freeze-thaw cycle
GENERAL FOODS CORP 06.05.70-US-035267 (06.08.71-JA-059495)
*(10.04.79) *US3713-837 +A22c-11 A23j-03 A23l-01/31*

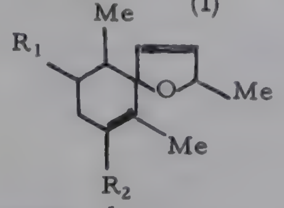
Title process comprises shaping, heat setting, freezing for >3 days and thawing a mixture of (1) a gel precursor consisting of a non-fibrous vegetable protein contg. > 30 wt.% (rel. to gel) of albumen, casein and/or whey in a min. wt. ratio of protein to albumin, casein or whey of 3.4:1, 5:3 and 1:1 respectively (corresp. max. is 40:1), 2) 5-30 wt.% rendered animal fat and/or vegetable oil, (3) 5 wt.% of a mix. of wheat gluten, soya grits and flour as filler, (4) flavourings, and (5) 41-74 wt.% H_2O.

The pdt. simulates meat in appearance, taste and texture. 6.8.71 as 059495 A23j-3/00; A22c-11/00; A231-1/31 (10.4.79) GENERAL FOODS CORP. (6pp) (J48023967)

FIRM ★ D13 34615B/18 ★NL 7711-135
Tetra:methyl-oxa-spiro-deca:diene cpds. - useful as perfumes and flavours
FIRMENICH SA 11.10.77-NL-011135
B07 E13 (B03) (17.04.79) A61k-07/46 C07d-307/94

Tetramethyl-1-oxaspiro(4,5)deca-3,6-dienes of formula (I) are new:

(I)



(where one of R_1 and R_2 is Me and the other is H).

Cpds. (I) are useful as perfumes and flavours with mint, clary sage, blackcurrant and citrus notes. They can be used in foodstuffs, drinks, pharmaceuticals, tobacco products, soaps, detergents, cosmetics, etc. 11.10.77 as 011135 (13pp367)

STAM ★ D13 34621B/18 ★NL 7711-393
Pure benzaldehyde prodn. - by treating contaminated benzaldehyde with an oxidising agent and distilling
STAMICARBON BV 18.10.77-NL-011393
E14 (D23) (20.04.79) C07c-45/24 C07c-47/54

Method comprises treating contaminated benzaldehyde with an oxidising agent and distilling the mixt. The benzaldehyde raw material is e.g. made by oxidn. of toluene with an O_2-contg. gas, esp. air. The oxidn. treatment is carried out e.g. with a peroxide agent such as H_2O_2, used at 3-1500 mmol, esp. 3-150 mmol per kg benzaldehyde; or with an O_2-contg. gas, esp. air, used for 0.5-10 hr. at a rate of 0.5-5 Nl O_2 per l benzaldehyde per hr. The oxidn. is carried out e.g. at 20-100°C, esp. 75-175°C. The oxidn. and distn. stages may be carried out in a single stage.

Process gives high purity benzaldehyde suitable as a starting material for the prodn. of aromatising and flavouring agents. The purified prod. has a much reduced tendency to discolouration of prods. purified by known methods. 18.10.77 as 011393(9pp513)

DORO ★ D13 34622B/18 ★NL 7810-138
Cream cheese mfr. - using pre-cheese mixt. of milk, cream and added whey protein subjected to ultrafiltration
DORR OLIVER INC 17.10.77-US-842654
(19.04.79) A23c-19/12

In a process for the prodn. of cream cheese, at least part of the milk and cream raw materials are subjected to ultra-filtration to form a pre-cheese mixt. Extra whey protein is then added and the mixt. is coagulated and stabilised to form the cheese.

The process allows the prodn. of cream cheese having the required content of butter fat and other components using less costly raw materials than prior art processes. 9.10.78 as 010138 (11pp513)

GERA/ ★ D13 34628B/18 ★SU -611-599
Automatic control system for fat standardisation in flowing milk - has fat content sensor located before mixer for mixing full and skimmed milk, to ensure stable fat content
GERAIMOVICH O A 24.05.76-SU-365020
P13 R26 (23.05.78) A01j-11 G05b-13

Automatic control system is used in fat standardisation in flowing milk. It uses two flow pipelines for full and skimmed milk, each with flow transducers and regulating valves, and a common control unit.

In order to ensure stable fat content in the standardised milk, the control system is provided additionally with fat content transducer which is placed before the mixer.

The programmer forms a proportional signal which controls the ratio of skimmed and full milk by varying the amplification coefft. of the valves control mechanisms. Geraimovich, O. A. Bul. 23/25.6.78. 24.5.76. as 365020 (2pp847)

LIVE= ★ D13 34630B/18 ★SU -611-601
Substitute of plain milk for calves and piglets - contg. dried skimmed milk, whey, protein hydrolysate, fat, sugar, vitamin(s), emulsifier, furfurol, calcium hydrogen phosphate and blood
LIVESTOCK RES INST (MEAT=) 11.02.76-SU-324862
C03 (23.05.78) A23c-11

The plain milk substitute for calves and piglets feeding lysate, an animal fat, sugar, vitamins and an emulsifier is improved by addition of furfurol, $CaHPO_4$ and blood components.

The taste and aroma of the product and its nutritive value are improved. The product is cheaper than the natural plain milk; the latter can be excluded from the calf diet from the 11th day of its life.

The compsn. contains (in wt. %) dried skimmed milk 40-70, dried whey 1.0-5.0, blood components 5.0-15.0, protein hydrolysate 1.0-4.0, animal fat 17.0-30.0, sugar 1.0-5.0, vitamins 1.5-3.5, emulsifier 2.6-5.6, furfurol 0.003-0.006, $CaHPO_4$ 0.5-0.7.

Smekalov, N.A., Usoltseva, L.A., Faivishevskii, M.L. et al. Bul. 23/25.6.78. 11.2.76. as 324862 (3pp70)

ODFO= ★ D13 34631B/18 ★SU-611-603

High quality buckwheat groats prodn. - by water washing and steaming, with simultaneous exposure to intermittent electromagnetic field

ODESS FOOD IND TECH 09.11.76-SU-419172
(22.05.78) A23l-01/10

Buckwheat is processed to give improved yield and quality by cleaning, washing in warm water and steaming at a pressure of 0.7-0.9.10^5 Pa to a moisture content of 20-23% while exposing to an alternating electromagnetic field for 1.5-2.5 min. at intervals of 7-9 min. After steaming the product is subjected to thermal treatment to a moisture content of 17-19%.

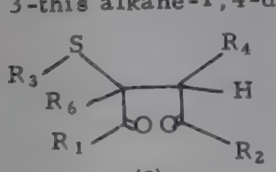
Yakovenko, V.A., Kaminskii, V.D. Bul. 23/25.6.78. 9.11.76. as 419172 (2pp1358)

INFL D13 15382W/09 =SU-612-625

3-Thia-alkane-1,4-dicarbonyl cpds. - useful as flavouring agents in foodstuffs

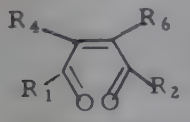
INT FLAVORS & FRAGR INC 07.08.73-US-386455 (07.08.73-US-386452)
*E17 (E14) (31.05.78) *NL7408-382 C07c-149/14*

3-this alkane-1,4-dicarbonyl cpds. of formula I, where R_1, R_2, R_4 and R_6 = H or 1-4C alkyl and R_3 = H, 1-4C alkyl, acyl grp. aroyl grp. benzyl gp. or opt. substd. phenyl gp. (I) can be used as flavouring agents for foodstuffs.



(I)

(I) may be obtd. by forming a 2-ene-alkane-1,4-dicarbonyl cpd. (II) and reacting this with a cpd. R_3SH in the presence of an organic base such as piperidine, pyridine, triethylamine or α-picoline.



(II)

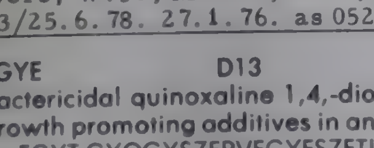
Ivers, W.J., Meiers, B.J., Heinson, H.H. et al. Bul. 23/25.6.78. 27.1.76. as 052752 (2pp)

EGYE D13 30206X/17 =SU-612-628

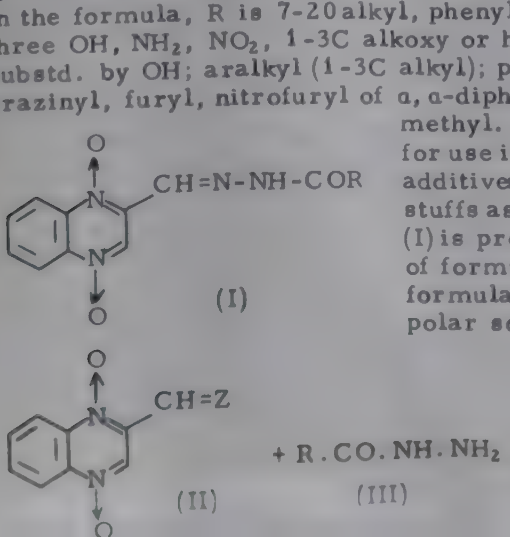
Bactericidal quinoxaline 1,4,-dioxides - for use in medicine and as growth promoting additives in animal foodstuffs

EGYT GYOGYSZERVEGYESZETI 21.11.74-HU-EE2278
*B02 C02 (02.06.78) *BE-835-763 A61k-31/49 C07d-241/42*

Quinoxaline 1,4-dioxides of formula (I) have been prepd. In the formula, R is 7-20 alkyl, phenyl substd. by one to three OH, NH_2, NO_2, 1-3C alkoxy or halo; naphthyl opt. substd. by OH; aralkyl (1-3C alkyl); pyridyl, piperidyl, prazinyl, furyl, nitrofuryl of α,α-diphenyl-α-hydroxymethyl. (I) are bactericides for use in medicine or as additives for animal foodstuffs as growth promoters. (I) is prepd. by reacting cpd. of formula (II) with cpd. of formula (III) in water or polar solvent at 15-100°C.



(I)



(II) (III)

In the formula (II), Z is O or $(OAlkyl)_2$.

The activity is similar to that of nitrofurantoin and thiamphenicol. LD_{50} orally in mice is > 4 g/kg. As an additive to pig food, (I) have similar activity to that of Mecadox Pre-mix (R.T.M).

Benko, P., Shimonek, I., Pallosh, L. Bul. 23/25.6.78. 19.11.75. as 189810 (3pp)

VICO= ★ D13 34882B/18 ★SU-612-675

High quality toffee prodn. - by applying gelatin and flavouring layer to evaporated syrup layer on cooling drum

VILIN CONFECTIONERY 12.04.76-SU-345352
(16.06.78) A23g-03

Toffee of improved quality is made by adding a gelatin mass layerwise at 80-85°C to a boiled down mixture of other ingredients while simultaneously cooling. Then flavourings pre-mixed with sugar powder in 1:0.3 ratio are added and the mass is moulded.

Miltenis, A.S., Shulman, P.B. Bul. 24/30.6.78. 12.4.76. as 345352 (2pp1358)

MOFO= ★ D13 34883B/18 ★SU-612-676

Laurel leaf tablets prodn. - using comminuted leaves mixed with common salt, drying and stamping into tablet form

MOSC FOOD IND TECHN 25.10.76-SU-415472
(16.06.78) A23l-01/22

Laurel leaf tablets are produced by first comminuting the leaves and then mixing with common salt of 55-60% moisture content. Then the mixture is dried, stamped into tablets and subjected to final thermal processing. The stirring process takes 15-18 mins. at 20-25°C, but the drying processes is carried out at 65-70°C for 45-50 mins.

Proposed production method allows the volume (mass) of laurel leaves used to be reduced by more than 40 times (compared with earlier methods), to completely eliminate manual labour during metering and packing of materials, to considerably reduce costs or transportation and to update the presentation of the marketed product.

Zurabishvili, G.G., Machikhin, Yu.A. Bul. 24/30.6.78. 25.10.76. as 415472 (2pp987).

MEAT= ★ D13 34884B/18 ★SU-612-67

Freezing foodstuffs in blocks - by rapid low temp. freezing, wit simultaneous compression, to reduce process time

MEAT IND RES INST 15.03.76-SU-334161
(D12) (16.06.78) A23l-03/36

Product quality is improved and freezing time reduced by forming food products, e.g. meat, fish, curds, or egg, into blocks, simultaneously with preliminary freezing.

A mould filled with product is placed in a chamber and cooled to -50 to -60°C while the pressure on it is increased to 500 kPa for 10-15 min. so that the block surface layer is frozen. A frozen outer layer is formed immediately on contact with the chamber, to prevent loss of juices whe pressed.

Gorbatov, V.M., Mekenitskii, Sh.-S.Ya., Ionov, A.G. et al. Bul. 24/30.6.78. 15.3.76. as 334161 (2pp1358)

DECI- D13 41975V/23 =US RE29-9

Agitated vat for cheese prodn. - having two intersecting cylinde each with agitating arms with vertical blades of variable pitch

DEC INT INC 17.11.72-US-307379 (05.01.77-US-757077)
*P13 (17.04.79) *DT2354-136 B01f-07/32*

A food-processing vat comprises a vessel in which is di posed a rotatable vertical shaft carrying a frame. One plement carried by the frame stirs the prod. when rotat in one direction, and slices the prod. when rotation is r ersed.

A second implement pivoted to the frame effects a sli ing action when rotation is reversed, and freely pivots i the first direction of rotation. A conduit is located in th vessel to remove portions of the prod. The vat is used cheese-making, eliminates the necessity of using differ types of implements, and when sealed, minimises conta ination. 5.1.77 as 757077 Reissue of 3858855 (10pp137

ROSS/ ★ D13 34988B/18 ★US 4149-

Popcorn cooking pan - with domed lid and vertical stirrer ha detachable top handle

ROSS M M 17.03.78-US-887680
(17.04.79) A23l-01/18

A pan has a lid and a stirrer having a handle with a hor ontal part connectable to a stirring rod. The part has

U-shaped recess and upstanding tip members, and the handle is removable from the rod so that the end can be used to remove a hot rod.

The lid may be domed and translucent, with insulation and an air gap between lid and pan. The gap may be formed by a pair of handles with ledges which support the lid above the pan. The handle and stirring rod are pref. attached by a resilient locking clip. 17. 3. 78 as 887680 (8pp1358)

DYNL ★ D13 35124B/18 ★US 4150-038

High purity, crystalline hesperetin prepn. - from crude hesperidin by recrystallisation and saccharide cleavage with sulphuric acid methanol

DYNAPOL 16.05.77-US-797105

B02 E13 (17.04.79) C07d-311/32

Crystalline hesperetin (I) is prepd. from $\ngtr$ 95 wt. % crude hesperidin (II) as follows: (a) a 5-30 wt. % soln. of crude (II) in a polar aprotic liq. amide solvent is filtered; (b) the filtrate is added to stirred H_2O ($\nless$ 0. 25 vol.) at 50°; (c) pptd. purified (II) is recovered and added (concn. $\nless$ 3 wt. %) to an excess of H_2SO_4 in MeOH and mixt. is heated to hydrolyse (II) to (I); (d) mixt. is diluted with H_2O to ppt. high purity (I).

Process affords high ($\nless$ 97 wt.%) purity (I) in commercially viable yields. (I) is an inter. for H_2O-soluble sweeteners that are suitable as food additives. 16. 5. 77 as 797105 (5pp478)

GENO D13 67030A/38 =US 4150-161

Two-component chewing gum, esp. bubble gum - comprising a chewing gum and gasified sugar, esp. of specified water activities

GENERAL FOODS CORP 15.03.77-US-777797

*(17.04.79) *BE-864-853 A23g-03/30*

A confection is prepd. comprising $\geqslant$ 2 distinct components aving a water activity of 0. 10-0. 30, capable of surviving long periods of storage when packaged in a moisture resisant material.

Confection comprises a first pliable bubble gum component having moisture content of 0. 10-5. 0 wt. % and water ctivity of 0. 10-0. 30; and second carbonated candy component contg. 0. 05-15 ml. CO_2 per gm. candy to provide a pop or sizzle upon being wetted upon eating. Candy has moisture content of 1. 0-5. 0 wt. % and moisture activity of . 10-0. 30.

Both sugar based and sugarless prods. using sugar alcohols in both gum and candy can be formulated. 15. 3. 77 s 777797 (4pp931)

D13

AQUA- ★ D13 35182B/18 ★US 4150-162

Timed release fish feeding block mfr. for use in aquariums - contg. plaster of paris, fish food pellets and piece of fish food

AQUARIUM PHARM INC 27.10.77-US-845989

C03 (17.04.79) A23k-01/10

Timed release fish feeding block is made by mixing 1 pt. plaster of Paris, 1 pt. water and microcrystalline cellulose to absorb sufficient water to prevent hydration of the freeze dried fish food subsequently added. Fish food pellets are then mixed with the first mixt., and the composite mixt. is placed in a mould to thicken. Finally, a piece of freeze dried fish food is injected into the centre of the mould, the prod. is allowed to set and removed from the mould.

The blocks are useful in aquariums, where because of their high porosity, the blocks break up in about 7 days. During this time fish pellets are release continuously and the piece of fish food is exposed after 3-4 days. The piece of fish food does not rot during storage of the blocks. 27. 10. 77 as 845989 (5pp1248)

BEAF ★ D13 35183B/18 ★US 4150-163

Creamy confectionery contg. dried yoghurt powder - useful as soft candies and candy coatings

BEATRICE FOODS CO 14.11.77-US-851358

(17.04.79) A23g-03

Uncooked, low moisture content yoghurt-flavoured confectionery comprises 10-65 pts. sweetener, 20-50 pts. edible fat and 3-30 pts. spray dried yoghurt, having a particle size of $\leqslant 40\ \mu$. The mixt. is prepd. below 250°F, to avoid spoiling the flavour of the yoghurt.

Cooked, high moisture content yoghurt flavoured confectionery is prepd. by (a) cooking a mixt. contg. 10-65 pts. sweetener, and 5-15 pts. water at $\geqslant$ 250°F, until a soft candy is obtd.; (b) cooling the candy below 250°F; (c) mixing the candy with 3-35 pts. spray dried yoghurt.

The prods. are esp. candy coatings and candy centres. The prods. have creamy textures, without grittiness, or spoilage of flavour and texture by cooking the yoghurt. 14. 11. 77 as 851358 (5pp955)

See Also

D15 DS 2808703
D16 J7 9007699
D15 EP----1584
D16 US 4150152
D16 EP----1720
D23 DT 2747765

D14 : FOODSTUFF MACHINERY

HAL ★ D14 33376B/18 ★BE -873-078

istn. and evapn. plants for chemical and food industries - articularly for oil-solvent mixt. distn.

VEB SCHWERMASCH THALMANN 27.12.77-SU-559774

J01 (17.04.79) B01d

he appts. consists of a vertical body which is divided nto sections by perforated plates. Heat exchange tubes ixed to the perforated plates occupy the central section. ontact tubes fitted with extensions which ensure the disribution of the mixt. in the tubes occupy the peripheral ection. The mixt. is made to flow upwards through the entral tubes. Any vapour is removed at the top and the q. is made to flow in a thin film down the inside of the uter pipes. The arrangement of the appts. allows a simltaneous displacement of the liq. and vapour.

The rate of prodn. per unit of work surface of the appts. increased by a factor of 3. 5-4. The productivity of the ppts. is improved by a factor of 8-10 compared to others . g. Kastner distn. plant. The oil quality is improved y reducing the contact time of the oil-solven mixt. with e hot tube surfaces. 27. 12. 78 as 873078 (10pp1330)

BERT/ ★ D14 B/18 ★BR 7706-277

Coffee, rice or wheat drying plant - uses even hot air distribution providing increase in drying area

DA SILVA BERTAO J 20.09.77-BR-006277

(17.04.79) A23f-01/02

AMLA= D14 51156W/31 =DS 2402-947

Vegetable juice extraction by electro-plasmolysis - esp for preserves and wine making with improved yield and shorter extraction time

AS MOLD APPL PHYS 22.01.74-DT-402947

*(D16) (26.04.79) *DT2402-947 A23n-01*

A device for the plasmolysis of minced vegatable matter by means of an electric current, consists of two concentric electrodes. One of these is a ring and the other is a cylin-der; there being a gap between the two for the passage of the raw material.

The eletroplasmolytic action is intensified; a greater yield of juices being achieved, whilst the device is applicable to a wide range of matter- apples, grapes, etc., by forming the ring electrode from at least two parts insulated from each other, each of which has a connection to the power supply. 22. 1. 74 as 402947 (4pp1045)

TANA D14 44590X/24 = J7 9007-859
Coating for dough foods to be cooked by microwave heating - contains sugar and dihydroxy-acetone and gives better taste and baking colour
TANABE SEIYAKU KK 23.10.74-JA-122769
*(10.04.79) *J51048-445 A23l-01/* +A21d-10*

Mixt. contg. 3-9 parts of sugar and one part of dihydroxy-
acetone is coated on the surface of dough food, which is
then cooked by microwave irradiation. Examples of sug-
ars, are monosaccharose: glucose, xylose, fructose,
galactose, mannose; disaccharose; sucharose, maltose,
lactose; trisaccharose: raffinose; polysaccharose: dex-
trine, starch. 23. 10. 74 as 122769 A231-1/01; A21d-10/00
(10. 4. 79) TANABE SEIYAKU KK (TOKE) (5pp)(J51048445)

POTA= ★ D14 34632B/18 ★SU -611-604
Dried vegetable pieces cleaning appts. - with air flow extracting comminuted skins removed by abrasive elements and brushes
POTATO FOOD PRODS 25.10.76-SU-413960
(22.05.78) A23n-07/02

Appts. for removing skins from dried fruit and vegetable
pieces, e.g., from potatoes, comprises a loading hopper,
a discharge pipe with an adjustable slide valve, a fan, a
housing and a perforated cylinder inside which is a hollow
shaft with perforations and carrying abrasive elements.
Brushes are mounted between the elements on the inner wall
of the cylinder.
Zaletskii, V.N., Zabashtanskii, I.P. Bul. 23/25.6.78.
25.10.76. as 413960(2pp1358)

ODPR= ★ D14 34845B/18 ★SU -612-139
Heat exchanger for thermal treatment of viscous food prod. - has coaxial cylinders forming annular chambers, and annular chamber containing turbine at one end
ODESS PROVISION MAC 01.09.76-SU-402163
Q78 (26.05.78) F28d-11/02 F28g-01/08

The heat exchanger can be used for thermal treatment of
viscous food prod. The heat exchanger contains media
supply and removal pipes, coaxial cylinders which form
outer and inner annular chambers. A rotor is placed in the
inner chamber. The rotor is made as rings situated on
cylinder ends and connected by axial pins. The axial pins
are provided with knives. To increase the economy, the
heat exchanger is provided at one end with an annular
chamber contg. a turbine. The turbine is attached to the
rotor and is connected to media supply pipe.
Vavilin, V.S., Vainshtok, Yu.G. Kukin, O.N., et al. Bul
23/25.6.78. 1.9.76. as 402163(3pp110)

UTIN= ★ D14 34888B/18 ★SU -612-689
Catering industry mixer for salad preparation - has corrugated rotating cylindrical drum perforated at specific angles to minimise vegetable damage
UKR TIN FOOD IND 05.05.76-SU-357642
(08.06.78) A23n-15 B01f-09/02

The mixer comprises a rotating cylindrical drum, corru-
gated on the inside, a loading bin, and an emptying trough.
To permit mixing of e.g. salad vegetables and salt without
damaging the vegetables, the corrugations are perforated
and have a dividing angle of 60-70°.
Utochkin, B.M., Galkina, S.N. Bul. 24/30.6.78. 5.5.76.
as 357642 (2pp132)

GOLI/ ★ D14 34890B/18 ★SU -612-694
Hammer type fodder crusher - has hammer rotor loading uniformity achieved by progressive decrease in gaps between successive sets of counter-hammers
GOLIKOV V A 19.08.76-SU-396106
P41 (07.06.78) B02c-13/04

The crusher comprises a casing, a rotor with hammers,
a deck and a grating both carrying sets of counterhamm-
ers, and an input and an output. To increase the rotor
shaft loading uniformity, the counterhammer step dist-
ance decreases in each set in the rotor rotation direction,
to the hammer step.
Golikov, V.A., Abilzhanov, T. Khabibullin, M.G. et al.
Bul. 24/30.6.78. 19.8.76. as 396106 (2pp132)

NORM/ ★ D14 B/18 ★ZA 7706-79
Appts. for sorting articles by size - includes auger-like membe defining article sorting apertures, and backing
NORMINGTON S M 15.11.77-ZA-006795
P28 (08.02.79) A23n-07/08 A47j-17

Appts. includes an auger-like member (I) rotatably moun-
ted in close proximity to a backing, (I) defining article
sorting apertures between it and the backing, the apertur
being of a variety of sizes over the length of (I). 15.11.77
as 006795 (9pp)

WILL- ★ D14 B/18 ★ZA 7801-8
Stone fruit cutter - includes a pair of vertical belts guiding the fruit vertical disc cutters
J A & A M WILLIAMS 31.03.78-ZA-001864
P28 (14.02.79) A47j-23

A stone fruit cutter includes a pair of vertical belts defin
ing the channel to guide and carry the fruit therealong to
pass thr fruit between a pair of vertical disc cutters dis-
placed one above the other to give an upper and lower cu
ter, so that during cutting the fruit is supported and rota
ed to produce a cut around its circumference to the dept
of the stone. 31.3.78 as 001864 (13pp)

D15: WATER TREATMENT

GODA/ ★ D15 33323B/18 ★BE -871-512
Installation to collect and purify water or aq. effluent - with aeration, chemical dosing, decanting and filtration
GODAR S 24.10.78-BE-871512
Q42 (24.04.79) C02b E03b

The installation comprises an intake section into which the water is drawn and given selected physical and chemical pretreatment. This pref. includes aeration and dosing with liq. and/or gaseous reagents injected into the suction branch of a controlled delivery pump transferring the water to a main treatment section.

The main treatment section comprises a decanter which is pref. preceded by a continuous, tubular, chemical reactor with multiple dosing points. The main treatment section pref. includes also, following the decanter, a series of filters and, if desired, a sterilising unit.

Aeration is pref. by means of tins bubbles of compressed air introduced at a rate of between 1 and 50 litres per lite of water. The intake section pref. comprises a floating suction box partly immersed in supply water. The suction opening in the box should face downstream and b fitted with a grill.

Used for purificn. of water and aq. effluent, e.g. to obtain water for sterilie bottling or an improved effluer for easy disposal. The installation is simple and comp and can easily be constructed at a transportable unit.
24.10.78 as 871512 (29pp448)

STER ★ D15 33356B/18 ★BE -871
Compressing injection air for wet oxidn. purificn. of organic wa with adiabatic cooling during compression to reduce energy i requirement
STERLING DRUG INC 07.11.77-US-849077
Q56 (30.04.79) C07b F04b

Air or other gas contg. oxygen is compressed to a pre
ure high enough for injection into a wet oxidn. proces
used for purifying organic waste in aq. suspension, i.
pref. in excess of 35 kg/cm^2. During compression th

air is cooled by injection of water which is vaporised to produce adiabatic cooling. Pref. at least part of the water is injected before the air is subjected to compression.

Compression may be carried out in several successive stages, pref. with injection of water after each stage except the last, so that interstage, adiabatic cooling accompanies repeated vaporisation. Part of the injected water may be vaporised during compression and the remainder when compression is finished. 30.10.78 as 871644 (15pp)

TEXC ★ D15 33367B/18 ★BE-871-700

Treating waste water contg. cyanide and formate(s) - esp. from synthesis gas mfr., by pptn. using ferrous salts and biological treatment

TEXACO DEV CORP 31.10.77-US-847192
(30.04.79) C02c

Treating water contg. cyanides, formates, and a metal or ammonium halide comprises first adding ferrous ions in excess molar ratio to the cyanide ions present at pH 7-9 to convert an appreciable amt. of the cyanide to iron cyanide. The pH is then adjusted to 9-11 with a base to ppte. a sludge contg. the iron cyanides. The water is sepd. and then treated in a biological reactor to convert the formates into CO_2 and a biological residus and the treated water is recovered.

The effluent is produced in the mfr. of synthesis gas. The liquor, which is both toxic and corrosive, after the treatment is suitable for release to the environment. 31.10.78 as 871700 (15pp597)

PASE ★ D15 33410B/18 ★BE-873-186

High rate overflow assembly for purified water from gravity separator - uses progressive divergent outlet passages with minimal flow restrictions

PASSAVANTW MICHELBACHER 30.01.78-DT-U02712
J01 Q39 (17.04.79) B01d B67c

Separator has an outlet pipe for purified water leading to an over flow chamber outside the separator. The outlet pipe is of processively increasing dia. from separator to the outlet pipe leads into the lower end of a conical funnel which enlarges progressively in cross-section to an overflow edge at the top of the funnel.

The outlet pipe is pref. formed with bends as gentle as possible and certainly without sharp channels of direction. The interior of the funnel pref. presents $\geqslant 1$ coaxial, annular gutter with outlet channels radiating outwards to carry uprising liq. to the rising wall of the overflow funnel. A flexible, leak proof, extensible coupling is pref. fitted between the outlet pipe and the funnel. This permits a pref. facility to adjust the overflow funnel w.r.t. the chamber.

Divergent and practically unrestrictef low ensures that the overflow is capable of rapidly discharging spasmodic peak loads with virtually no change in the liq. surface level within the separator. 29.12.78 as 873186 (10pp448)

FREI- D15 28465X/16 =DS 2446-117

Removal of complexed transition metals from effluents - by cementation with aluminium or magnesium

FREIE & HANSESTADT 27.09.74-DT-446117
*J01 M11 (26.04.79) *DT2446-117 C02c-05/02*

A plant for the separation of transition metals in complex compounds such as tartrates, from industrial effluents, by means of metals higher in the electropositive scale than the transistion metals, obtains the recovered heavy metals in a form which can be processed further directly.

The vessel for the effluent has an agitator, and the exchange metal has the form of a number of plates of aluminium or magnesium, immersed in the effluent. 27.9.74 as 446117 (5pp1045)

NORM- D15 19990Y/12 =DS 2559-324

Composted humus continuously produced from wet biological sludge - by aeration followed by hot drying to accelerate moisture extraction

NORM AMC AG (KAEL/) 03.12.75-CH-015749 (12.11.75-CH-014705)
*C04 (26.04.79) *BE-848-158 C05f-07*

Continuous processing of wet mud with 80-95% water content, obtd. from water purification plant, comprises treat

some water to leave a water content 55-80%; and composting at 65-85°C to produce a humus with 45-70% water, useful as fertiliser. 31.12.75 as 559324 (9pp047)

KEIL/ ★ D15 33443B/18 ★DS 2752-581

Water softening appliance - with plastics throwaway cartridge for ion exchanger resin sealed in sheet metal tank

KEIL W 25.11.77-DT-752581
A91 J01 (26.04.79) C02b-01/40

Small-scale water softening without a bypass is effected in a stainless steel sheet tank with an exchangable plastics cartridge. The cartridge can be made of polyethylene, and has a perforated bottom and a neck with a male thread at the other end with a perforated cover. Seal rings between a chamfer on the neck and the cover, and on a groove near the bottom seal the cartridge against the tank walls. A conductivity meter is mounted on the tank cowl.

This replaces the complications of any regeneration of the ion exchanger resins by a throwaway cartridge. The spent resins can be used as fertilizer and the cartridge is easy to produce by blow moulding. 25.11.77 as 752.581 (4pp39)

BECK/ ★ D15 33446B/18 ★DS 2808-703

Treatment of effluent waters contg. fats and proteins - by flocculation with anionic starch and flotation to give a protein slurry suitable e.g. as animal feed

BECKER D J 01.03.78-DT-808703
C03 (D13) (26.04.79) A23k-01 C02c-05

In the purificn. of waste waters contg. fats and protein components, the water is opt. mechanically cleaned and the pH is then adjusted to around the average isoelectric point of the main protein components present. The water is then mixed with an aq. soln. of a substd. anionic starch with constant stirring.

After standing for a short time the mixt. is subjected to release flotation under a dispersion pressure of 4.5-6 bar and the flotation slurry is sepd. from the clarified waste water. The slurry is removed and sterilised by passage, at least once, through a UV disinfection unit. The clarified water, opt. after a subsequent biological clarification stage, is passed into the drains.

Process allows treatment of effluent waters e.g. from dairy produce plants, meat- and poultry processing plants, etc., to give recovery of the fat and protein components in a form suitable for re-use. 1.3.78 as 808703 (5pp513)

ALBE/ ★ D15 33474B/18 ★DT 2746-648

Liq. purificn. in contact beds - with direct introduction of oxygen for microorganism growth

ALBERSMEYER W 17.10.77-DT-746648
(26.04.79) C02c-01/02

Liquids are purified in a contact bed with a filling, pref. of plastics, which is sealed at the bottom by a barrier layer of purified liq. maintained at a constant height by syphon or by pressure controlled valves. O_2 is introduced at various levels for the microorganisms. The O_2 flow rate, temp. moisture and pressure are controlled for optimum growth conditions.

The direct application of O_2 to the microorganisms improves their physiological performance and raises the efficiency considerably, even when used for sewage which is otherwise difficult to clean. 17.10.77 as 746648 (12pp39)

LICN ★ D15 33503B/18 ★DT 2746-917

Liquid irradiation device - with adjustable inclined treatment plate fed by diffusors and rising vessel

LICENTIA PATENT GMBH 19.10.77-DT-746917
J04 K08 (26.04.79) B01j-01/10 C02c-01

Liquids and pastes, esp. sewage sludge, is radiated by an electron beam over an inclined irradiation plate. The material to be irradiated is supplied at an adjustable rate through one or several diffusors to the bottom of a rising vessel. The latter has an overflow edge which discharges the liquid over the irradiation plate.

This arrangement ensures a constant and uniform layer thickness in the irradiation zone. The layer thickness can be easily matched to the electron energy available by altering the angle of inclination of irradiation plate.

MOTA ★ D15 33540B/18 ★DT 2747-424
Refuse fired gas generator - with cooling water recycled through pressurised heat exchanger (DK 2.4.79)
MOTALA VERKSTAD AB 08.09.77-DK-004004 (21.10.77-DT-747424)
H09 (26.04.79) C10j-01

In a gas generator plant for the gasification of refuse or digested sewage sludge the water-soluble organic compounds together with the condensate are recycled to the gas generator. This fluid circuit which includes a heat exchanger has upstream and/or downstream pressure control devices for the water.

Arrangement prevents the deposition of dissolved particles which cause clogging and loss of efficiency in heat transfer. 21. 10. 77 as 747424 (12pp39)

ZELL- ★ D15 33574B/18 ★DT 2747-807
Recycled activated sludge thickener - with mechanical thickened sludge removal by scraper blades from trommel
MASCH ZELL KRUCKELS 25.10.77-DT-747807
(26.04.79) B01d-33/06 C02c-01/06

A trommel for a thickening process for recycled activated sludge in biological sewage treatment systems is fed with a sewage/sludge mixture with a high percentage of suspended solid particles. The particles deposited on the outside of the filter cloth of the trommel are removed only mechanically by converging scrapers and a stripping lip.

This saves any prelimary thickening by centrifuge or flotation and does not harm the microorganism in the recycled sludge. 25. 10. 77 as 747807 (18pp39)

SOMA- ★ D15 33597B/18 ★DT 2838-899
Dewatering sewage sludge - by comminution, flocculation and treatment in extn. press
SOMAT CORP 25.10.77-US-844871
(26.04.79) C02c-03

In the dewatering of sludge from municipal sewage and industrial wastes the sludge is first broken up, pref. to a particle size of $<$ 11 mm. The comminuted sludge is treated for optimum mechanical dewatering, pref. by adding a flocculant. Finally, the treated sludge is dewatered.

Plant requires little floor space. It has a better efficiency than conventional processes and requires less power to drive it. 6. 9. 78 as 838899 (30pp39)

TYLE/ ★ D15 33615B/18 ★DT 2844-375
Water purification plant - with reverse osmosis filter and storage tank issue control by multi-diaphragm value
TYLER T V 21.10.77-US-844374
(26.04.79) C02b-01/82

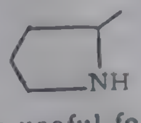
A water purification system, based on a reverse osmosis, includes a storage tank, sepd. by a flexible member into a pure water chamber and a press-out chamber. A multi-diaphragm valve controls the piping between water main and filter, storage tank, and pure water tap.

The arrangement facilitates the cleaning of the filter membranes. The amt. of waste water can be reduced to a min. 11. 10. 78 as 844375 (36pp39)

HENK D15 29922B/16 =EP ---1-584
1-Hydroxy-alkane-1,1-di:phosphonic acid derivs. - useful as chelating agents e.g. in water treatment, for providing trace elements and treating metabolic disorders
HENKEL KG AUF AKTIEN 07.10.77-DT-745083
*B05 C04 E11 (B03 C01 D13 D21) (02.05.79) *DT2745-083 A61k-07/16 A61k-29 A61k-31/66 C02b-05/06 C07f-09/38 C07f-09/65*
D/S: E(BE, CH, FR, GB, NL)

Diphosphonic acids of formula (I) and their water-soluble salts are new:

$$X - C(PO_3H_2)_2OH \qquad (I)$$

(X is $(CH_3)_2C(NH_2)$- or ).

(I) are chelating agents useful for preventing Ca pptn. in water; as corrosion inhibitors; for cleaning metal or glass; to overcome unwanted effects of Cu ions (e.g. to stabilise per cpds., fats and soaps); to bind metal ions in dye baths; to introduce trace elements into plants; and as additives for cyanide electroplating baths. They are also used for control of Ca and phosphate metabolic disorders (e.g. given orally at 1-50 mg./kg./day or for animals as feed additives, opt. in conjunction with calcitonin) and in oral hygiene to prevent development of calculus. (I) can also be used to make ^{99m}Tc diagnostic agents having high selectivity for the skeleton and Ca-contg. tumours.

2.10.78 as 101050 (16pp1251).
(G) ISR: DT2534391; DT2343196; DS2130794; FR2354338

KLEI/ ★ D15 33742B/18 ★EP ---1-679
Particulate polyurethane foam tripodal strands - prepd. by comminuting flexible foam in water, and incorporated in paper or filter medium
KLEIN M 15.09.77-US-833643
A25 F09 J01 (A94 A97) (02.05.79) C08j-03/12 D21h-03/48
D/S: E(DT, FR, GB, NL, SW).

A particulate polyurethane foam comprises broken and interconnected strands from adjacent cells of a flexible foam. The strands comprise predominantly tripodal particles having uneven leg lengths and hook-like projections, indentations and flutes formed by the destruction of cell windows of the flexible foam. The strands also are free of intact cell windows.

The flexible foam has a density of $<$ 0.1, pref. 0.017-0.05 g/cc.

The polyurethane particles are used as modifier in paper (products) to improve tensile and tear strength and to admix in or serve as a filter medium to remove phenol from aq. soln. e.g. industrial effluent and from gaseous streams.

14.9.78 as 300390 (22pp966)
(E) ISR: GB922306; GB1058932; GB1194492; FR2065482

MORE/ ★ D15 33774B/18 ★FR 2398-465
Vessel for gasifying esp. carbonating water - automatically controls inflow of gas and water as prod. is drawn off
MORENO A 28.07.77-FR-023578
(30.03.79) A23l-02

Water and gas (esp. CO_2) are fed continuously into the vessel until gas pressure is sufficient to arrest inflow of water.

When gasified, esp. carbonated, water is drawn off, the liq. level in the vessel drops to allow gas to escape via a purge valve. This permits water to spray in rapidly until the purge valve is covered and closed, so that gas pressure can build up and stop the ingress of water.
28. 7. 77 as 023578 (4pp448).

NKKA D15 74412Y/42 =GB 1545-01
Activated carbon regnerated in annular upright chamber - wit external and internal heating and perforated outer wall
NIKKI KK (MITN TAKE) 31.03.76-JA-035862
*E36 J01 +Q77 (02.05.79) *DT2714-208 C01b-31/10 F27b-01/0*

Regeneration of spent active carbon is effected in appts. which has a burner in a furnace, an annular regeneration chamber defined by inner and outer cylinders, the spent carbon being fed in at the top and removed from the botto of the chamber and being indirectly heated from both insi the inner and outside the outer cylinders. The outer cyli der is perforated.

The chamber is pref. concentric in the furnace. Duct are pref. provided in the lower part of the cylinders to in troduce gas from the furnace to the inner cylinder.

The thermal efficiency of the appts. is improved.
30. 3. 77 as 013384 (8pp1376)

BENC D15 30297A/17 =GB 1545-1
Compsn. for preventing lime deposition in aq. systems - contai cyclohexane 1,2,3,4-tetra:carboxylic acid
BENCKISER J A GMBH 21.12.76-DT-657775
*E15 (02.05.79) *BE-862-122 C02b-05/06 C07c-61/08*

Cyclohexane 1, 2, 3, 4-tetracarboxylic acid-contg. comps are prepd. by (a) reacting a mixt. of acetic anhydride a acetyl chloride in molar ratio 9:1 - 1:9, with croton-ald hyde in molar ratio mixt. :crotonaldehyde of 2:0, 6-1, 0, produce a reaction mixt. contg. 1-acetoxy-butadiene, (b reacting mixt. from (a) with acrylic acid such that mola ratio of mixt. of acetic anhydride and acetyl chloride to acrylic acid is 2:0.6-1.0, to produce a reaction mixt. contg. 2-acetoxy 1,2,5,6-tetrahydrobenzoic acid, (c) reacting mixt. from (b) with maleic anhydride such that molar ratio of acetic anhydride and acetyl chloride to maleic anhydride is 2:0.6-1.0 to produce a reaction mixt. contg. bicyclo-(2,2,2)-octene(7)-1,2,3-tricarboxylic acid 2,3-anhydride and (d) oxidising mixt. from (c) with nitric acid.

Compsns. are esp. used for inhibiting the formation of scale or stone-forming deposits in aq. media. 21.12.77 as 053255 (4pp931)

ICHW D15 27463Y/16 =GB 1545-250
Continuous thickening and dewatering of slurries - having dewatering screen rolls followed by continuous belt
ICHIKAWA WOOLEN TEX LTD 02.10.75-JA-U34075
*(02.05.79) *DT2638-541 B01d-33/10*

Sludge dewatering appts. includes a sludge thickening roll drivingly rotatable about its axis, and devices at first and second stations for applying and removing sludge to and from the roll. The roll has a cylindrical frame overlaid by reticulate material and a washing device for dispensing fluid to wash the reticulate material on its inner surface. The fluid is dispersed onto a segment between the second and first stations in the direction of roll.

Pref. the reticulate material is stainless steel, phosphor bronze or a plastics resin gauze, of mesh size 10 to 40 mesh/inch. There is pref. an additional roll.

Appts. is partic. adapted to treat efficiently a slurry of low solids content to form a dehydrated cake with high solid content. 5.8.76 as 032709 (5pp1376)

YORK ★ D15 33843B/18 ★GB 1545-268
Removing mercury from aq. soln. - by absorption with methylene thiourea derivs.
YORKSHIRE CHEMICALS 05.10.76-GB-041203
E16 J01 (02.05.79) C02c-05/02

Hg is absorbed from aq. soln. of its cpds. by treatment with a thiourea deriv. of formula RNH. CS. NH(CH_2. NH. CS. NH)$_n$R' (I) (where R and R' are each H or CH_2OH; n = 1-5). Pref. (I) are made by reacting thiourea with 0.5-1.5 esp. (0.9-1.1) moles HCHO; esp. a mixt. of cpds. having average value of n from 1-5 is used. Opt. (I) are blended with aninert material such as Fuller's earth or diatomaceous earth.

(I) are effective and stable against hydrolysis, even in 30% aq. H_2SO_4. 4.10.77 (4pp1251)

NIKK- ★ D15 33878B/18 ★GB 2006-408
Regenerator for wet spent active carbon - uses exhaust gas from furnace to heat spent carbon fed to furnace
NIKKI KK 20.10.77-JA-125184
E36 J04 Q77 (02.05.79) C01b-31/10 F27d-13

Regenerator for wet spent active C comprises a furnace for generating or heating to a high temp. a reaction gas and a copper for feeding the spent active C into contact with the reaction gas. An exhaust duct passes through the hopper from the furnace to heat the spent active C passing through the hopper. A condensate collecting header at the lower end of the hopper collects and discharges water sepd. from the spent active C.

The heat from the exhaust gas is recovered and used to heat the spent active C in the hopper. 15.10.78 as 039452 (8pp67)

POTT/ ★ D15 33894B/18 ★J5 4024-274
Fresh water prodn. from sea water - where water vapour under pressure is heat exchanged to effect evapn.
POTTHEARST T C 26.07.77-US-819213
(23.02.79) B01d-01/28 B01d-03/42

The water vapour under compressive condensation is heat exchanged in an evaporating zone and, the water is evaporated. The appts. comprises (a) a means of injecting water in the evaporating zone, preventing formation of $Mg(OH)_2$ and decomposing bicarbonate salt into CO_2 gas, (b) a means of heating the fed water, (c) a means of degasifying CO_2 and unnecessary gas from the fed water and acidifying the fed water in a degasifying zone, (d) a means of operating the evaporating zone under a lower pressure lesser than the pressure of the degasifying zone, and (e) a means of maintaining constant liquid level in the evaporating zone, and further (f) a means of introducing the water vapour into the degasifying zone.

The process is used to produce fresh water from sea water contg. dissolved solid components. 19.7.78 as 087231 (5pp15)

TOKE ★ D15 33936B/18 ★J5 4037-067
Controlling rate of addn. of chemical into sludge treating appts. - in which pumps for feeding the chemical and sludge are controlled depending on signals from the flow rate of each
TOKYO SHIBAURA ELEC LTD 29.08.77-JA-102585
(19.03.79) B01j-01 C02c-03

The sludge treating appts. comprises a condenser/mixer, sludge feed pump, chemical pouring pump, sludge flow rate detector and chemical flow rate detector. Sludge is fed into the condenser/mixer from a reservoir through the sludge feed pump, while a chemical for treating the sludge is poured through the chemical pouring pump into the condenser/mixer.

The object is to avoid errors in pouring the chemical for a specified ratio of the chemical to the sludge. The novelty is that outputs of detectors are applied to a comparator for comparing the sludge flow rate with the chemical to control both pumps for the specified ratio. 29.8.77 as 102585 (2pp26)

MAZN ★ D15 34044B/18 ★J5 4037-362
Purificn. of waste water contg. organic acids or salts - using activated charcoal in acidic medium
MARUZEN OIL KK 07.07.77-JA-081251
(19.03.79) C02c-05/02

In purification of a water water contg. organic acids and/or salts thereof as well as non-polar or weak polar org. cpds. with an activated charcoal, the improvement comprises making the pH value of the water under acidic state prior to continuing the activated charcoal treatment, when practically all amt. of the non-polar or weak polar org. cpd. (except the org. acid and/or salts thereof) is removed by absorption, so that the greater part of the remainder, i.e. the org. acids having low adsorbability are converted into free acid form, thereby they are rapidly adsorbed on the activated charcoal.

This purification process is esp. applicable for treating waste water discharged from a dyestuff producing plant or other sulphonating procedure. The acid to be used is a mineral acid, but wasted HCl or wasted H_2SO_4 may also be used. 7.7.77 as 081251 (6pp34)

KUBI ★ D15 34045B/18 ★J5 4037-363
Treating sludge from domestic night soil purificn. vessel - by adding polymer coagulant, filtering and adding filtrate to crude night soil to carry out nitrification and denitrification
KUBOTA KK 27.08.77-JA-102809
(19.03.79) C02c-01/02

A sludge from domestic night soil purifying vessel is effectively utilised as carbon source for the nitrification and the denitificiation of night soil by adding to the sludge a polymer coagulant in an amt. of 0.5-1.5 wt.% based on solids in the sludge followed by dewatering by filtration to give a filtrate, the main BOD source of which is organic carbon source; adding the filtrate to a crude night soil to carry-out the nitrification and the denitrification of the crude night soil and simultaneously the nitrification of NH_4-N in the filtrate while adjusting the dissolved oxygen content, the amt. of coexisting organic matters, the pH value, the temp. of the water and the content of the org. carbon source, etc.; and subsequently aerating the treated water in the presence of an activated sludge to decompose surplus organic matters, followed by removal of the sludge by pptn. to discharge treated water. 27.8.77 as 102809 (2pp34)

KUBI ★ D15 34046B/18 ★J5 4037-364
Biological denitrification of polluted water contg. organic material - involves floating fillers adhered with microorganisms on the water
KUBOTA KK 27.08.77-JA-102811
(19.03.79) C02c-01/02 C12b-01

An organic polluted water contg. nitrogen components, e.g. NH_3-N, Alb-N, NO_2-N and NO_3-N, etc., e.g. city sewage gen-removal by supplying the water to a contact nitrification vessel in which fillers adhered with microorganisms, e.g. nitrifying bacteria, etc. are floated in the water at a tubular space between an inner tube and an outer tube of an inner vessel.

A diffuser having air introducing holes is also provided. The water is then passed to a contact-reducing vessel in which fillers adhered with denitrification bacteria are floated in the water at a tubular space between an inner tube and the outer wall, and a contact oxidation vessel having almost the same structure as that of the first vessel, in which BOD-oxidising bacteria-adhered fillers are filled. 27.8.77 as 102811 (4pp34)

MITO ★ D15 34047B/18 ★J5 4037-365

Treatment of organic acid-contg. waste washing liquor - obtd. from surface treatment of metals etc. by adding calcium (hydr)oxide, saturating with carbon di:oxide and incinerating resulting liq.

MITSUBISHI HEAVY IND KK 29.08.77-JA-103383

J09 M12 Q73 (19.03.79) C02c-05/02 F23g-07/04

Washing waste liquor contg. heavy metal ions, resulted from treating the surface of a metal article e.g. boiler and heat-exchanger, etc. in chemical plant with an organic acid, e.g. citric acid, mono-ammonium citrate, formic acid, hydroxyacetic acid, etc. to wash-off oxide scales and a neutralised anti-rusting waste liquor are subjected to an incineration treatment without any release of heavy metals-contg. dust in the open air and any deposition of ash on the bottom of furnace, a hopper or air-heater, etc. even in a boiler having no dust collector.

The process comprises (i) adding $Ca(OH)_2$ or CaO in such amt. that the pH value becomes 10-12.5 to ppte. heavy metal hydroxides, (ii) blowing air, combusted waste gas or CO_2 into the supernatant liquor until it is satd. with CO_2, or adding ammonium carbonate in stoichiometric amt. to separate Ca components by pptn., and (iii) incinerating the supernatant liquor thus treated in the boiler. 29.8.77 as 103383 (5pp34)

NDEN ★ D15 34048B/18 ★J5 4037-366

Treating ionic surfactant-contg. waste water - by in-pipe agitation

NISSHIN ELECTRICAL KK 29.08.77-JA-103971

(19.03.79) B01d-21/ C02c-05/02*

Ionic surfactant is removed by coagulation from waste water (I) by (a) adding to (I) an opposite ionic surfactant as the coagulant; (b) agitating in a pipe with intercepting walls under non-air space state; and (c) passing the agitated (I) through a pptn. vessel and/or a filtration tower to remove flocs of the surfactants.

A cationic surfactant, e.g. stearyltrimethylammonium chloride, dialkyldimethylammonium chloride, alkylbenzyldimethylammonium chloride, alkyltrimethylammonium chloride, etc. is pref. used with (I) contg. an anionic surfactant, e.g. Na dodecylbenzene sulphonate, etc. Na dodoecylbenzene sulphonate, Na alkylbenzene sulphonate, sodium alkylsulphate, Na alkylethoxysulphate, Na alkylphenolethoxysulphate, etc. are used as the coagulant when treating cationic surfactant-contg. (I). Coagulation assisant, e.g. bentonite, diatomaceous earth and powdered activated charcoal, etc. may be used in combination with the coagulant. 29.8.77 as 103971 (4pp34)

AGEN ★ D15 34049B/18 ★J5 4037-367

Removing phosphate ion from waste water - by treating with cement-lime composite granules to ppte. calcium phosphate

AGENCY OF IND SCI TECH 29.08.77-JA-104028

E36 (19.03.79) C02c-05/02

PO_4^{3-} is removed from waste water by contacting the PO_4^{3-} contg. waste water with cement-lime composite granules having the wt. ratio between the cement and lime of 2/1 to 1/10 for a period of 10-120 min. to ppte. PO_4^{3-} in form of Ca phosphate.

The granular size of the cement-lime composite granules is 5 to 200 mm., and the shape of the granules is not esp. restricted. More particularly, the PO_4^{3-}-contg. waste water is introduced downwardly into a reaction tower packed with the cement-lime granules, thereafter introducing a suspension discharged from the bottom of the reaction tower into a settling tank, where Ca phosphate is sepd. by pptn., if necessary further subjected to filtration treatment, e.g. sand filter, etc. to give a treated water having a pH value of 10.5-11.0, which is then neutralised with an acid and flowed-out in rivers. 29.8.77 as 104028 (3pp34)

DAIZ ★ D15 34050B/18 ★J5 4037-368

Phosphorus component removal from waste water - by adding alum then bi:carbonate to stabilise resulting aluminium hydroxide floc

DAIDO TOKUSHOKO KK 29.08.77-JA-104105

A91 E36 (19.03.79) C02c-05/02

In removal of P components from a waste water by adding alum to convert the P-components into Al phosphate which is then coprecipitated with flocs of Al hydroxide formed simultaneously, the improvement comprises adding to the system bicarbonate ion to stabilise and to grow-up the flocs of Al hydroxide so that the P removability is improved.

In an example, 74 ppm. of alum is added to a treated waste water (subjected to the activated sludge aeration treatment) if necessary together with a polymer coagulant, e.g. polyacrylamide, etc. under agitation while blowing in a CO_2-contg. gas and maintaining the Ph at 5-7 to form Al phosphate which is adsorbed on flocs of $Al(OH)_3$. The $Al(OH)_3$ flocs are effectively stabilised in the presence of > 3 ppm. of HCO_3^-. The P removability was 87%. 29.8.77 as 104105 (2pp34)

TOAD- ★ D15 34119B/18 ★J5 4038-187

Removing sulphur ions from liq. sample e.g. river water - before determn. of cyanide concn., by fixing cyanide as ferrocyanide and acidifying to evaporate hydrogen sulphide gas

TOA DENPA KOGYO KK 31.08.77-JA-104641

E36 J04 R16 (22.03.79) G01n-01 G01n-31

Method comprises adding ferrous sulphate ($Fe(SO_4)$) and/or ferrous ammonium sulphate ($Fe(NH_4)_2(SO_4)_2 . 6H_2O$) to the sample liq. to fix cyanide (CN) contained in the sample liq. as ferrocyanide complex, reducing the pH value of the sample liq. to <2.0 with the addn. of H_2SO_4 etc., and thus sepg. and removing sulphur ion contained in the liq. as H_2S gas. Pref. $KMnO_4$ soln. is added to the sample liq. to oxidise and remove remaining sulphur ion.

Sulphur ions interfering with the determn. of total cyanide concn. by ion-selective electrode method can be satisfactorily removed with high removing rate by simple operation. The method is useful for the determination of total cyanide concn. in river water, industrial exhaust wa er, etc. 31.8.77 as 104641 (3pp50)

TOKE ★ D15 34162B/18 ★J5 4038-26

Ozone-oxidn. deodorising appts. - in which gas to be treated is firs admixed with air of specified relative humidity

TOKYO SHIBAURA ELEC LTD 01.09.77-JA-104185

J01 P34 (22.03.79) A61l-09 B01d-53/03

In the deodorising of malodorous gas, e.g. H_2S, the gas is reacted with O_3 generated from an ozoniser in an activated carbon-packed reactor, gas to be treated is mixed prior to deodorising treatment, with the air of relative humidity 30-60% or 0.5-2 x smaller than the relative humidity of the gas to be treated, controlled by means of a drier, refrigeration, or dehumidifier.

Process gives prolonged efficient deodorisation since lowering of catalytic activity of activated carbon due to the deposition of moisture on its surface is prevented. A pollution is reduced. Process is partic. suitable for trea ing gases from sewage treatment. 1.9.77 as 104185 (3pp117)

MICH- ★ D15 34167B/18 ★J5 4038-2

Treating waste solids and sewage sludge - by maintaining elevated temp. and pressure in reactor contg. aq. mediu introducing gas contg. oxygen, etc.

MICHIGAN TECK FUND 31.08.77-JA-104689

P41 (22.03.79) B01j-01 B03b-07

Waste solids and sewage sludge are introduced into a ti ly sealed space reactor kept at a temp. of 150-450°C. a a pressure of 21.1-211 kg./cm.^{2} contg. an aq. medium and a gas contg. O_2 is introduced into the aq. medium. T waste solids and sewage sludge are thus thermally oxidi until the COD is lowered below a rate of 10-95%.

The oxidised material is then divided into a liq. phas and a solid phase. The solid phase is introduced in a th mally decomposing chamber contg. a flow of molten lead whereby a gas component contg. methanol, ethanol, benzene, xylene and toluene is sepd. from a solid component contg. carbon, metals and other inorganic material.

Process is used to treat solid waste material and sewage sludge produced in a city zone. 31.8.77 as 104689 (9pp15)

SUMO ★ D15 34185B/18 ★J5 4038-294

Bromide ion recovery from soln. contg. organic acid or salt - by electrodialysis in bath contg. cation and anion exchange membranes opt. with addn. of organic base

SUMITOMO CHEMICAL KK 01.09.77-JA-105468

A97 E37 J03 (22.03.79) B01d-15/04 B01j-01/08 C01b-07/10

Bromide ion is recovered from a soln. also contg. organic acid or salt of mol. wt. <500 and carboxylic and/or phenolic hydroxide, by electrodialysis at $pH < 5$, opt. with the addition of organic base. The electrodialysis bath is equipped with cation exchange membranes and anion exchange membrane alternately.

The method is used to recover bromide ion from industrial waste water.

The pH is controlled by the addn. of mineral acid and/or organic high molecular acid, such as polystyrene sulphonic acid, etc. 1.9.77 as 105468 (5pp42)

MITO ★ D15 34278B/18 ★J5 4038-657

Biological degradation of waste polyurethane foam - together with e.g. sewage sludge, in fermentation tank in presence of air

MITSUBISHI HEAVY IND KK 31.08.77-JA-103658

A35 (A25 D16) (23.03.79) C02c-01/02

Waste polyurethane foam (polyurethane sponge) is completely decomposed by biological degradation without any generation of harmful gas by supplying pieces (10-30 mm.) of the waste polyurethane foam and a sludge, e.g. sewage sludge and sewage digested sludge etc. to a mixer wherein they are thoroughly mixed together; transferring the mixture to a fermentation tank in which perishable org. matters contained in the sludge are almost completely decomposed during residence time under aerophilic state (by admitting a pref. amt. of air from an air inlet at 60-70°C. discharging the fermentation-completed mixt. to the outside; and subsequently separating the mixt. into a by-product compost obtd. from the perishable org. matters and the polyurethane foams pieces which are considerably decreased in amt. by the biological degradation.

The polyurethane foam pieces thus sepd. are recycled to the mixer to subject them to further fermentation degradation treatment. 31.8.77 as 103658 (3pp34)

SUGI/ ★ D15 34279B/18 ★J5 4038-658

Waste water treatment to lower BOD and COD - by adding polymerisation initiator under agitation and irradiation eg with mercury lamp

SUGIURA K 31.08.77-JA-103698

(23.03.79) C02c-05/02

Waste water having very high COD and BOD content which is difficult to decompose biologically by conventional treatment is treated by adding a polymerisation initiator, e.g. $K_2S_2O_8$, under agitation and irradiation of electromagnetic wave of wavelength 1, 000-4, 000 Å e.g. with low pressure Hg lamp to react the COD and BOD components to form a water-insoluble sludge.

Oxidn. agent e.g. Cl_2, NaClO, H_2O_2, $KMnO_4$ etc. may be added. As polymerisation initiator assistant may be use used a reducing agent, e.g. $Na_2S_2O_3$, Na_2SO_3, $NaOHSO_3$, $FeSO_4$, $FeCl_2$, $FeCl_3$, H_3BO_3, ZnO, TiO_2, Na_2HPO_4 etc. 31.8.77 as 103698 (5pp34)

KAGO- ★ D15 34280B/18 ★J5 4038-659

Treatment of pectin contg. effluent from orange processing - involves preheating to enhance separability of pectin-contg. solids and facilitate active sludge treatment

KAGOME KK 01.09.77-JA-104218

(23.03.79) C02c-05/02

In pre-treating a pectin-contg. effluent resulting from orange processing with $Ca(OH)_2$ so as to carry-out coagulation sepn., improvement comprises heating the effluent at >50°C., so that the removability of the pectin and floated matters is increased in a large extent, thus facilitating subsequent activated sludge treatment.

In an example, an effluent from orange peeling, having the COD value of 2, 093 ppm., total pectin content of 1, 960 ppm., and the floated matters content of 916 ppm. is heated at 50°C., after which 0.2% of $Ca(OH)_2$ is added under agitation for 3 mins. followed by allowing to stand for 10 mins. to give a supernatant liquor having the COD value of 1, 761 ppm., the total pectin content of 45 ppm. and the floated matters content of 110 ppm. 1.9.77 as 104218 (2pp34)

HITA ★ D15 34281B/18 ★J5 4038-660

Ammoniacal nitrogen removal from waste water - by adding a zeolite and then an organic coagulant to coagulate and ppte. the zeolite

HITACHI KK 02.09.77-JA-104880

(23.03.79) C02c-05/02

In removing by adsorption NH_4-N from a NH_4-N-contg. waste water with zeolite, the improvement comprises contacting the waste water with zeolite having the granular size of <200 mesh to remove by adsorption NH_4-N, and subsequently adding an organic coagulant to coagulate and ppte. the zeolite, so that the NH_4-N adsorbability (against the zeolite) is accelerated.

The NH_4-N adsorbing coagulated zeolite is easily regenerated in its adsorbability by treating it with alkali(ne earth) metal ion, e.g. Na^+ etc. under elevated temp., and the NH_4-N adsorbability is hardly lowered even carrying-out repeatedly the heat regeneration.

The NH_4-N adsorbing rate of the zeolite is very rapid when the granular size of the zeolite is <200 mesh, but the zeolite is very difficult to be settled under that granular size. The organic coagulant is added to accelerate the settling of the zeolite. 2.9.77 as 104880 (5pp34)

OSHI- ★ D15 34411B/18 ★J5 4039-372

Conversion of waste sludge from filtration plant to landfill material - by treatment with aluminium sulphate and macromolecular flocculant, centrifuging, and drying solid

OSHIO SANGYO KK 02.09.77-JA-104974

A81 J04 (26.03.79) B01j-01 C02c-03

The method comprises adding aluminium sulphate to the waste sludge to settle it; thereafter adding a macromolecule type aggregating agent to the resulting settled substance to obtain a mixt. thereof; centrifugally sepg. the mixt. to obtain a solid substance and a liq.; and heating the solid substance to solidify it. The aggregate agent is sodium polyacrylate, polyethylene imine, polyacrylamide, polyoxyethylene, or a maleic copolymer.

Typically, a waste sludge is mixed with an aggregating agent, the mixt. was introduced into a centrifugal separator to produce a liq. and solid; and the solid is heated in a drying furnace at 200-500°C. to obtain a dried cake. 2.9.77 as 104974 (3pp51)

HITG ★ D15 34412B/18 ★J5 4039-373

Dehydration and calcination of waste sludge - with addn. of coal powder, macromolecular flocculant and lime

BABCOCK-HITACHI KK 02.09.77-JA-105004

A81 J04 (26.03.79) B01j-01 C02c-03

Method comprises mixing a waste sludge with powdery coal, a macromolecular type aggregating agent, and lime, and calcining the mixt. to prevent generation of SOx, NOx, and hexavalent chromium.

The method comprises adding 20-40 wt. pts. of powdery coal of 170 mesh and 0.2-1.5 wt. pts. of a macromolecule type cationic aggregating agent to the waste sludge, thereby removing foul fumes from the waste sludge; simultaneously dehydrating the waste sludge to obtain cake; adding lime or limestone to the cake at 1-10 of a molecular rate to obtain a mixt. thereof; and calcining the mixt. in a fluidised bed type calcining furnace. 2.9.77 as 105004 (7pp51)

NIDE ★ D15 34418B/18 ★J5 4039-383

Appts. for continuous treatment, e.g. oxidn. or redn., of liq. - comprises partitioned container with open cylinder in each compartment for treating gas introduction

NIPPON ELECTRIC KK 02.09.77-JA-106099

J04 (26.03.79) B01j-10 C02c-05/02

Appts. comprises a container having a liq. inlet port at one end and a liq. outlet port at the other end; a number of sets of partition walls dividing the chamber into a number of compartments, each set including a first wall extending from the bottom of the container and terminating at a spaced distance from the top wall of the container, and a second wall extending from the top wall of the container and terminating at a spaced distance from the bottom wall of the container; an open-ended cylinder disposed within each compartment; and a gas injection tube opening into each cylinder.

As the liquid continuously passes through the successive compartments, it is repeatedly contacted with the gas injected into the cylinders. 2.9.77 as 106099 (4pp47)

OHTA/ ★ D15 34420B/18 ★ J5 4039-386
Membrane sepn. appts. for treating waste liq. - includes perforated stainless steel tubes, fibrous mat, perforated polypropylene film and reinforcing discs
OHTA J 03.09.77-JA-105993
A88 J01 (26.03.79) B01d-13

Appts. for filtering waste liquid by the use of an osmotic membrane comprises a tube including an inner perforated tube surmounting the inner tube and formed from a thin-walled stainless steel sheet. The perforations of the outer tube are smaller in dia. than those of the inner tube. A fibrous mat is applied to the surface of the outer tube, and a perforated polypropylene film covers the fibrous tube layer. A number of axially spaced reinforcing discs are inserted into the inner tube.

The tube assembly is placed within a sealed casing to which a waste liquid is introduced under pressure so that pure water passes through the fibrous tube layer into the tube and is then recovered through one end of the tube. 3.9.77 as 105993 (3pp47)

KAME- ★ D15 34518B/18 ★ J5 4039-951
Water treatment with magnetic particles e.g. of ferrite - to reduce contamination by nutrients e.g. phosphate
KAMEI DIECAST KOGYO 04.09.77-JA-106139
(28.03.79) C02b-01/14 C02c-05/02

Contamination of natural water, e.g. fresh water in lake and swamp etc. sea water and industrial or domestic waste water etc. by nutrients enrichment, e.g. with PO_4^{3-} or NH_4-N or with a wide variety of bacteria, further with the generation of plankton etc., is effectively prevented by spraying permanent magent grains, e.g. of ferrite etc., on the water so that it stays at the bottom as long as possible.

Typically, when a sewage-treated water having COD value of 20 ppm., BOD value of 14, total oxygen content of 29 ppm., 30 ppm. of suspended solids, 10.9 ppm. of NH_4-N and 4.53 ppm. of PO_4^{3-} is passed through a filtration appts. packed with granular ferrite to give a treated water having COD value of 8 ppm., BOD value of 10 ppm., total oxygen content of 9 ppm., suspended solids content of 3 ppm., NH_4-N of 10.7 ppm. and PO_4^{3-} content of 0.54. It was proved that PO_4^{3-} is effectively removed by the action of ferrite. 4.9.77 as 106139 (4pp34)

KURS ★ D15 34519B/18 ★ J5 4039-952
Water purification - by passing through porous membrane of hollow fibres consisting of PVA-contg. polymer
KURARAY KK 05.09.77-JA-107120
A88 J01 (A14) (28.03.79) B01d-13 C02b-01/82

Method comprises passing water through a porous membrane made of hollow fibres having holes of dia. 0.005 to 1.0 μ, composed of a PVA-bearing polymer having a polymerisation degree of 500 to 3,500 and a saponification degree of 85 to 100 mol.%, to remove very fine granules and microorganisms.

The membrane has excellent resistance to acid, alkali, and heat, so washing and thermal sterilisation of the membrane can be carried out under severe conditions, and regeneration of the membrane is carried out easily.

The membrane is made e.g. by adding 100 pts. wt. of polyethyleneglycol to 100 pts. wt., preparing an aq. soln. having a PVA concn. of about 15%, introducing the aq. soln. into a coagulation bath ($NaOH/Na_2SO_4$=70/240 g./l.) through a ring-shaped nozzle to give hollow fibres which are then immersed in a treating bath at 70°C. for 5 hrs. so as to be crosslinked, followed by treating with hot water (93°C.) for 3 hrs. and water-washing and drying. 5.9.77 as 107120 (4pp34)

KAWA- ★ D15 34520B/18 ★ J5 4039-958
Treating waste water from coke oven gas desulphurisation - formed using aq. ammonia absorbing agent, using two activated sludge treatments
KAWATETSU KAGAKU KK 03.09.77-JA-106143
E36 H09 J01 (28.03.79) C02c-01/02

In activated sludge treatment of waste water resulting from desulphurisation of coke-oven gas, where aq. NH_3 is used as the absorbing agent and recovering by stripping ammonia liquor from a H_2S-contg. ammonia liquor to reuse it as the absorbing agent under circulation, improvement comprises removing >90% of free ammonia and fixed ammonia from the desulphurisation waste water, followed by blending with a coke-oven ammonia water, then subjecting it to an initial activated sludge treatment to lower its COD value, and subsequently subjecting it to a secondary activated sludge treatment to oxidise NO_2^- and NO_3^- resulted in the initial biological treatment and to further decompose a remaining portion of COD, BOD and SCN components, followed by transferring to a settling vessel if necessary by use of an inorganic coagulant, sand filter and activated charcoal treatment, etc. 3.9.77 as 106143 (4pp34)

MITU ★ D15 34578B/18 ★ J5 4040-279
Treating pulp digested waste soln. - by passing dust-contg. soln. through amphoteric ion exchange resin, then eluting chloride(s) from resin
MITSUBISHI CHEM IND KK (MITY) 05.09.77-JA-106504
A91 F09 (29.03.79) B01j-01/04 C02c-05/08

Treatment of pulp digested waste soln. comprises passing dust-dissolving soln. contg. dissolved dust (formed when pulp digested waste soln. is concentrated and burned) through amphoteric ion exchange resin, so that chlorides contained in the soln. are adsorbed by the resin, and then passing water through the amphoteric ion exchange resin, to elute the absorbed chlorides.

Used for removing chlorides suchas Na, and K chloride contained in pulp digested waste soln., exhausted from th sodium-base digesting process of craft, semichemical, chemiground and sulphide pulp. 5.9.77 as 106504 (5pp96)

KAWI ★ D15 34579B/18 ★ J5 4040-28
Removal of water soluble impurities in solid filtration cake - b washing with water fed from sprayers parallel to drum type vacuum filter
KAWASAKI STEEL KK 06.09.77-JA-106286
J01 (29.03.79) B01d-33 B01j-01 C02c-03

A suspension contg. a water-soluble impurity such as so um sulphate is supplied into a drum type vacuum filter an adsorbed uniformly on a rotating filter cloth. The suspension is filtered under vacuum in a dewatering zone to for a dewatered cake on the filter cloth. Then, water spraye are disposed parallel to the axis of the drum along the c cumference of the drum in the dewatering zone. The dewa ered cake adsorbed on the filter cloth is sufficiently was ed directly with water to remove the water-soluble impurity.

The water-soluble impurities such as sodium chloride sodium sulphate, magnesium sulphate, ammonia water, may be continuously and effectively removed from the fil tration cake of water-insoluble particles, using relativel simple equipment. 6.9.77 as 106286 (4pp35)

TOYJ ★ D15 34583B/18 ★ J5 4040-2
Adsorbent compsn. with excellent sedimentation property - in was water, comprises activated magnesium oxide, adsorbed orga material and silicate(s)
TOYO SODA KK 06.09.77-JA-106316
J01 L02 (29.03.79) B01d-15 C02c-05/02

Adsorbent compsn. comprises activated Mg oxide obtd. by calcining Mg series cpds., adsorbed organic substan and silicic acid series mineral including ≥1 silicate. T compsns. exhibit excellent sedimentation property in waste water and good dehydration property in solid-liqu sepn.

In an example, $Mg(OH)_2$ was heated at 450°C. for 60 min. in electric furnace to obtain MgO. 3 Pts. wt. of the oxide was added to 1000 pts. vol. of craft pulp waste soln., shaken for 90 min., and allowed to adsorb organic substance in the waste soln. After filtering, solid obtd. was heated at 500°C. for 60 min. in electric furnace to obtain powder adsorbent. The diatomaceous earth was mixed with the powder adsorbent to obtain compsn. described. 6.9.77 as 106316 (5pp96)

KUBI ★ D15 34593B/18 ★J7 9007-273
Gas-liq. contact by three/phase fluidisation - by placing solid granules on fluid-permeable plate and passing gas and liq. through plate
KUBOTA KK (SHIA KURK) 24.11.73-JA-135818
J04 (D16) (05.04.79) B01j-08/22 C02c-05/04 C12b-01

Method comprises placing on a fluid-permeable plate solid granules having specific gravity (x) of $\geqslant 2.5$, particle dia. of y mm, and $12 \leqslant x \times y \leqslant 38$, and passing gas and liq. through the plate at a flow rate from the min. rate necessary for fluidising the granules to a rate sufficient to expand the bulk of the granules to 1.5 fold. 24.11.73 as 135818 B01j-8/22; C02c-5/04; C12b-1/00 (5.4.79) KUBOTA KK; KURITA WATER IND. KK (4pp83) (J50082847)

COMB- D15 07796V/05 =J7 9007-274
Treatment of sewage and town waste - in fluidised bed
COMBUSTION POWER CO 26.04.72-US-247829
*Q73 +P54 Q77 (05.04.79) *FR2182-105 B01j-08/34 B23g-07*

Appts. deals simultaneously with liq. and solid wastes comprises a fluidised bed reactor in which a bed of granular material is fluidised such that it can react with another introduced material. The combustion system comprises an assembly for the introduction of waste solids delivered by lorries; an assembly for the introduction of sewage wastes and sludge and an assembly for the combustion of the solid wastes which are used as fuel. The plane can deal simultaneously with liq. wastes without causing any pollution. These liq. wastes may contain 100% of water and need not be dehydrated; they are sprayed, at the upper part of the bed in the combustion chamber and serve to regulate the temp. of the air and gases after combustion. Additions of lime and other agents to the fluidised bed can be made while the plant is operating. These agents react with any polluting gases and prevent the release of noxious fumes to the atmos. 25.4.73 as 047163 (+26.4.72-US-247829) B01j-8/34; F23g-7/00 (5.4.79) COMBUSTION POWER CO. INC. (20pp) (J49047261)

HITA D15 54776Y/31 =J7 9007-380
Removing calcium sulphate from water - using strong cation-exchange and anion-exchange resins
HITACHI KK 17.12.75-JA-149474
*E33 (06.04.79) *J52073-545 C02b-01/40*

Method comprises (a) treating with a strongly acidic cation-exchange resin and a strongly basis anion-exchange resin to remove Ca^{2+} ion and SO_4^{2-} ion; (b) blending cation-exchange resin- reproducing waste liquor having high Ca^{2+} concn. and an anion-exchange resin-reproducing waste liquor having high SO_4^{2}- concn., resulting in the reprodn of the ion-exchange resins, to ppte. gypsum; and (c) using a mother liquor sepd. from the gypsum as the reproducing liquor for each of the ion-exchange resins. 17.12.75 as 149474 C02b-1/40 (6.4.79) HITACHI, K.K. (3pp) (J52073545)

HITA D15 76701X/41 =J7 9007-381
Electrolytic treatment of acidic waste water contg fluorine - using aluminium electrode and adding sea water
HITACHI KK 24.02.75-JA-021919
*J03 (06.04.79) *J51097-250 C02c-05/12*

In electrolytically treating acidic fluorine-contg. waste water by use of an Al plate as the anode so as to form a complex of fluorine and aluminium to fix the fluorine, the improvement involves adding 0.5 to 1 pt. by vol. of sea water to 1 pt. by vol. of the waste water. Ca ion in the sea water reacts with the F ion to form calcium fluoride, thereby the F ion is fixed.

NaOH requirement for pH adjustment is greatly reduced due to formation of NaOH by the electrolysis and buffer action of the sea water. Electricity cost is also lowered, due to the fact that the sea water is a strong electrolyte and electric current for dissolving the Al electrode is passed under constant voltage. 24.2.75 as 021919 C02c-5/12 (6.4.79) HITACHI KK (3pp) (J51097250)

NIMI D15 27878Y/16 =J7 9007-382
Defluorination of waste waters - by agitation with red mud from Bayer alumina prodn.
NIPPON LIGHT METAL KK 30.08.75-JA-104547
*L02 (06.04.79) *J52030-054 C02c-05/02*

To fluorine-contg. waste water is added red mud (obtd. in the prodn. of alumina from bauxite according to the Bayer process) followed by agitation. Excellent defluorination can be achieved. The red mud has hitherto had no viable uses. 30.8.75 as 104547 C02c-5/02 (6.4.79) NIPPON LIGHT MET RE (3pp) (J52030054)

TOZK D15 44721X/24 =J7 9007-512
Fractional distillation appts - comprising heating chamber, flash type separator and 2 heat exchangers and collection vessels
TOYODA MACH WORKS KK (TOYX) 24.10.74-JA-122779
*J01 (07.04.79) *J51048-763 B01d-01 B01d-03/06*

A vaporising separator comprises a heating chamber for heating the original liquid to its b.pt., a flash type separator, a first heat-exchanger to effect heat-exchanging between the vapour obtd. at the separator and the liquid before entering the heating chamber so as to preheat the liq. and condensate the vapour, a receiver to collect condensate from the first heat exchanger, and a second heat-exchanger to catch vapour not condensed in the first heat-exchanger and condense it by a coolant introduced to the second heat-exchanger. Separator is compact and highly efficient. 24.10.74 as 122779 B01d-3/06; 1/00 (7.4.79) TOYODA MACH. WKS. LTD. (6pp) (J51048763)

OKAZ/ D15 41012X/22 =J7 9007-513
Anode protection in water control device - giving high alkali concn.
OKAZAKI T 16.10.74-JA-118816
*J03 (07.04.79) *J51044-567 A23l-01 +B01k-01 C02b-01/82*

Control device has anode and cathode chambers sepd. by porous, sintered cover, with cathode comprising a carbon rod and kept dry by the cover to preclude expansion due to water. 16.10.74 as 118816 B01k-1/00; A23l-1/00; C02b-1/82 (7.4.79) OKAZAKI, T. (3pp) (J51044567)

KUBI D15 69493Y/39 =J7 9007-627
Water spray device for contact oxidation of waste water - has adjustable cylinders fixed spray plate above the filler
KUBOTA KK 09.02.76-JA-014645
*(09.04.79) *J52096-977 B01j-10 C02c-05/04 +B01d-03/26*

Device is described for spraying water over a filler charged in a contact oxidising device treating contaminated water. The device has adjustable cylinders fixed to a spray plate. The filler is charged in an oxidising cell and a raw water fed into the cell, while oxygen is fed into the cell to contact the water with an active treating layer coated over the surface of the filler, to oxidise the water.

The spray plate is disposed in an upper section of the cell and above the filler. Spray holes are bored through the plate to spray the water over the filler through the cylinders. A distributing channel structure is disposed over the plate to distribute the water fed onto the plate over the holes. 9.2.76 as 014645 B01j-10/00; F02c-5/04; B01d-3/26 (9.2.76) KUBOTA KK (5pp26) (J52096977)

INFO- ★ D15 B/18 ★NO 7703-154
Water waves concn. appts.
SENTRALINST IND FOR 13.09.77-NO-003154
+Q42 (09.04.79) C02b E02b-09/08

VEOS ★ D15 B/18 ★OE 7709-144
Wire cloth press for dewatering materials
VER OSTERR EISEN & STAHL 20.12.77-OE-009144
(15.04.79) C02c-03

VESE/ ★ D15 34653B/18 ★SU-611-641
Compact filter for water - has perforated base in arcuate section, with one cylinder filled with poly-disperse floating and other with mono-disperse granulate
VESELOV YU S 20.12.76-SU-430217
J01 (22.05.78) B01d-23/10

The filter, comprises a casing made as two intercommuni-
cating hollow cylinders with an intermediate arcuate
section and filled with granulate, and distribution and
drainage units. To improve performance, the filter has
a perforated base in the arcuate section, while one of the
cylinders is filled with polydisperse-floating, and the
other with monodisperse granulate.
Veselov, Yu.S., Markelov, V. B, Bul. 23/25. 6. 78 20.12. 76.
as 430217 (3pp132)

LAZO/ ★ D15 34757B/18 ★SU -611-891

**Iron-contg. coagulating agent removal from waste water ppte. -
includes treatment with inorganic acid under vibro-mixing to
solubilise ferric oxide, used in water purificn.**

LAZOVSKII YA K 11.05.76-SU-356314

(09.06.78) C02c-03

The regeneration of Fe-contg. coagulant from waste
water sediment (esp. from water purification stations) is
based on treating with inorganic acid under vibromixing to
solubilise 99.8% of Fe_2O_3 present. Pref. mixing is at
freq. 36-50 vibns/sec. and amplitude 0.2-4mm (pref. 2-3
mm). 30-50% stoichiometric excess of acid is pref. used.
The excess acid is subsequently bound.

Amplitude of 0.2+mm. is necessary to breakup ferric hydroxide floc. Below 36 vibns/sec. freq. the regeneration time is prolonged.

Lazovskii, Ya.B., Mineralov, O.I, Novikov, M.G. et al. Bul. 23/25. 6. 78 11. 5. 67 as 356314 (4pp114)

AAZP= ★ D15 34758B/18 ★SU -611-892

Hard waste water contg. petroleum and metal ions purificn. - includes treatment with potassium chloride, alkali metal silicate and ethanol mixt.

AS AZERB PETROCHEM (AAZP= KASP=) 23.06.76-SU-373867

(09.06.78) C02c-05/02

The treatment of waste water by alkali metal silicate and ethanol mixt. allows simultaneous removal of all impurities at all degrees of contamination by incorporation of KCl.

The compsn. comprises (wt. %): silicate 94.5-99.4; ethanol 0.5-0.7; KCl 0.1-5. The proposed method is suitable for removing water hardening ions, petroleum prods. and metal ions.

Abdullaev, G-M.B., Aliev, V.S., Altman, N.B. et al. Bul. 23/25. 6. 78 23. 6. 78 as 373867 (2pp114)

FORE= ★ D15 34860B/18 ★SU -612-165

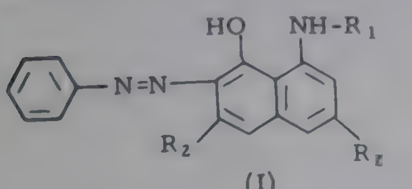
Qualitative determination of quaternary ammonium surfactants - in turpentine, rosin or waste water using aq. phenyl:azo-naphthol-di:sulphonic acid derivs. as dye

FOREST CHEM IND RES 13.10.75-SU-180602

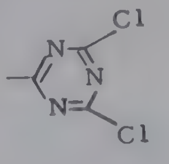
E16 G02 J04 R16 (E21) (26.05.78) G01n-21/24

The synthetic cationic surface active alkylamines are determined qualitatively in final and intermediate prods. obtd. by processing natural resins. The method is used for turpentine, rosin and turpentine-rosin prodn. waste water by treating the test material with aq. dye soln. with subsequent colorimetric analysis.

The selectivity of the determination is increased by using 8-naphthol-7-azobenzene-3,4-disulphonic acid-1-imine-dichlorotriazine of formula (I) as dye in the analysis of above materials. In this formula R_1 is gp. of formula (II) and



(I)



(II)

R_2 is gp. of formula: $-SO_3H$. Traces of surfactant (1×10^{-4}%) can be estimated by this method.

Maslennikov, A.S., Maslennikova, M.A. Bul. 23/25. 6. 78. 13. 10. 75. as 180602 (4pp938)

AUTO- D15 27500V/15 =US RE29-969

Biological degradation sewage treatment plant - using rotating discs coated with organisms alternately immersed and exposed

AUTOTROL CORP 29.09.72-US-293594 (14.11.73-US-415677)

*(17.04.79) *DT2349-029 C02c-01/04*

Waste water contg. carbonaceous pol
BOD_5 and NH_3 nitrogen in a wt. ratio of ≥ 3.6:1 respectiv-
ely is treated by (1) supplying the water at a predetermined
rate to a single stage biological treatment unit which inclu-
des ≥ 1 rotatable shaft supporting partially submerged bi-
ological contactors having a surface area for growth and
maintenance of organisms.

Method further comprises (2) creating a flow of water
through the unit perpendicular to the shaft so as to feed the
organisms on the contactor surfaces equally and (3) rotat-
ing the shaft to impart a predetermined peripheral velocity
to the contactors to alternately expose the surface area to
waste water and an O_2-contg. atmos.

Feed of organisms and peripheral velocity are chosen
to simultaneously oxidise ≥ 83 wt. % of the carbonaceous
pollutants measured as BOD_5 and ≥ 46 wt. % of the NH_3
nitrogen on the same surface of the contactors. 1.3.77 as
773304 Div. ex. 3817857 Reissue of 3869380 (+29.9.72,
14.4.73-US-293594, 415677) (10pp992)

AUTO- D15 75591W/45 =US RE29-970

**Upgrading wastewater treatment plant - with a single stage
biological treatment unit with defined operational parameters**

AUTOTROL CORP 02.05.74-US-466290 (29.09.72-US-293594)

*(17.04.79) *US3915-854 C02c-01/04*

Process is claimed for upgrading the pollutant removal eff
iciency of waste water treatment plants which include a
prim. treatment unit (I) for removing settleable and flotab
solids, and activated sludge processing tank (II), a clarif-
ier (III) downstream of (II) and a conduit (IV) for recircula
ting solids from (III) to (II).

Method comprises providing a single stage biological
treatment unit (V) between (II) and (III), supplying waste
water contg. carbonaceous pollutants measured as BOD_5
and NH_4 nitrogen in a wt. ratio of ≥ 3.6:1 respectively,
to (II) from (I), supplying the water at a constant rate fror
(II) to (V), flowing water through (V) perpendicular to ≥ 1
rotatable shaft (which supports partially submerged biolo-
gical contactors (VI) having a surface area for the growth
and maintenance of organisms) so as to feed the organism
on (VI) equally, rotating the shaft(s) to oxidise ≥ 83 wt. %
of the BOD_5 and ≥ 46 wt. % of the NH_3 nitrogen on the sam
surface of (VI) and inactivating (IV) to prevent recirculati
of solids from (III) to (II). The water is supplied to (V)
from (II) at 0.4-2.5 gallons/day/ft^2 of surface area of (VI
25.4.77 as 790290 Reissue of 3915854 C. i. p. 3817857
(+29.9.72, 16.4.73, 2.5.74-US-293594, 351200, 466290)
(8pp992)

BOUL- ★ D15 35085B/18 ★US 4149-95

Appts. for treating waste water - by electrolytic action usin particulate aluminium anode and particulate iron cathode

BOULIGNY R H INC 14.11.77-US-851110 (31.05.77-US-801653)

J03 (17.04.79) C02b-01/82 C02c-05/12

Waste water is treated electrolytically in an appts. whic includes a treating chamber operating as an electrolytic cell. The anode in the cell is particulate aluminium whi the cathode is particulate iron and is disposed close to th aluminium. Water containing dissolved solids is used a the electrolyte.

In operation the aluminium and iron dissolve and floc produced in the treating chamber. The floc-laden water may be transferred to a holding chamber where it is mi with the waste water. The floc absorbs the impurities from the waste water.

The method is used for treating waste water having a high concentration of petroleum waste products, e, g. waste obtained from a machinery cleaning operation whe the effluent includes acids, alkalis, oil and grease, sol ents and heavy metals. The method minimises slime ac umulation on the electrodes. 14. 11. 77 as 851110 (10pp

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KUPI/ ★ D15 35097B/18 ★US 4149-

Treatment of liquid contg. industrial waste - with bentonite portland cement to give inert porous product

KUPIEC A R 21.09.77-US-835264 (05.05.76-US-683045)

A35 J04 L02 (17.04.79) C02c-05/02

Liq.-contg. polluting waste contg. metal ions is made harmless by adjusting the pH to 6-11, and adding $^1/_4$-30 wt. % bentonite clay, mixing, then adding $^1/_4$-50 wt. % Portland cement, and mixing the percentages being bas on wt. of waste. After a reaction time of $\frac{1}{2}$-5 hours, the prod. is a spongy soil-like solid, which entraps pollutant ions.

The process is suitable for all types of industrial waste. Vegetation can be grown on the prod. 21. 9. 77 as 835264 (4pp955)

AMMX D15 83280A/46 = US 4149-969
Corrosion-proofing of metal parts in water
AMAX INC 23.03.77-US-780530
*E13 M14 (17.04.79) *J53118-238 +C02b-05/02*

Corrosion of metal parts and scaling in water systems are prevented by dissolving in the water (a) alkali molybdate to molybdate ion concn. $\geqslant$ 1 ppm., (b) $\geqslant$ 0. 5 ppm Zn, Mn or Ni (II) ion, (c) $\geqslant$ 5 ppm 1-hydroxyethylidene-1, 1-diphosphonic acid or its alkali salts, and (d) $\geqslant$ 1 ppm 2-mercapto-benzothiazole or its alkali salts, 1, 2, 3-benzotriazole or tolyltriazole.

The additives prevent corrosion of ferrous and copper based parts and effluent from the system can usually be discharged to waste without treatment. 23. 3. 77 as 780530 (5pp945)

SEKI D15 60866A/34 = US 4149-972
Aerobic sewage treatment device - comprising rotor contg. non:foamed PVC or polyethylene resin plates contg. holes which are assembled with clamping rods and spacers
SEKISUI KAGAKU KOGY 16.02.77-JA-016605
*A88 (17.04.79) *DT2806-415 C02c-01/04*

Waste water treatment appts. comprises a shaft upon which fan-shaped sheets of unfoamed synthetic resin are radially mounted, and which have holes in alignment with adjacent sheets. Spacers are interposed between the sheets.

Synthetic resin tubes are inserted through the aligned holes to form a rotatable assembly, the tubes having a metallic core. The assembly is mounted for rotation in a treatment tank. The design allows for easy construction and is of smaller size than previous appts. 14. 2. 78 as 877813 (7pp1379)

CARO ★ D15 35107B/18 ★ US 4149-994
Hard, granular, activated carbon for water treatment - is prepd. from brown coal by dil. acid treatment, etc.
CARBORUNDUM CO 02.12.77-US-856881
E36 J01 (17.04.79) B01j-21/18 C01b-31/08

In the prepn. of hard, granular activated C (I) of abrasion no. $\not<$ 70, and ash content $\not>$ 8 wt. %, (a) granules are formed from brown coal from which Fe material has been extd. magnetically, (b) granules are treated with a dil. aq. inorganic acid (II), washed and dried to $<$ 25 wt. % H_2O; (c) granules are reduced to a fine powder, compressed into shapes and reformed into granules; (d) reformed granules are devolatilised without charring by being heated above the charring temp. in an inert atmos., and (e) devolatilised granules are activated by being heated above the devolatilisation temp. in the presence of a gaseous activating agent.

Process gives higher yields of (I) from the lower cost brown coal while avoiding the use of a charring step or a carbonaceous binder. (I) is partic. suitable for use in H_2O and waste H_2O treatment. 2. 12. 77 as 856881 (14pp)

CARO ★ D15 35108B/18 ★ US 4149-995
Hard granular activated carbon for water treatment - is prepd. from brown coal by treatment with conc. acid, etc.
CARBORUNDUM CO 30.12.77-US-865801
E36 J01 (17.04.79) B01j-21/08 C01b-31/08

In the prepn. of hard granular activated C (I) of abrasion no. $\not<$ 70 and ash content $\not>$ 8 wt. % (a) granules are formed from brown coal from which Fe material is magnetically extd., (b) granules are treated with 1-10 wt. % of a conc. inorganic acid without addn. of a carbonaceous binder so that subsequent charring is eliminated; (c) granules are reduced to a fine powder of H_2O content (including acid) 10-30 wt. %; (d) powder is compressed to be shaped and reduced to reform the granules; (e) reformed granules are devolatilised by being heated directly above the charring temp., in an O_2-free atmos., and (f) the granules are finally activated by being heated above the devolatilising temp. under a gaseous activating agent.

(I) is prepd. in higher yield from lower cost brown coal by a process which does not involve a charring process and which does not use large amts. of acid. (I) is suitable for use in H_2O and waste H_2O treatment. 3. 12. 77 as 865801 (13pp478)

See Also

D22 BE 871666 D22 US 4150220 D25 EP ---1561

D16 : FERMENTATION INDUSTRY

BOEF ★ D16 33326B/18 ★ BE -871-530
Maltose-phosphorylase and beta-phosphoglucomutase prodn. - useful in alpha-amylase clinical assay, from specific Lactobacillus and Streptococcus strains
BOEHRINGER MANNHEIM GMBH 26.10.77-DT-748036
B04 R16 (25.04.79) C12d G01n

Prodn. of maltose phosphorylase (I) and/or β-phosphoglucomutase (II) comprises fermentation of Lactobacillus brevis DSM 20054; NCIB 8836, 8561 or 8562; L. plantarum DSM 20174 and 43; L. reuteri DSM 20015; L. fermentum DSM 20052, or Streptococcus spec. DSM 1118, 1119, 1120 and/or 1121.

Also new is the use of (I) and (II) without sepn., as a crude extract or in purified form, for assaying α-amylase opt. with addn. of α-glucose-1, 6-diphosphate (III) and/or Mn^{2+} ions.

(I) and (II) are obtd. simply and cheaply without use of the dangerous pathogen Neisseria meningitidis. 25. 10. 78 as 871530 (8pp1251)

BEHW ★ D16 33342B/18 ★ BE -871-612
Stabilising meningococcal polysaccharide for use in vaccine - by adding hydrate forming cpd., e.g. sucrose, then freeze drying
BEHRINGWERKE AG 27.10.77-DT-748132
B04 (27.04.79) A61k C12k

The stability of meningococcal polysaccharides (A) is improved adding to their aq. soln., opt. together with lactose $\geqslant$ 0.3 mg per 100 ug (A) of a cpd. (I) which can form a hydrate which is reversibly dehydrate during lyophilisation then drying the mixt. (I) is esp. sucrose, raffinose, glucose, trehalose, a glycerophosphate, or a glutamate. Vaccines contg. (A) stabilised with (I), and opt. lactose, are also new.

Used esp. for stabilising gp. A meningococci polysaccharides. Addn. of (I) stabilises (A) against hydrolytic depolymerisation more effectively then lactose. 27. 10. 78 as 871612 (8pp1251)

BOEF D16 71173V/41 = DS 2315-501
Cholesterol determination - by liberation of combined cholesterol with a cholesterol-esterase derived from micro-organisms
BOEHRINGER MANNHEIM GMBH 28.03.73-DT-315501
*B04 +R16 (26.04.79) *BE-812-858 G01n-33/16*

Determination of cholesterol in aq. media is effected by incubation with cholesteroloxidase, followed by determination of O_2, H_2O_2 or cholestenone produced. Bonded cholesterol is first treated with Candida cylindracea or cholesterol-esterase. The process comprises add. of the micro-organism (as a dry powder); treatment with an anion exchange resin; elution with $(NH_4)_2SO_4$, (1. 8-2. 4M); and chromatography on an anion exchange resin. A reagent for cholesterol analysis comprises cholesteroloxidase and components for the analysis of H_2O_2; and opt. the above mi

-croorganism or cholesterolesterase prepns. Process is used as a diagnostic aid. 28.3.73 as 315501 (4pp047)

WISS- ★ D16 33606B/18 ★DT 2843-614

Microorganism cultivation plant - with pump for fermenter column, heat exchanger and degassing cyclone

WTZ TECHN MIKROBIO 20.10.77-DL-201604

(26.04.79) C12b-01

Plant for the cultivation of microorganisms in an aq. nutrient medium includes a circulating pump with a gas injector and a fermenter column with perforated plates having decreasing hole diameters in descending order. A heat exchanger leads to a degassing cyclone, followed by inlets for the nutrient medium and pH control fluid and an outlet for fermenter run-off.

Arrangement saves the shaft which passes through the whole fermenter column and achieves a thorough degassing of the fermentation medium. 6.10.78 as 843614 (15pp39)

MITU ★ D16 33664B/18 ★DT 2845-820

Fluid glucose content measurement - is performed by measuring hydrogen peroxide formed during glucose oxidase treatment after ion exchanger pretreatment

MITSUBISHI CHEM IND KK 22.10.77-JA-127102

B04 J04 R16 (26.04.79) G01n-31/14 G01n-33/16

Method and device are used pref for determining the glucose content at fluid samples. The method involves treatment with glucose oxidase during formation of hydrogen peroxide. The quantity of hydrogen peroxide formed is measured.

They are designed for rapid, simple and exact measurements unaffected by fluid impurities. The fluid is first treated with an ion exchanger resin before being introduced to the glucose oxidase. The ion exchanger consists of a strong basic anionexchanger resin. 20.10.78 as 845820 (36pp1297)

MITU ★ D16 33713B/18 ★EP ---1-622

Steroidal alcohol(s) prodn. by fermentation with Mycobacterium species - to give 20 alpha-hydroxymethyl-pregna-1,4-diene-3 one or pregn-4-en-3-one

MITSUBISHI CHEM IND KK 14.10.77-JA-123185 (14.10.77-JA-123184)

B01 (02.05.79) C07b-29/02 C07j-09

D/S: E(CH, DT, FR, GB, NL, SW).

Prodn. of steroidal alcohols comprising mainly 20a-hydroxymethyl-pregna-1,4-dien-3-one (I) or 20a-hydroxymethyl-pregn-4-en-3-one (II) comprises cultivation of a suitable Mycobacterium sp. microorganism on a sterol substrate. Pref. substrates are sterols and their C-3 esters and ethers, and oxidation intermediates. The microorganisms are pref. mutants lacking or poor in enzymes capable of degrading (I) or (II).

M. parafortuitum complex microorganisms are pref. used, esp. M. parafortuitum complex MCI 0617 and M. neoaurum. Pref. the culture medium contains ≥ 0.1 wt.% glyceride(s) and pref. also vegetable oil meal(s).

(I) and (II) are important intermediates in prodn. of corticosteroids, progestogens, anabolic hormones, etc. High yields are obtd. using mutant microorganisms, c.f. wild strains, e.g. ≮70 mole % based on consumed sterol substrate.

13.10.78 as 101142 (35pp949).

(E) ISR: US3684657; US3759791; FR2313395; 4 Journal References.

BRPE ★ D16 33743B/18 ★EP ---1-681

Dehydration of aq. alcohol(s) - using a relatively non-toxic cyclohexane entrainer giving reduced phase separation time

BP CHEMICALS LTD 06.10.77-GB-041527

E17 J01 (E15) (02.05.79) C07c-29/28 C07c-31/08

D/S: E(DT, FR, GB).

Anhydrous alcohols are prepd. continuously by distilling a mixt. of aq. alcohol and cyclohexane fed to the upper half of a drying column, withdrawing a ternary azeotrope as an overhead distillate and recovering alcohol contg. ≤ 0.1 wt.% water from the base of the column.

The distillate is fed into a decanter maintained at a temp. below the distillate b.pt. for ≥10 mins., the separated organic hydrocarbon phase is recycled to the top of the drying column, the aq. phase contg. ≥ 30 wt.% the drying column feed is fed into the lower half of a recovery column, an overhead distillate contg. mainly organic cpds. is recycled from the recovery column to the drying column at a point intermediate between the aq. alcohol feed point and column top, and organics-free water is removed from the base of the recovery column.

The process obviates the use of toxic entrainers such as benzenes and greatly reduces phase separating time in the decanter.

19.9.78 as 300397 (9pp558).

(E) ISR: DS1014974; DS1219011; 2 Journal References.

BRPE ★ D16 33748B/18 ★EP ---1-694

High purity anhydrous ethanol prepn. - by azeotropically distilling aq. ethanol with cyclohexane as an entrainer

BP CHEMICALS LTD 14.10.77-GB-042753

E17 J01 (E15) (02.05.79) C07c-29/28 C07c-31/08

D/S: E(DT, FR, GB).

Anhydrous ethanol is prepd. by azeotropically distilling aq. ethanol and cyclohexane, as entrainer, in a drying still contg. ≥ 50 plates, removing all the water as an overhead fraction comprising a ternary water/cyclohexane/ethanol azeotrope, and withdrawing anhydrous ethanol in the vapour phase either from a point intermediate between the level of liq. in the base of the drying still and the 5th plate or as an overhead fraction from a further tailing still into which anhydrous liq. ethanol from the base of the drying still has been fed.

The method prevents ethanol from being downgraded w.r.t. its permanganate time and Komarowski values owing to solvent extraction of impurities from flexible materials used for jointing purposes and pump seals. The final prod. is of very high purity and may be used in potable or pharmaceutical applications.

3.10.78 as 300449 (12pp558).

(E) ISR: DS1219011; DS1014974; 2 Journal References.

PFIZ D16 35178B/18 =EP ---1-720

Poly:cyclic ether antibiotic 47224 - useful against gram positive bacteria and coccidiosis in poultry, and for improving feed utilisation in ruminants

PFIZER INC 26.10.77-US-845491

*B04 C03 (D13) (02.05.79) *US4150-152 A61k-35/66 +C07g-11 C12d-09/14*

D/S: E(BE, DT, FR, GB, LU, NL).

Polycyclic ether antibiotic having the characteristics of Antibiotic 47224 produced by Streptomyces hygroscopicus ATCC 31337 is new. The antibiotic may be in the form of the free acid or its Na salt.

The acid is soluble in MeOH, Me_2CO, $CHCl_3$, MeCOiBu or Et acetate and insoluble in water. It shrinks at 65°C and melts at 68-80°C, and it has $[\alpha]_D + 43°$ (c, 1% in MeOH). It analyses for C 62.5%, H 8.92% and O 28.58%. It has U.V. light absorption maximum in MeOH at 232 nm with $E^{1\%}_{1cm}$ of 150; it also has a characteristic i.r. spectrum.

The antibiotic is active against Gram-positive bacteri it has good activity against coccidial infections in poultry and it is useful for improving feed utilisation in ruminan and monogastric animals. It is used in chicken diets at 5-100 p.p.m.

25.10.78 as 300541 (26pp1248).

(E) ISR: FR2303539; FR2356667; GB1495858.

VIRO- ★ D16 33779B/18 ★FR 2398-5

In vitro culture of hepatitis A virus - useful for the prepn. of speci antigens, immuno-serums and vaccines

INST VIROLOGIE TOUR 29.07.77-FR-023372

B04 (30.03.79) A61k-39/12 C12k-07

Complete hepatitis A virus is extracted from the stools, blood or its derivs. are taken from subjects (man or ani mals) suffering from hepatitis A, or from the liver, bil or any organ or fluid from an animal infected experimen ally by centrifuging, adsorption, chromatography or ult centrifuging. The virus may then be conc. to the min. necessary for replication on diploid cultures.

Replication is then effected by a series of passages on cell material of the virus, in the course of which the apparent speed of development of the virus accelerates, resulting in a large quantity, which is industrially exploitable, of hepatitis A virus, consisting of a mixt. of complete viral particles and empty capsides of genetic material.

The complete viral particles are capable of producing a rapid and useful amt. of viral material on diploid cells. Process is used to produce specific reactive antigens, immunoserums and vaccines against hepatitis A. 29.7.77 as 023372 (8pp520).

CUVE- ★ D16 33792B/18 ★FR 2398-677

Stainless steel vat for storage of wine - has internal coating of phenolic or epoxy resin

CUVES ET REVETEMENT 28.07.77-FR-023856

A82 Q32 Q34 (A21 A92) (30.03.79) B65d-25/14 B65d-87/24

Internal surface of a stainless steel vat for the storage of wine is first sanded, and then isolated from the liq. by means of a coating of (a) phenol-formaldehyde resin, pref. applied in four or five oven polymerised layers, or (b) an epoxy resin, without thixotropic agent, which can be applied by projection in monolayer. The stainless steel used is partic. austenitic or ferritic stainless steel.

The coating prevents corrosion of the electrochemical type occurring at the internal stainless steel surface, and lessens the deposit of tartar contained in the wine onto the internal surface. 28.7.77 as 023856 (4pp1319).

POMP- ★ D16 33793B/18 ★FR 2398-679

Elevating band conveyor for winemaking grapes etc. - has lower end band tensioning assembly of sanitary construction

POMPES MACH HYDRA 26.07.77-FR-023839

Q35 (30.03.79) B65g-19/08 B65g-23/44 C12g-01

A band conveyor for elevating bulk material, partic. wet material possibly contg. pockets of liq. has a drive pulley at the upper end, and a band is fitted with transverse pusher slats or flaps.

At the lower end of the conveyor, the idler pulley has its shaft bearings mounted on a support which is slidable longitudinally in a guide channel. Sliding adjustment of the support regulated band tension. Between the bearings, the support is cut back in a radius coaxial with the pulley shaft so that the circumferential edges of the band slats ride in sealed contact on the radius. The guide channel has base and sidewalls and the support slides in leakproof contact with the channel surfaces.

Used for elevating wet material, partic. grapes for winemaking. Band tensioning is adjusted at the idle end pulley which provides for better band tracking and cleaner discharge than drive end adjustment. These advantages are combined with a hygienic design of tensioning unit which is easy to clean. 26.7.77 as 023839 (10pp448).

EAST D16 32799Y/19 =GB 1545-237

Cholesterol oxidase prodn. in surfactant-contg. medium - causing enzyme to be produced outside the cell

EASTMAN KODAK CO 07.11.75-US-629955

*A97 B04 R16 (02.05.79) *BE-848-070 +C07g-07/02*

Cholesterol oxidase (I) is produced by growing a suitable microorganism in a medium contg. $\geqslant 0.5$ g/l of a nonionic surfactant, the presence of the surfactant ensuring that extracellular (I) is formed, and the surfactant and any of its decomposition products being non-toxic to the microorganism in the quantity used.

Pref. the surfactant comprises a hydrophilic moiety which is a polyoxyethylene or polyglycidol moiety and a lipophilic moiety contg. $\geqslant$ 9C. Pref. the microorganism is Nocardia cholesterolicum species NRRL 5767 or 5768, and the medium contains (i) an inducer of (I) e.g. cholesterol, and/or (ii) yeast extract.

The need for complicated and costly cell harvesting techniques used in the prior art is eliminated. 8.11.76 as 046408 (14pp990)

WAKP ★ D16 34071B/18 ★J5 4037-798

determn.. of substrate quantity or enzyme activity - in enzyme reaction where hydrogen carrier e.g. NADH acts as coenzyme, by colorimetry using meldola blue

WAKO PURE CHEM IND KK 31.08.77-JA-104396

B04 J04 R16 (20.03.79) G01n-31/14 G01n-33/16

In the determn. of substrate quantity or enzyme activity in an enzyme reaction process a hydrogen carrier (e.g., NADH etc.), participates as the coenzyme. Change in the quantity of the reduced-type hydrogen carrier, which has correlation with the substrate quantity of the enzyme activity, is colorimetrically determined using Meldola Blue as the colouration reagent.

The method is used for diagnostic analysis such as determination of GOT (glutamic acid oxaloacetic acid transaminase) in blood serum, etc. Improved reproducibility is obtd. 31.8.77 as 104396 (7pp173)

CHOK/ ★ D16 34105B/18 ★J5 4037-876

Cultivating microorganism of species Saccharomyces cerevisiae - which is alcohol resistant and used in brewing, using enzyme for dissolving yeast cell body

CHOKAN K 27.08.77-JA-102194

(20.03.79) C12c-11/04 C12k-01/04

Microorganism belonging to the species Saccharomyces cerevisiae, which is useful for brewing, is cultivated in a liquid medium, and in logarithmic growing stage of the microorganism. Enzyme for dissolving yeast cell body in 5 to 20 percent alcohol soln. is acted upon the microorganism, and then non-dissolved microorganism is collected and subjected to liquid cultivation, the series of steps being repeated. Microorganism mutant having high resistance against the above enzyme is sepd. and concentrated, and then from the thus obtd. concentrate is sepd. mutant which is resistant against alcohol such as 20% alcohol soln. contg. 1% of glucose.

When brewing is conducted with the use of this mutant, the mutant is not killed even after long periods of brewing and thus properties of the resultant alcohol are not damaged. 27.8.77 as 102194 (4pp22)

MITN ★ D16 34106B/18 ★J5 4037-879

Yeast cell body prepn. in high concn. - by continuously cultivating e.g. yeast of genus Pichia which can assimilate (m)ethanol, under aerobic conditions

MITSUBISHI GAS CHEM IND 01.09.77-JA-105276

(20.03.79) C12c-11/08

Yeast which can assimilate methanol or ethanol is cultivated continuously in a culture medium contg. methanol or ethanol as the main carbon source at high cell body concn., whereby cell body of yeast is obtd. Sepn. of the resultant is easily conducted, and culture broth of high cell body concn. can be obtd., and thus dried cell body can be easily obtd. by direct drying of the culture broth by e.g. spray-drying.

The yeast which can assimilate methanol includes microorganism belonging to the genus Hansenula, Pichia, Torulopsis, etc. and that which can assimilate ethanol includes Saccharomyces, Hansenula, Pichia, Torulopsis, Candida, etc. Typical examples of the microorganisms are Pichia aganobii (FERM 2430) and Torulopsis methanoescule (FERM 2461). The cultivation is conducted under aerobic condition at the cell body concentration of 50 to 150 g./1. 1.9.77 as 105276 (9pp22)

KANE ★ D16 34107B/18 ★J5 4037-882

Stabilising activity of urokinase - by adding cpd. with di:sulphide and/or mercapto gps.

KANEBO KK 29.08.77-JA-104013

B04 (20.03.79) C07g-07/02

Activity of urokinase is stabilised by adding to a substance (I) contg. urokinase a cpd. (II) contg. disulphide and/or mercapto gps. (I) are e.g. those of specific activity >30,000 IU/g. as soln. or powder, e.g. crude urokinase soln. or powdery human urine. (II) is e.g. peptide or aminoacid such as L-cystine or cysteine, or coenzyme A, which is added as 1×10^2-5×10^5 mole/mole protein.

The process stabilises the activity of high specific activity urokinase of >30,000 IU/mg. for a prolonged period, preventing loss of activity during dialysis or concn. with membranes or hollow fibres based on cellulose, nylon etc. Used in the purificn. steps such as dilution, freezing or freeze-drying. 29.8.77 as 104013 (5pp43)

KYOW ★ D16 34108B/18 ★J5 4037-884
Choline dehydrogenase enzyme prepn. - by culturing a strain of Pseudomonas, Bacillus, Arthrobacter etc. in a medium contg. choline
KYOWA FERMENTATION KK 30.08.77-JA-103244
(20.03.79) C07g-07/02

Prodn. of choline dehydrogenase comprises culturing in a medium contg. choline a strain belonging to Pseudomonas (except for pseudomonas aeruginosa) Agrobacterium, Arthrobacter, Bacillus, Brevibacterium, Euribinia, Mycobacterium, Paracolobactorum, Salmonella, Zarcina, Aspergillus or Mucor, and collecting choline dehydrogenase from the cultured product.

Culture is effected in a medium composed of glucose, sucrose, etc., alcohols ammonia or other N sources and peptone and other natural nutrients, added with choline chloride, at 20-40°C. for 1-4 days. Collection is effected by conventional purificn. procedures. 30.8.77 as 103244 (6pp43)

KYOW ★ D16 34109B/18 ★J5 4037-885
Cholesterol oxidase purificn. - by contacting soln. contg. cholesterol oxidase with adsorbent and eluting cholesterol oxidase from adsorbent
KYOWA FERMENTATION KK 01.09.77-JA-104221
(20.03.79) C07g-07/02

Purificn. of cholesterol oxidase comprises contacting a soln. contg. cholesterol oxidase with a water insol. adsorbent obtd. by binding a substance similar to a substrate for cholesterol oxidase with a support, to adsorb cholesterol oxidase, and eluting the cholesterol oxidase.

The support is e.g., polymeric polysaccharides having amino or porous glass contg. amino gps., which is bonded with substance similar to the substrate like cholic and deoxycholic acid. The soln. contg. choline oxidase is e.g. filtrate of the cultured prod. of choline oxidase producing bacteria, or is e.g. produced by eliminating solids from crushed ground prod. of bacteria bodies sepd. from culture soln. of choline oxidase producing bacteria. Adsorption is effected e.g. at pH 6-8, and <30°C. The adsorbed enzymes are eluted with mixt. of DMF, DMSO, or other hydrophilic solvents and water.

The process produces cholesterol oxidase without requiring pretreatments like pptn. with $(NH_4)_2SO_4$, etc. 1.9.77 as 104221 (5pp43)

AJIN ★ D16 34110B/18 ★J5 4037-886
L-threonine prodn. by fermentation - using Prebibacterium microorganisms which are resistant to p-chloro-meta-tri:chloro:methyl phenyl:alanine
AJINOMOTO KK 31.08.77-JA-104324
B05 E16 (20.03.79) C12d-13/06

Prodn. of L-threonine by fermentation comprises collecting L-threonine accumulated and produced by culturing in a culture medium a variant strain belonging to Brevibacterium which is resistant to p-chloro-metatrichloromethyl-phenylalanine and capable of producing L-threonine. Typically the process produces L-threonine by culturing, e.g. Brevibacterium lactofermentam at 27-37°C., and pH 5-9 in aerobic conditions.

In an example, Brevibacterium lactofermentam Aj 11186 is inoculated into a culture medium composed mainly of 10 g./l. glucose, 4.5 g./l. ammonium sulphate and other nutrients to give 1 litre of culture soln. Centrifugal sepn. and column purification with Amberlite IR-120, followed by elution with 3% ammoniacal water and concn. and crystallisation after decolouration yielded 5.4 g. (> 98%) pure L-threonine. 31.8.77 as 104324 (4pp43)

BANY ★ D16 34111B/18 ★J5 4037-887
7-2-Thienyl:acetamido cephalosporanic acid prodn. - by reacting 2-thienyl:acetic acid or its deriv. with 7-amino-cephalosporanic acid in presence of Arthrobacter enzyme
BANYU PHARM CO LTD 30.08.77-JA-103229
B02 C02 (20.03.79) C12d-09/20

7-(2-Thienylacetamido)cephalosporanic acid (I) is prepd. by reacting 2-thienylacetic acid or its reactive deriv. with 7-aminocephalosporanic acid (II) in the presence of a cultured prod. or treated culture broth of Arthrobacter enzyme, in an aq. medium.

Reactive deriv. of 2-thienylacetic
alkyl -2-thienylacetate (e.g. methyl ester, ethyl ester)
and 2-thienylacetamide. Enzymatic reaction is carried out
at 20-45 (28-35)°C. in pH 5.0-8.0 (6.8-7.5) for 1-5 hrs.
A concn. of (II) is 0.1-10 (2-5) mg./ml. 30.

(I) is obtd. by acylating enzymatically (II) with 2-thienyl
acetic acid or its reactive deriv. over a cultured prod. of
treated culture broth of Arthrobacter enzyme. 30.8.77 as
103229 (3pp104)

AJIN ★ D16 34112B/18 ★J5 4037-888
Pullulan prepn. by cultivating aureobasidium genus bacteria - using partly decomposed cellulose (cello oligosaccharide) as carbon source
AJINOMOTO KK 30.08.77-JA-103812
B04 (20.03.79) C12d-13/04 C12k-01

Pullulan (I) is prepd. by cultivating a pullulan producing bacterium of Aureobasidium genus with partially decomposed cellulose (cello-oligosaccharide) as carbon source.

Cello-oligosaccharide forms a cheap carbon source.
Pullulan producing bacterium includes e.g. Auerobasidium
pullulans AHU 9553, IFO 4464, IFO 6353, IFO 6401, IFO
6402 and the like. Particularly IFO 6464 and IFO 6402 are
pref. Partially decomposed cellulose includes a mixt. of
cello-oligosaccharide such as cellobiose, cellotriose,
cellotetraose, cellopentaose or cellohexaose. Culture is
carried out at 25-35°C. at pH 5-8.0 for 2-8 days. 30.8.7
as 103812 (3pp104)

AJIN ★ D16 34113B/18 ★J5 4037-88
Fermentative prodn. of polysaccharide(s) - using Acetobacte
microorganisms in culture medium contg. partially decompose
cellulose as carbon source
AJINOMOTO KK 30.08.77-JA-103813
(D17) (20.03.79) C12d-13/04

Prodn. of polysaccharides comprises culturing a Aceto-
bacter microorganism capable of forming bacterial mem
branes in culture medium comprising as carbon source
partially decomposed prod. of cellulose (celloligosaccha
ide (sic)) and collecting the produced polysaccharides.
The process may use waste paper.

In an example, 100 g. of filter paper powder is treate
in 525 ml. of acetylating soln. for 4 days, then neutrali
ed with $NaHSO_3$, and the ppte. filtered out to react with
sodium methylate. The filtered out insolubles yield a so
of celloligosaccharide (sic). Acetobacter acetate IFO328
is cultured for 20 days at 30°C. in 50 ml. of medium co
2.0% of celloligosaccharide (sic), yielding polysacchari
in amt. 190.7 mg./50 ml. in yield of 19.1%. 30.8.77 as
103813 (3pp43)

GODO ★ D16 34114B/18 ★J5 4037-8
Wine prodn. - by inoculating grape juice contg. sulphurous ac
with sulphurous acid resistant yeast, adding yeast for wine a
fermentation
GODO SHUSEI KK 29.08.77-JA-102676
(20.03.79) C12g-01/02

Prodn. of wine comprises inoculating a grape juice cont
>30 ppm. of free sulphurous acid and incapable of fermenting with usual yeast for wine with yeast resistant t
sulphurous acid, adding yeast for wine simultaneously
thereafter, and effecting fermentation.

The yeast resistant to sulphurous acid is e.g. Sacch
myces rouxii No. CJ-2, and, when being inoculated int
grape soln. with high content of sulphurous acid, reduc
the sulphurous acid to facilitate the fermentation with t
usual wine yeasts, resulting in prodn. of dry wine afte
7 to 10 days. 29.8.77 as 102676 (4pp43)

TANA ★ D16 34115B/18 ★J5 4037-
Seasoning agent soln. prodn. - using protein solubilising enzy
and aminopeptidase and carboxy:peptidase in yeast to give
aminoacid(s) content
TANABE PHARMACEUTICAL KK (UEDA-) 26.08.77-JA-102894
(20.03.79) A23l-01/23 C12d-13/10

The process comprises mixing a hydrolysis soln. obtd
by hydrolysing protein raw material modified with an
zyme prepn. composed of protein solubilising enzyme,
with a treated bacterial body obtd. by immersing non
resistant yeast bacterial body and koji bacteria body,

conditioning the mixt. in the presence of salt, or mixing the hydrolysis soln.with the non-salt-resistant yeast bacteria and koji bacteria body, treating the mixt. in the presence of salt and conditioning it.

The protein solubilising enzymes are e.g. endo type protein decomposing enzymes e.g. produced from bacteria e.g. Bacillus amilolquefacence bar Neyagawa. The non-salt-resistant yeasts are e.g. yeasts for sake wine or yeasts for bread. The process, using strong protein solubilising enzymes and aminopeptidase and carboxypeptidase contained in yeasts, produces seasoning agent with high content of amino acids from soybeans, defatted soybeans, etc. 26.8.77 as 102894 (6pp43)

OHSA- ★ D16 34294B/18 ★ J5 4038-901

Cellulose- based pulp prodn. from algae - e.g. spirogyra, urothrix, corallina and tribonema, by treatment with acid, alkali, chlorine etc.

YK OHSAKA SEIKEN 30.08.77-JA-103960

F09 (24.03.79) D21c-03/02

Algae such as Spirogyra, Chaetophora, Urothrix, Corallina, Tribonema, etc. are used as the raw materials, and these are chemically treated with alkali, acid, chlorine, etc., to produce cellulose-based pulp.

The algae used as the raw materials can be easily cultivated in aq. medium from which the algae can be easily sepd. The cell wall of algae contains no lignin, and consequently, digestion with S-contg. chemicals is not necessary. Bleaching of the algae, pulp can be carried out by simple chlorine treatment, etc. 30.8.77 as 103960 (5pp173)

TAKE ★ D16 34319B/18 ★ J5 4039-001

Physiologically active material P-725 - inhibits prostaglandin biosynthesis and having antiinflammatory and analgesic activities

TAKEDA CHEMICAL IND KK 31.08.77-JA-105234

B04 (24.03.79) A61k-35/66 A61k-37/64 C07g-17 C12d-09/04

Substance P-725 having the following physical and chemical properties is new: (1) appearance, acidic lipophilic colourless pillared crystals or crystalline powder; (2) the pillared crystals change into needles at 140-160°C., and decompose at 165-170°C.;(3) elemental analysis: C 45.75± 0.5, H 4.45±0.5, N 8.94±0.5, O 41.22±1.0; mol.wt.157; mol.formula: $C_6H_7NO_4$; (4) $(\alpha)_D^{25}$ = +48.95±5° (c = 1.0, MeOH), (5) colour reaction: positive to iodine, Rydon-Smith and ninhydrin reactions; negative to naphthoresorcinol-H_2SO_4 reaction.

(6) Solubility: soluble in MeOH, EtOH, Me_2CO, MeCOEt, dioxane, EtOAc, alkaline water, and pyridine; readily soluble in THF, DMSO; sparingly soluble in PhH, Et_2O, $CHCl_3$, n-hexane, water and acidic water; (7) and has characteristic UV and IR spectra.

Substance P-725 is produced by a substance P-725 producing strain of Penicillium (Penicillium thomii IFO-7984) by cultivation pref. on a liquid medium with shaking or aeration and agitation at 20-35°C. for 1-12 days. 31.8.77 as 105234 (5pp52)

NORQ ★ D16 34531B/18 ★ J5 4040-136

Rearing mutant by tissue-cultivation of plants - without using e.g. radiation to induce mutation

NORIINSHO 25.08.77-JA-101134

P13 (28.03.79) A01h-01/06 C12k-09

Rearing mutant (based on the gene mutation generated during cultivation and the change of the chromosome structure) comprises tissue-cultivating one part of organ of plant such as seed, pollen, growing point, stem, foliage, petal or root or whole of plant such as young seedling, to dedifferentiate them and to restore the plant body.

The method gives the mutant in high yield, e.g. > 60%. In radial ray treatment, the mutation percentage is 20-40%. The method is safer and is more convenient, since it can induce the mutation without using e.g. radiation, 25.8.77 as 101134 (4pp)

KYOW ★ D16 34532B/18 ★ J5 4040-138

Large scale prodn. of begonia seedlings - by culturing pieces of plant tissue in solid then liq. medium

KYOWA FERMENTATION KK 07.09.77-JA-107391

P13 (28.03.79) A01g-01 C12k-09

Method comprises culturing tissue pieces of begonia plants in a solid medium until stems and leaves can be differentiated, and then culturing the resulting differentiated blocks in a liq. medium under shaking and stirring. This is opt. followed by culturing the resulting blocks in a solid medium.

Begonia seedlings are produced cheaply and quickly. The tissue may be e.g., leaf, stem, root, bud or other tissue. The solid medium cultivation is pref. conducted for 20-50 days, and the liq. medium cultivation is pref. carried out for 15-40 days. As medium there are used, e.g. White medium, Heller medium, Murashige-Skoog medium, etc. 7.9.77 as 107391 (4pp108)

EBAR ★ D16 34536B/18 ★ J5 4040-170

Urban refuse purificn. before or after compost prodn. - by mechanically sepg. metal, soft plastics etc., and statically sepg. glass ceramics and other brittle materials

EBARA MFG KK 06.09.77-JA-106955

C04 P43 (28.03.79) B07b-15 C05f-09

Purification of urban refuse compost comprises removing by mechanical means soft plastics, metal, cloth and like non-brittle materials which cannot be converted to compost, and separating by static means the compost-convertible materials from glass, ceramics, hard plastics and like brittle materials which are not convertible to the compost, before or after the fermentation step.

Brittle foreign materials such as glass, ceramics and hard plastics having small particle size which have hitherto been difficult to separate, can be sepd. accurately. Thus obtd. urban refuse compost can be used safely, since it does not contain materials which are dangerous to agricultural processes. 6.9.77 as 106955 (9pp108)

HOHN D16 13694X/08 = J7 9007-696

Mushrooms cultivation medium - based on corn fibres and rice or corn bran

HOHNEN OIL KK (HOHN-) 21.06.74-JA-071047

*P13 (09.04.79) *J51001-253 A01g-01/04*

Mushrooms are cultivated in a culture medium consisting of 95-70% wt. corn fibres, and 5-30 wt.% of rice bran or corn bran. Corn fibres are obtained as by-products when corn starch is produced from corn. Example of mushrooms include Pleurotus ostreatus Quil, Flammuline velutipes Sing, Auricularia auriculajudae Quel.

The period of cultivation is short, the yields are good and subsequently the cultivation medium may be used as feedstuff. 21.6.74 as 071047 A01g-1/04 (9.4.79) HOHNEN OIL KK (3pp) (J51001253)

HOHN D16 21409X/12 = J7 9007-697

Pleurotus ostreatus Ouel mushroom cultivation - on medium contg. soy bean husks, rice bran and/or corn bran

HOHNEN OIL KK (HOHN-) 18.07.74-JA-082397

*P13 (09.04.79) *J51013-663 A01g-01/04*

Pleurotus osteatus Ouel (mushroom) is cultivated on a culture medium contg. 75-90 wt.% of soybean husks and 10-25 wt.% of rice bran and/or corn bran. The soybean husks have uniform quality, good permeability and nutritional value. The culture medium is reuseable. 18.7.74 as 082397 A01g-1/04 (9.4.79) HOHNEN OIL KK (3pp) (J51013663)

TAKE/ D16 54970X/29 = J7 9007-699

Culture medium for mushroom - obtd from bagasse, dried grass, rice bran, ammonium molybdate, starch etc.

TAKEUCHI M 22.11.74-JA-134895

*P13 (D13) (09.04.79) *J51063-246 A01g-01/04*

To 80 pts. of bagasse and 20 pts. of dried grass, 15 pts. of defatted rice bran, 0.02 pts. of ammonium molybdate or sodium molybdate, 5 pts. of starch, 3 pts. of garlic powder,. 0.2 pts. of gibberelline, extract soln. of an oak or a beech and water are added. A culture medium contg 60-70% of moisture is obtd. Using this medium mushroom is produced with a yield of 200-250g, per 1 kg. of the medium. 22.11.74 as 134895 A01g-1/04 (9.4.79) TAKEUCHI, M. (2pp) (J51063246)

05747U/05 = J7 9007-873
RETO D16
Whole microbial cells - aggregated on a flocculant for enzyme-catalysed reactions, especially isomerisation of glucose
REYNOLDS TOBACCO CO 09.07.71-US-161337
*(D17) (10.04.79) *NL7209-532 C12d-13*

An aggregate contg. whole microbial cells combined with
active amts. of an enzyme and formed by means of a flo-
cculant, is used in enzyme-catalysed conversions of a
substrate. The aggregates can be used in (dis)continuous
processes, e.g. isomerisation oxidn. dehydrogenation,
hydrolysis and redn. The isomerisation of glucose to
fructose is claimed. Sepn. of the enzyme from the cells
is avoided. The dried aggregates can be stored for long
periods. 7. 7. 72 as 068108 (clg. 9. 7. 71-US-161337)
C12d-13/00 (10. 4. 79) REYNOLDS TOBACCO CO., R. J.
(6pp) (J48018487)

71174V/41 = J7 9007-875
SNAM D16
Malic acid prepn from fumarates - using fumarase in a microfilamentous polymeric structure
SNAMPROGETTI SPA 30.03.73-IT-022377
*A97 E17 (10.04.79) *BE-812-860 C07g-07/02 + C12d-01*

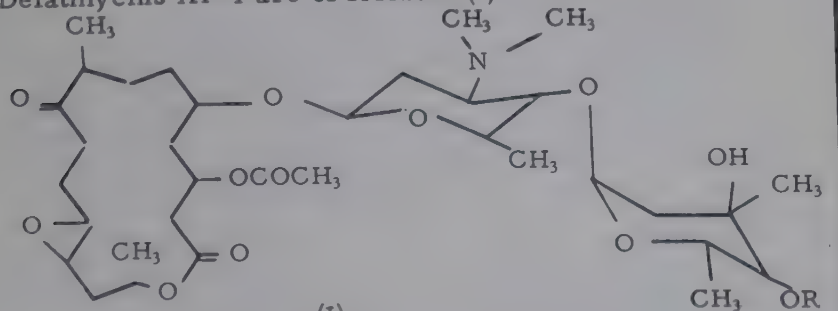
Enzymatic prepn. of malic acid comprises contacting a
soln. of a salt of fumaric acid with a filament structure
contg. fumarase. The filament structure is formed of fib-
res of polymers of esterified cellulose or cellulose nitra-
tes, polyolefins, (co)polymers of acrylonitrile, acrylates,
methacrylates vinyl esters, vinyl chloride, vinylidene
chloride, styrene, polyamides or polyvinyl butyrates.
28. 3. 74 as 035546 (clg. 30. 3. 73-IT-022377) C12d-1/00;
C07g-7/02 (10. 4. 79) SNAM PROGETTI SpA (2pp)
(J49126887)

64041T/40 = J7 9007-876
ZAID D16
Pepstatins as anti ulcer agents - from streptomyces strains
ZH BISEIBUTSU KAGAKU KEN 26.03.71-JA-017292
*B04 (10.04.79) *BE-781-253 C12d-09/14*

Cpds. esp. pepstatin, pepstatin B, pepstatin C and 5 unidentified other related cpds. are prepd. by cultivation of Streptomyces testaceus or Streptomyces argenteolus var toyonakensis and sepd. by chromatography. Pepstatins B and C have the same structure as pepstatin but isovaleryl is replaced by capryl and isocapryl resp; the 5 unidentified derivs. have 5-16C alkanoyl replacing isovaleryl. 26. 3. 71 as 017292 C12d-9/14 (10. 4. 79) ZAIDAN HOJIN BISEIBUTSU KAGAKU KENKYU KAI (8pp)(J47029582)

87089Y/49 = J7 9007-877
SAOC D16
Deltamycins A1, A2, A3, A4 produced by the genus Streptomyces - and useful as antibiotics active against Gram positive bacteria
SANRAKU OCEAN (AJIN) 25.03.74-JA-033741
*B03 (10.04.79) *J50132-182 + C07d-313 C12d-09/14*

Delatmycins A1-4 are of formula (I):



(I)

(where R is $OOCH_3$, $COCH_2CH_3$, $CO(CH_2)_2CH_3$, or $COCH_2CH(CH_3)_2$ respectively).

In an example, Streptomyces deltae P3409, an isolate from soil, was shake cultured on glycerin-glucose medium at 28° for 72 hrs. The broth filtrate (4.5 l) contg. (I)-A1-4 at the ratio of75. 6:10. 6:3. 3:10. 5, was extracted with EtOAc to give 260 mg white powder. On recrystallising with C_6H_6 and subjecting to chromatography gave 112 mg A1, 9 mg A2 and 13 mg A4.

MIC to Staphylococcus aureus 209P, Dipplococcus pneumonie, and Sarucina rutea was 1.0 ug/ml. 25. 3. 74 as 033741 C12d-9/14; C07d-313/00 (10. 4. 79) SANRAKU OCEAN KK (18pp) (J50132182)

30984X/17 = J7 9007-878
TANA D16
Immunity-promoting peptide prodn - specif peptide-gluco-mannane SPGM-I and SPM II from strain of Saccharomyces
TANABE SEIYAKU KK 30.08.74-JA-100343
*B04 (10.04.79) *J51029-215 A61k-35/72 + C12d-13*

Peptide glucomannane SPGM-I and SPM-II having immuni-
ty-promoting effect are produced from the autolysing sub-
stance or the destroying substance of the cell of yeast be-
longing to the genus Saccharomyces. 30. 8. 74 as 100343
C12d-13/00; A61k-35/72 (10. 4. 79) TANABE SEIYAKU KK
(12pp) (J51029215)

58970X/31 = J7 9007-879
MEIJ D16
Purifying antibiotic matl contg phosphorus - by adsorbing on porous non-ionic styrene or acrylic acid ester resin and eluting
MEIJI SEIKA 16.12.74-JA-143532
*B04 (10.04.79) *J51070-890 C12d-09/02*

Method comprises adsorbing a P-contg. antibiotic sub-
stance, which contains P as an element constituting the
molecule, on a porous (specific surface area 140-800 m²/
g) and non-ionic styrene type resin or acrylic acid ester
resin, and then eluting the adsorbed cpd. with a suitable
solvent.

The highly pure antibiotic substance obtd. can be used
as it is or suitably diluted, and it is widely used in the
field of medicines or veterinary drugs. The purification
method is very simple cf known methods for such purifica-
tion. 16. 12. 74 as 143532 C12d-9/02 MEIJI SEIKA (4pp)
(J51070890)

29530T/19 = J7 9007-880
RAIN- D16
Enclosed brewery vat - for single vessel complete brewing including settling and ageing
RAINIER COMPANIES (RAI -) 20.10.70-US-082404
*(10.04.79) *DT2149-986 C12c-11/04*

The large cylindrical vat has a conical base with a slope
of 25° and rising from the centre just above the sediment
level a distributor head for CO_2 gas which rises and sets
up a gentle convection current so that sediment is collect-
ed from the mixed wort and yeast during fermentation,
in the conical base from which it is flushed by an annular
sprinkler pipe and extracted by a pump through a central
drain.

Maturing takes place subsequently in the same tank an
the process follows a regulated temp. cycle between 1. 7
and 23. 9°C. The walls are thermally lagged and have in-
tegral heating plates. 20. 10. 71 as 082524 (clg. 20. 10. 70
US-082404) C12c-11/04 (10. 4. 79) RAINIER COMPANIES
INC. (14pp) (J47009744)

B/18 ★OE 7707-80
RUTH/ ★ D16
Mushrooms prodn.
RUTHNER O 02.11.77-OE-007808
P13 (15.04.79) A01g-01/04

65913W/40 = SU -611-59
BRPE D16
Single-celled micro organism-contg. creams - separated fro fermentation liquors by centrifugeing heated and re-centrifuged improve solids content
BRITISH PETROLEUM LTD 19.03.74-GB-012101
*H04 (19.05.78) *DT2511-436 C12b-01/26*

A process is claimed for the sepn. of the biomass contg.
monocellular microorganisms obtd. in the fermentative
culturing of these microorganisms, the technique com-
prising centrifuging the fermentation broth to obtain a
concentrated biomass product, then heating the product,
5-70 (pref. 15-50)°C, and centrifuging again to further
increase the solids concentration of the biomass.

The process is used partic. with the culturing of yeas
(esp. Candida lipolytica or C. tropicalis) on hydrocarbo
substrate, esp. gas oil of boiling range 300-350°C (this
embodiment being specifically claimed), or kerosene.
Previous max. of 17 wt. % solids may be improved to 26 w
% in continuous and to 35 wt. % in batchwise processes.

The second centifuging temp. is esp. 75-80°C, the te
of the broth having been increased by 40-45°C. The pH
of the medium is 3-8 esp. 6-7 and the heating may be
carried out by blowing in steam or in a plate type heat-
exchanger. Jet discharge or decanter-type centrifuges
are suitable. The contact time of the microorganisms i

the heated environment should be minimised, e.g. to 0.1-5 min.

Grant, D.H., Sheppard, P.G., Keller, J.M., et al. Bul 22/15.6.78. 19.3.75. as 117934 (3pp)

DERI- D16 26235W/16 =SU -611-595

Isolation of protease inhibitor from animal organs - by lysis with proteolytic enzyme and sepn. with cationic detergent

LAB DERIVATI ORGANI 05.10.73-CH-014265

*B04 (19.05.78) *DT2447-050 C07g-07/02 +C12d-13/10*

A protease inhibitor is isolated from animal organs by (a) subjecting the organs for a powder or extract thereof) to lysis with a proteolytic enzyme which does not attack the inhibitor; (b) terminating lysis by separating the protein; (c) separating the inhibitor by means of a cationic detergent; and (d) purifying the inhibitor. The process is simple gives high yields, and can be operated in combination with a standard heparin-isolation process.

In the combined process, stages (a) and (b) are effected above and the product is then separated in stage (c) into an insoluble fraction contg. heparin and mucopolysaccharides and an aq. liquid contg. the protease inhibitor; the heparin and protease inhibitor are then purified separately The animal organs can be lungs, parotid glands, pancreas and/or liver. The proteolytic enzyme must be one which is not inactivated by the inhibitor, e.g. papain, ficin, bromelain or pancreatin. Stage (c) can be effected by adding a protein precipitant and/or by heating. The cationic detergent is pref. cetylpyridinium chloride or cetyltrimethylammonium bromide. The inhibitor is pref. purified by acidifying the aqs. liquid with 2-5% CF_3COOH, adding $(NH_4)_2SO_4$ to 45-90% satn. fractionating with alcohol and/or acetone, and subjecting the product to gel filtration or gel chromatography.

Fedeli, G., Ambrosi, L.de. Bul. 22/15.6.78. 4.10.74. as 068151 (3pp)

CHUS D16 31931F/00 =SU -611-597

Anti-tumour substance from cells of hemolytic

CHUGAI PHARMACEUTICAL KK (CHUG KYOX) 31.10.66-JA-071347

*B04 (19.05.78) *NL6714-739 +C12k-01*

Haemolytic streptococcus with high anti-swelling activity is obtd. by culturing Streptococcus haemolyticus ATSS 21060 in nutrient medium of pH 7.0-7.4 contg. 3.0-6.0% yeast extract and usual additives.

The nutrient is prepd. by dissolving yeast extract or yeast autolysate in water, followed by heating, filtration neutralisation to pH 7.0-7.4 with alkali soln. concn. addn. of salts bacterial culture (grown on meat broth) and culturing for 12-30 hrs. at 37°C.

Ogava, H., Suzuki, S., Savada, M. et al. Bul. 22/15.6.68. 25.10.67. as 192686 (2pp938)

KIFO= ★ D16 34784B/18 ★SU -611-925

Control of pure culture microorganisms cultivation - using transducers for sensing nutrient parameters and with computer control of servo

KIEV FOOD IND 01.06.76-SU-367705

(17.05.78) C12b-01/08

High yield and improved quality of final prod. obtd. by pure culture cultivation of microorganisms are ensured by transducers. The latter measure density, specific resistivity and optical density of nutrient salts. The computer derives the concn. of P and K in the nutrient salts soln., and is connected to the transducers via converters.

Gorodenskaya, V.Ya., Tregub, V.G., Veklich, N.P. et al. Bul. 23/25.6.78. 1.6.76. as 367705 (3pp89)

KHNO= ★ D16 34785B/18 ★SU -611-926

Hops extract prepn. for use in beer prodn. - includes heating pptd. magnesium salts with alkaline aq. alcohol and extn. with organic solvent

KHARK NON-ALCOHOLIC 06.07.76-SU-381188

(17.05.78) C12c-09/02

Hops extract for use in beer prodn. is prepd. by extracting fragmented hops organic solvent, e.g. petroleum ether (b.pt. 70-100°C) using ether: hops ratio 5:1-25:1 (pref. 10:1) at 32-45°C (pref. 40°C). The extract is treated with aq. Mg salt soln. (e.g. MgCl) at pH 7.0-9.5 (pref. 8.5-9.0) to ppte. α-acids is Mg salts followed by the isomerisation of the latter in aq. alcohol (using water: alcohol ratio 9:1-1:9) at pH 7.0-9.5 for 8-25 min. with boiling.

Aksenov, Z.N., Suvorova, Z.V., Shmuilovich, et al. Bul. 23/25.6.78. 6.7.76. as 381188 (2pp938)

FERM= ★ D16 . 34786B/18 ★SU -611-927

Ferment soln. concentrator - includes an additional reservoir with vibrator and divided into truncated cone chambers

FERMENTATION PRODS 30.07.76-SU-393076

(17.05.78) C12c-11/26

Intensified concentration and maintenance of activity of ferments in the culture medium are ensured by using a reservoir with a vibrator. The reservoir is divided into tiered chambers in the form of truncated cones with a corrugated heat exchange surface, and inter-connected by the wide and narrow bases.

Kodin, G.S., Yarovenko, V.L., Belozfrov, P.A. et al. Bul. 23/25.6.78. 30.7.76. as 393076 (4pp89)

PROT= ★ D16 34787B/18 ★SU -611-928

High purity microbial biomass continuous prodn. - in three stages using hydrocarbon oxidn. prods. as carbon source in specified amts. at controlled flow rates

PROTEIN BIOSYNTH 16.07.76-SU-384148

(17.05.78) C12b-01/08 C12c-11/14 C12d-13/06

Continuous prodn. of high purity microbial biomass includes three-stage aerobic culturing of microorganisms, e.g., yeast Candida utilis or bacteria Pseudomonas methanolica using hydrocarbon oxidn. prods. e.g. alcohols or carboxylic acids as carbon source material.

The prod. yield and purity are increased if each fermentation stage is conducted at controlled C-source concn. and regulated medium flow rate. The final prod. does not contain metabolites or carbon-source residue. The prod. is used as protein-vitamin additive.

Bykhovskii, E.G., Bouden, B.S., Kalunyan, N.P. et al. Bul. 23/25.6.78. 16.7.76. as 384148 (3pp938).

VOTE= ★ D16 34788B/18 ★SU -611-929

Storage-stable blended sparkling wine prodn. - includes treatment with xylite, cation exchanger, bentonite and polyacrylamide and using carbon and sulphur di:oxide(s) in nitrogen

VORON TECHNOL INST 21.04.76-SU-350895

A91 (A14) (17.05.78) C12g-01/06

Sparkling wine prodn. includes treatment of blended wine with xylite (1.5%) followed by the addn. of cation exchange resin (KU-2) as demetallising agent, bentonite as clarifying agent and polyacrylamide as flocculating agent in the amt. of 0.1-0.12g per 1mg. of iron in wine mixt. The ratio cation exchanger: bentonite: polyacrylamide is 1:0.05:0.01 The wine blend is then centrifuged and cooled to the temp. of -2 to -3°C and held under the mixt. of inert gases comprising 20-25% CO_2, 10-15% SO_2 and 60-70°C N_2 for 3-5 days.

The method accelerates the prodn. of wine and improves its storage stability. The final prod. can be stored for 12 months.

Tokhmakhchi, N.S., Chernyi, A.G., Golikova, N.V. et al. Bul. 23/25.6.78. 21.4.76. as 350895 (2pp938)

MAGA= ★ D16 34789B/18 ★SU -611-930

Sparkling wine production line - includes a cool treatment tank with fabric strips for promoting sepn. of tartrate crystals

MAGARACH VINICULT 22.11.76-SU-422138

(17.05.78) C12g-01/06

Improved quality of sparkling wine and an enhanced efficiency of the line are due to the tank for cooling which features inside vertical fabric strips. They promote the precipitation of crystals of tartarate salts. The cooling tank is connected to the next tank for cooling the wine material with pipes linking their upper zones.

The second cooling tank features a circuit for controlling the level, while the filter and the bottling unit comprise pressure drop controllers. The fillers of the fermenting tanks and of the cold treatments reservoirs are made up of beech shavings.

Buryan, N.I., Valuiko, G.G., Godin, K.G. et al. Bul. 23/25.6.78. 22.11.76. as 422138 (3pp89)

ROAN= ★ D16 34791B/18 ★SU -611-933

Bacteriological nutrient medium purification - includes addn. of calcium hydroxide, di:sodium phosphate and hydrochloric acid with intermediate heating and filtration

ROST ATNI-PLAGUE RE 20.05.76-SU-353401

(17.05.78) C12k-01/06

Bacteriological nutrient medium obtd. from protein-vitamin raw materials, is purified by addn. of calcium hydroxide to pH 10-10.5, heating to 70-75°C treatment with disodium phosphate (I) followed by holding at this temp. filtration and addn. of hydrochloric acid to pH 7.0-7.2.

The nutrient is transparent and can be used for culturing pathogenic microorganisms for medical, veterinary etc. applications. It gives high yield of microbial biomass and can be obtd. cheaply from raw materials not used in food prodn.

Milyutin, V.N., Bendas, L.G. Gabrilovich, A.B. et al. Bul. 23/25.6.78. 20.5.76. as 353401 (4pp938)

COAT- ★ D16 35044B/18 ★US 4149-869

Legume seeds coated with viable rhizobia bacteria - and a man-made caseinate salt

COATED SEED LTD 07.09.76-NZ-181956

A97 C03 (A11) (17.04.79) A01n-21/02 C05g-03/08

A legume seed is coated with viable rhizobia bacteria and with adhesive containing a man-made caseinate salt formed by reaction of casein with a salt-forming alkaline agent in solution. Additional materials may also be present in the coating.

The bacteria improve nodulation of the legume plants but they are susceptible to toxic exudates from the seeds. Incorporation of a caseinate salt in the coating, however, increases survival of the bacteria, probably by reduction of the toxic effect of the exudates. Also, the salt is a nutrient source for rhizobia. Further, the salt satisfies the major criteria for a good adhesive. 30.8.77 as 829096 (4pp476)

CORG D16 24332B/13 =US 4149-936

Composites of microbes bound to porous support - with defined pore size characteristics

CORNING GLASS WORKS 26.06.78-US-918928 (14.09.77-US-833275)

*(17.04.79) *GB2004-300 +C12b-01*

An immobilised microbe composite is prepd. contg. a porous, high surface area inorganic support having a controlled population of fungus-like microbes bonded to the internal surfaces of the pores.

The support is water-insoluble and non-toxic to the microbes, having a controlled porosity such that $\geqslant$ 70% of the pores, on a pore size distribution basis, has a pore dia. $\geqslant$ the smallest spore dimension of the microbes, but $<$ 16 times the largest major spore dimension. Pref. support is a spinel-zirconia crystalline material.

Composites are esp. useful in situations requiring a high biomass surface within a relatively small volume. Esp. used for spores of Aspergillus niger, Streptomyces, olivochromogenes and Penicillium chrysogenum. 26.6.78 as 918928 (6pp931)

CORG D16 24332B/13 =US 4149-937

Composites of microbes bound to porous support - with defined pore size characteristics

CORNING GLASS WORKS 26.06.78-US-918794 (14.09.77-US-833277)

*(17.04.79) *GB2004-300 +C12b-01*

An immobilised yeast composite is prepd. contg. a porous high surface area inorganic support having a controlled population of yeast cells bonded to the internal surfaces of the pores.

The support is water-insoluble and is non-toxic to the microbes, having a controlled porosity such that $\geqslant$ 70% of the pores, on a pore size distribution basis, have a pore dia. at least as large as the smallest dimension of the cells but $<$ 4 times the largest cell dimension. Pref. the average pore dia. is 1-140 microns.

Composites are esp. useful in situations requiring a high biomass surface within a relatively small volume. 26.8.78 as 918794 (5pp931)

USAS ★ D16 35076B/18 ★US 4149-938

Detecting microorganisms in solution - by measuring signal across electrodes after elapsed time and detecting preset voltage change

NAT AERO & SPACE ADMIN 30.11.77-US-856460

J04 (17.04.79) C12k-01/04

The elasped time between inoculation and the release of H_2 produced by the presence of microorganisms in a nutrient solution is measured by an apparatus which includes a pair of electrodes which dip into the solution. One electrode is a standard pH reference electrode and the other is a platinum cathode between which a voltage is produced by the presence of H_2. A measuring circuit is inactive for 80 mins to allow the solution to stabilise after which the time to increase the potential of the electrodes by 10 mV is recorded.

The elapsed time recorder is then run backwards until the potential across the electrodes has risen by a further 20 mV after which it is halted and the resultant elapsed time is displayed.

The appts. detects the presence of microorganisms in a sample e.g. urine by measuring the time for the critica voltages to generated by the electrodes. It automatically ignores the state of the electrodes immediately after inoculation where unreliable results may be obtd. 30.11.77 as 856460 (5pp295)

BEHW D16 74341W/45 =US 4150-10

Schistosome antigens prodn. - by incubating schistosomes fro infected animals in physiological saline and extracting with a medium

BEHRINGWERKE AG 29.04.74-DT-420706

*B04 +R16 (17.04.79) *DT2420-706 A61k-29 A61k-39 A61k-*

G01n-33/16

An antigen is made by extracting schistosomes with an aq. medium. The method is improved by storing the schistosomes prior to the extraction, for 12-96 hrs. at 1 40°C in 10-100-fold, by vol. of the schistosomes, of a sterile, physiologically tolerable, protein-free, and nitr gen-free aq. salt soln.

The antigens are useful in diagnestics for bilharziasis 7.10.77 as 840175 (+28.4.76-US-572086) (4pp910)

PFIZ ★ D16 35178B/18 ★US 4150-1

Poly:cyclic ether antibiotic 47224 - useful against gram positi bacteria and coccidiosis in poultry, and for improving fe utilisation in ruminants

PFIZER INC 26.10.77-US-845491

B04 C03 (D13) (17.04.79) A61k-35 C07g-11 C12d-09/14

Antibiotic 47224 (I) and its cationic salts are new. (I) is sol. in MeOH, acetone, $CHCl_3$, iBuCOMe and Et acetate and insol. in water; it has m. pt. 65°C (shrink) and 68-8 C; $[\alpha]^{20}_{D}$ + 43° (c=1% in MeOH); and analyses for C 62.5 H 8.92%, O 28.58%. It shows u.v. absorption max. in MeOH at 232 nm with $E^{1\%}_{1cm}$ 150, and it has a characteri tic i.r. spectrum.

(I) is obtd. by cultivation of Streptomyces hygroscop ATCC 31337 in an aq. culture medium contg. assimilab source of C, N and inorganic salts with antibiotic activ is obtd. 26.10.77 as 845491 (9pp1348)

See Also

D13 GB 1545168
D15 J5 4038657
D17 SU 611596
D13 J7 9007860
D15 J7 9007273
D21 US 4150116
D14 DS 2402947
D17 J7 9007874

D17: SUGAR; STARCH

HAYB D17 81198R/44 =DS 1916-721
Low-molecular amylose from starch
HAYASHIBARA CO 01.04.69-DT-916721
*(26.04.79) *DT1916-721 +C12d-13/02*
Low molecular amylose is produced from a starch suspension. The suspension is first either gelatinised by heating to 100-170°C to a degree of degradation of 1% D.E. or liquefied with α-amylase.

After rapid cooling the starch is treated with α-1,6-glucosidase from Pseudomonas or Aerobacter, pref. by injecting starch and glucosidase in a vacuum cooler. 1.4.69 as 916721 (8pp068)

USMC ★ D17 33608B/18 ★DT 2844-034
Sugar cane crushing mill - with three adjustable top rolls over fixed anvil roll
USM CORP 19.10.77-US-843578
(26.04.79) C13c-03
Sugar cane crushing mill consists of an anvil roll, surmounted with a gap by a sugar cane roll. At one side of the gap, a cane feed roll and at the other side a bagasse roll are adjustable, like top roll, relative to each other and to the anvil roll.

The bottom arrangement of the anvil roll saves the elaborate floating support for it and the complicated coupling. The individual adjustment increases the crushing efficiency. 9.10.78 as 844034 (24pp39)

RHON D17 24652W/15 =J7 9007-874
nzymatic glucose isomerisation to laevulose - with glucose somerase in presence of active cations bonded to cation exchanger
RHONE-POULENC SA 27.09.73-FR-034649
*A91 (D16) (10.04.79) *DT2445-880 C12d-13*
Continuous isomerisation of glucose to laevulose takes place by subjecting an esp. aq. glucose soln. to the activity of a glucose-isomersase in the presence of activating cations, pref. Mg^{2+} opt. mixed with Co^{2+}, bonded to a cation exchanger carrier.

Presence of activator cation(s) lengthens working life of enzyme, bonding of enzyme to cation exchanger carrier maintains association with activator cations, and obviates need for pH stabilisation of reaction mixt. Pref. carrier is a cation exchanger resin contg. $-SO_3H$ or -COOH gps. 25.9.74 as 110404 (clg. 27.9.73-FR-034649) C12d-13/00 10.4.79) RHONE-POULENC SA (2pp) (J50058283)

AGEN D17 49706W/30 =SU -611-596
nzymatic prodn. of maltose - using simultaneously-produced beta-amylase and alpha-1,6-glucosidase
AGENCY OF IND SCI TECH 11.01.74-JA-006465
*(D16) (19.05.78) *DT2500-597 C12d-13/10*
Process for the simultaneous prepn. of β-amylase and α-1.6-glucosidase comprises culturing microorganisms of the genus Bacillus in a bed and isolating the enzymes from the culture-bath. Also claimed is a process for the prodn. of maltose from starch or a starch deriv. using the simultaneously produced β-amylase and α-1,6-glucosidase to hydrolyse the starch. By producing the β-amylase and α-1,6-glucosidase simultaneously, one stage in the enzymatic prodn. of maltose is obviated.
Takasaki, E., Takahara, E. Bul. 22/15.6.78. 10.1.75. as 101415(8pp)

SUGA= ★ D17 34840B/18 ★SU -612-134
Free-flowing material fluidised layer drying and cooling - has frame mixer made as hinged parallel plate scrapers fitted on telescopic suspension
SUGAR IND RES INST 01.07.76-SU-377972
J08 Q76 (26.05.78) F26b-17/10
The free-flowing material, e.g. sugar, fluidised layer drying and cooling unit contains drying and cooling chambers with sloping gas distribution grids and heat carrier supply and removal pipes and frame mixer situated in the drying chamber. To intensify the process and increase the drying quality, the frame mixer is fitted on telescopic suspensions and is made as hinged parallel plate scrapers fitted on the frame.
Milyutenko, B.F., Zaborsin, A.F., Kostenko, N.V. et al. Bul. 23/25.6.78. 1.7.76. as 377972(6pp110)

MORA/ ★ D17 35057B/18 ★US 4149-901
Smoke stack for purifying waste gases - while simultaneously heating raw sugar cane juice
MORALES A J 06.10.77-US-839804
J01 (17.04.79) C13d-03
A smoke stack includes a smoke feed inlet at the bottom and a cleaned gas exit at the top. Raw cold sugar cane juice is fed into the stack just below the top to flow countercurrently to the rising gas. Two series of baffles are mounted in the stack, a first series of central baffles, and a second series of peripheral baffles, the series being staggered with respect to each other.

The first series of baffles comprises alternate circular and rectangular baffles. The inner edge of the uppermost peripheral baffle is in the vertical plane of the outer edge of the uppermost central baffle. The inner edges of the remaining peripheral baffles lie outside the vertical planes of the remaining central baffles.

The appts. is used to purify dirty hot waste gases while simultaneously heating the raw sugar cane juice. Also CO_2 in the gas clarifies the juice. 6.10.77 as 839804 (4pp295)

See Also

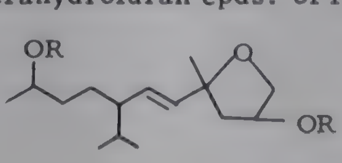
D16 J5 4037889 D16 J7 9007873

D18: SKINS; HIDES; LEATHER; TOBACCO

ACH- ★ D18 33546B/18 ★DT 2747-500
evice for discouraging smoking habit - with silver electrode and attery producing silver traces in mouthwash water
SACHS SYSTEMTECHNIK 22.10.77-DT-747500
(26.04.79) A61k-33/38
device to wean a smoker from the smoking habit consists f a small container for water in which two electrodes are mmersed. One of them is silver coated and is connected o the plus pole of small battery.

If a smoker gargles with water from this device once day, the traces of silver in the water react with the emnants of tobacco smoke in the mouth to give an unpleaant taste. If the smoker persists with this treatment, he oses the desire the desire for tobacco and acquires a distaste for it. 22.10.77 as 747500 (14pp39)

NISB ★ D18 34355B/18 ★J5 4039-070
Tetra:hydro:furan derivs. - useful as flavourants for tobacco
JAPAN TOBACCO & SALT PUB 30.08.77-JA-103248
E13 P15 (24.03.79) A24b-03/12 C07d-307/20
Tetrahydrofuran cpds. of formula (I):



(I)

(where R is H or $COCH_3$) are novel.

(I) markedly improve the flavour and taste of tobacco and at the same time suppress irritation by tobacco smoke.
(I) are added to tobacco in an amt. of about 0.0001-0.05

wt.%.

(I) can be prepd. by extracting conventional tobacco leaves with a polar organic solvent, concentrating the extract under reduced press., extracting the concentrate with a non-water sol. solvent, washing the extract with an alkaline soln. to obtain a solvent-soluble neutral portion, steam-distilling the neutral portion to obtain 10-200-fold (w/w) distilled water, saturating the distilled water with a neutral salt, extracting an essential oil component from the satd. distilled water with a non-water soluble solvent, and repeatedly subjecting the resulting solvent-soluble neutral portion to column chromatography until the fraction contains 5-30 wt.% of the cpds. (I). 30.8.77 as 103248 (5pp140)

OKHO/ ★ D18 34755B/18 ★SU -611-889

Leather and fur chrome tanning soln. prodn. - from hydrated chromichromate pulp and specific amt. of sulphuric acid related to chromium conc.

OKHOTNIKOVA N A 16.06.76-SU-371538

(09.06.78) C01g-37/08 C14c-03/06

Chrome tanning soln. used in the leather and fur inds. is produced from hydrated chromichromate pulp and sulphuric acid.

The amt. required is given by the formula:

$$V_k = 1.47(V_n/C_kd)\left\{\left[30.8C_3+(1.32C_1+C_2+0.93C_3)(Q_1-Q_2)\right]/1000\right\}$$

(where V_k is vol. of sulphuric acid, m^3; Vn is vol. of initial chromichromate pulp, m^3; C_k is sulphuric acid conc. %: d is sulphuric acid density, g/cm^3; C_1 is conc. of water sol. Cr (III) in pulp, g/l Cr_2O_3. (C_2 is conc. of water soln. Cr(VI) in pulp, g/l CrO_3; C_3 is conc. dichromate ions in pulp, g/l Cr_2O_7; Q_1 is basity of pulp, %; Q_2 is required basicity of the prod. %).

The prodn. can be carried out continuously.

Okhotnikova, N.A., Sereda, B.P., Zevalkina, G.U. Bul. 23/25.6.78. 16.6.76. as 371538 (2pp1047)

BRTA D18 52242Y/30 =US 4149-546

Mfr. of grooved element for cigarette filter tip - uses hot forming tool along which rotating element is passed

BRIT AMER TOBACCO LTD 17.03.76-GB-010774

*P15 (17.04.79) *BE-852-575 +A24c-05/50*

A rod component of a smoke filter is shaped by relatively moving the rod, in contact with a heated forming device having a rod-contacting portion, in an arcuate path in a direction transverse to the axis of the rod.

The rod is pref. transported at the periphery of a drum, the forming device comprising ≥ 1 arcuate stator facing the drum. The shaped rod is pref. wrapped in the same appts. Good shaping is achieved with machinery capable of producing a wide variety of filters. 11.3.77 as 776522 (8pp1379)

BRAD/ ★ D18 34992B/18 ★US 4149-548

Cigarette substitute including two chemicals - which react exothermically heat being conducted to edible end coating

BRADSHAW J C 21.09.78-US-944255

E13 P15 P32 Q74 (17.04.79) A24f-47 A61f-07 F24j-01

A simulated cigarette comprises a cigarette-shaped article enclosing a space subdivided into two enclosures separated from each other by a rupturable septum. Two separate chemicals are retained in the enclosures. The two chemicals react together exothermically on rupture of the septum. At least one end of the article is coated with an edible substance.

Pref. a heat conductive structure transfers heat from the enclosure region of the article to the edible end.

The article replaces a conventional cigarette. The use of the cigarette substitute is far less hazardous to health than the smoking of a conventional cigarette. 21.9.78 as 944255 (5pp295)

MONT- ★ D18 34993B/18 ★US 4149-549

Tobacco smoke filter contg. inorganic fibres - having positive zeta potential at the PH of tobacco smoke

MONTCLAIR RES CORP 19.12.77-US-862212 (13.06.74-US-479104)

P15 (17.04.79) A24b-15

A filter for tobacco smoke consists of non-toxic, synthetic inorganic, water insol. anhydrous fibres long enough to interlock, and having a positive yeta potential at the pH of tobacco smoke. The fibres are pref. of alumina, zirconia or alumina-silica.

Tobacco smoke contains large numbers of negatively charged colloidal particles which are caused to coalesce and are efficiently removed. Flavour and aroma cpds. are not removed. 19.12.77 as 862212 (+17.5.76-US-687109) (5pp955)

WIGG D18 86638Y/49 =US 4149-550

Multicomponent cigarette filter tip - comprising soft fibres reinforced by stronger, cone-shaped fibrous layers and additives

WIGGINS TEAPE LTD 02.08.76-GB-032179

*A88 P15 Q68 +P73 (17.04.79) *BE-857-379 B32b-15/02 D02g-03*

An elongate fibrous element, e.g. a cigarette filter has a core of randomly-oriented fibres enclosed by an integral fibrous crust of greater density, also containing randomly-oriented fibres, but pref. with a higher proportion of lengthwise fibres than the core.

The fibres are pref. a mixture of stiff bulky fibres, e.g. of highly extrated alpha cellulose pulps, and finer fibres, e.g. of esparto, eucalyptus and cotton. A proportion of synthetic fibres, e.g. of polyolefins, may also be present, as well as a binder, e.g. starch, polyamine or polyethylenamine. The element has improved filtration efficiency, and avoids the need for an initial paper wrap. 29.7.77 as 820387 (6pp1379)

CASS D18 02324B/02 =US 4149-979

Brightening and waterproofing cellulose textiles and leather - using compsn. contg. sulphonyl urea, emulsifier, opt. higher epoxide and water or organic solvent

CASSELLA AG 02.07.77-DT-730042

*E19 F06 (17.04.79) *EP-----201 C07c-143/74 D06m-13/40*

Sulphonylureas of formula (I) $R-B-CONHSO_2X$ (I) are novel and useful for conditioning and imparting water repellency to textile materials contg. or consisting of cellulose and for leather.

R is alkyl or alkenyl of 10-30C. B is =NR, =NR' or $-NH-C_nH_{2n}-NR^2-$. R' is 1-4C alkyl. R^2 is H or 1-4C alkyl and n is 2-4. X is β-haloalkyl or alkenyl of 2-4C. 26.6.78 as 919436 (14pp393)

D2: DISINFECTANTS; DETERGENTS

D21 : DENTAL; TOILET PREPARATIONS

COLG D21 07345R/05 =DS 1966-449
Agglomerated particles which form a water-insol dental polishing gent
COLGATE PALMOLIVE CO 05.08.68-US-750028 (05.08.68-US-749934)
*A96 E37 (26.04.79) *BE-737-027 A61k-07/16*

non-transparent toothpaste comprises an easily powderd agglomerate of a water insoluble polishing or abrasive gent, e.g. gum arabic,PVP, cellulose deriv., etc.

The agglomerate has a particle size of $<$2380 µm and he primary particles have a size of $<$74 um. The polishng agent is 75-98% water insol. and the bonding agent is p to 25 wt.% water insoluble.

Polishing agent e.g. dicalcium phosphate can be sieved nd adds to the aesthetic appeal of the toothpaste. 1.8.69 s 966449 Div. ex 1939136 (6pp068)

ATR D21 22747X/13 =DS 2065-824
luminium fluorosilicate glass powder for use in dental cement - in ombination with aq soln of carboxylic acid polymer
NATIONAL RES DEV CORP 14.12.70-DT-065824 (15.12.69-GB-061041)
*A96 L01 (26.04.79) *DT2065-824 C03c-12 + C03c-03/30*

luoroaluminium silicate glass powder for self hardening ental cement has the following weight ratios: - either iO_2 to Al_2O_3 of 1.60:1 to 1.90:1 and F_2 to Al_2O_3 of 1.05:1 o 1.50:1 or SiO_2 to Al_2O_3 of 0.75:1 to 1.00:1 and F_2 to l_2O_3 of 0.50:1 to 1.50:1. The powder may also contain a) phosphorous oxide and (b) titanium or zirconium dioxde in place of some of the aluminium oxide.

The cement is reactive and has high resistance to presure. 14.12.70 as 065824 (5pp068)

ELL/ ★ D21 33440B/18 ★DS 2749-166
air lotion and restorer - contg. oil of wine, e.g. in aq. alcohol
KELLERSCH J 03.11.77-DT-749166
(26.04.79) A61k-07/06

air lotion and restorer contains oil of wine. There is no roblem of excessive dosage as with compsns. contg. ucalyptus- or rosemary-oil.

The compsn. can be applied in aq. alcoholic soln. and ay be perfumed. After 2-3 months use hair loss is stopped, and in many cases new hair growth occurs. 3.11.77 s 749166 Div. ex 2759504 (2pp903)

UC- ★ D21 33451B/18 ★DT 2744-976
corbic acid-contg. compsn. effective against pigment disorders - g. freckles, contains anhydrous, hydrophilic ointment or lyethylene glycol vehicle
FRUCHT KOSMETISCH E 06.10.77-DT-744976
A96 B03 (26.04.79) A61k-07/48

ompsn. effective against freckles, pigment anomalies d age spots (senile lentigines) consists of an anhydrous, p. ointment-like vehicle and 4-25 (4-15) wt.% l-ascorc acid, (I), as active ingredient.

The compsns. can be used as sticks or ointments. (I) hibits melamine pigmentation of skin. Depigmentation only temporary and reversible. The compsns. are fective and non-toxic.

(I) can be used as ascorbyl laurate or -palmitate or as - or Na ascorbate. A pref. vehicle is an anhydrous, drophilic "unguentum molle" type ointment contg. the ry finely divided powdery (I). The vehicle may also be olyethylene glycol ointment, consisting of a mixt. of lyethylene glycols having different mol.wts. and contg. in dissolved form. 6.10.77 as 744976 (6pp200)

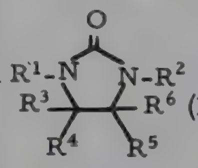
NK ★ D21 33473B/18 ★DT 2746-644
smetic agents esp. skin-care preparations - contg. alkyl-substd. a derivs. as skin humectants
HENKEL KG AUF AKTIEN 17.10.77-DT-746644
E16 (26.04.79) A61k-07

New cosmetic agents (esp. skin-care, skin-protectant and skin-cleansing agents based on usual ingredients such as emulsifiers, fatty substances, plant extracts, solvents, perfumes, thickening agents, preservatives and surfactants) contain alkyl-substd. ureas of formula $R_1R_2N-CO-NR_3R_4$ (I) in an amt. of 0.1-20 (pref. 3-10) wt.% based on the total wt. of the agent. In (I) R_1 is 1-6C alkyl, and R_2, R_3, R_4 are each H or 1-4C alkyl.

(I) have a skin humectant properties and serve to replace the substances responsible for the hygroscopicity of the skin which are removed by environmental effects such as washing with strongly wetting and extractive substances, contact with chemicals, climatic effects, etc. (I) thus help preserve the skin's protective effect against environmental influences. 17.10.77 as 746644 (17pp280)

HENK ★ D21 33475B/18 ★DT 2746-650
Skin care, protection and cleansing compsns. - contain imidazolidine-2-one or derivs. as moisture retainers or restorer
HENKEL KG AUF AKTIEN 17.10.77-DT-746650
E13 (26.04.79) A61k-07

Cosmetic compsns. contain 0.1-20 (3-10) wt.%, w.r.t. total compsn. of imidazolidin-2-one having formula (I) (where R^1 and R^2 are H, 1-4C alkyl, 2-6 C hydroxyalkyl contg. 1-5 OH gps., or alkanoylaminoalkyl contg. 1-4C in hydrocarbyl gps. and 0-5 OH gps. in alkanoyl residues, and R^3, R^4, R^5 and R^6 are H, 1-4C alkyl or 1-4C hydroxyalkyl).


(I)

Cosmetic compsns. include creams, emulsions, soaps, bath oils, foam baths, shaving and other lotions. (I) act as skin moisture retainers or restorers, are stable, non-toxic, neutral and nonionic, and can be worked into cosmetic emulsions, e.g. oil-in-water lotions. 17.10.77 as 746650 (19pp200)

WURT- ★ D21 33519B/18 ★DT 2747-092
Dentifrice powder or paste contg. dye and surfactant - gives coloured foam which fades after brushing for twenty seconds or more
WURTTEMBERG PARFUM 20.10.77-DT-747092
E24 (26.04.79) A61k-07/16

Dentifrices contain, in addn. to usual ingredients, $\geq$1 physiologically innocuous, natural or synthetic dye and $\geq$1 strongly foaming surfactant. The realtive amts. of dye and surfactant are so arranged that when the teeth are scrubbed intensively and uninterruptedly with a brush, the initially coloured foam of the dentifrice is decolorised to a white or only weakly coloured foam after $\nless$20 secs.

Decolourisation of the foam indicates to the user that the teeth have been brushed for a sufficient length of time. 20.10.77 as 747092 (15pp280)

REDK- ★ D21 33589B/18 ★DT 2817-866
Hair cosmetic compsns. for treating damaged hair - contain charged polypeptide having sterically unhindered positive charges and prepd. by protein hydrolysis
REDKEN LABS INC 25.10.77-US-845057
A96 (26.04.79) A61k-07/06

Cosmetic compsn. for treating keratinous tissue comprises an aq. soln. having pH 4-9 and contg. 16 mol% charged polypeptides having 2 sterically unhindered positive changed and formula $+H_3N(CHR^1-CO-NH)_nCHR^2-CO-O^-$ (I) (where n is an integer sufficiently large for polypeptides to have mol. wt. 200-2000, each R^1 is a side gp. bonded to the α-C atom of a natural aminoacid, and R^2 is $-(CH_2)_4-NH_3+$ or $-(CH_2)_3-NH-C(=NH)-NH_3^+$). (I) are soluble in the aq. solns. at pH 4-9 and are partly insoluble at pH $\leq$4 or $\geq$9.

(I) is used for treating hair damaged by permanent waving, dyeing or bleaching. The treated hair has impro -ved texture, gloss, fullness and hair-dressing properties. The sterically unhindered +vely charged end gps. of (I) bond the anionic SO_3- end gps. formed on oxidn. and cause a 3-dimensional re-structurising. 24. 4. 78 as 817866 Add to 2653560 (28pp200)

JOHO D21 57860X/31 =GB 1545-054
Dental alloy based on gold and palladium - contg. silver, gallium indium and tin, with reduced gold content
JOHNSON MATTHEY LTD 03.03.75-GB-008772
*M26 +P32 (02.05.79) *BE-839-123 C22c-05/04*

A noble metal alloy suitable for use in restorative dentistry consists of 25-42 wt. % Au, 5-22 wt. % Ag, 45-62 wt. % Pd, ⩽ 5 wt. % Ga, ⩽ 2 wt. % In, 0-1 wt. % Sn (apart from impurities).

Pref. the relative proportion of Ga, In and Sn is 62:25:13 (by wt.). Compsn. pref. contains 34 wt. % Au, 10 wt. % Ag, 50 wt. % Pd, 3. 72 wt. % Ga, 1. 5 wt. % In, 0. 78 wt. % Sn and impurities. Surface of the substrate is at least partly coated with a ceramic material. A coating including flake gold as an inter-surface adhesion promoter is applied to the substrate prior to applying the coating of ceramic material.

Prods. are equally as suitable as the 'porcelain golds' but contain a lower proportion of gold. 27. 2. 76 (3pp931)

RONE- D21 94626X/51 =GB 1545-206
Cosmetic formulation contg. milk - also contains an anionic surfactant and avoids excessive degreasing of the skin when used as a shampoo etc.
RONEY PROD DEV LTD (RONE/) 27.05.75-GB-023091
*(02.05.79) *DT2623-250 A61k-07 C11d-03/38 +A61k-35/20*

A compsn. suitable for use as a cosmetic comprised (per 100 pts. wt.) 10-70 pts. wt. dry wt. anionic surfactant, 5-70 pts. wt. whole milk solids and 0-50 pts. wt. liquid carrier, in which the compsn. contains ⩾ 5 wt. % (w. r. t. dry wt. surfactant) of cosmetically acceptable fat or oil.

Pref. the surfactant is a lauryl sulphate or sulphosuccinate lauryl ester as the sodium salt. The surfactant is introduced in dry powder form. Liq. compsn. is prepd. by mixing liq. milk and powdered surfactant in which the wet wt. of liq. milk is < 1½ times the surfactant wt.

Prods. are used as half shampoos, skin cleansers for use on the face or hands, for application to hard skin areas, as shaving cream, as dentifrices, for the treatment of nails, or as an aftershave precursor. 27. 5. 76 (5pp931)

NAKA/ ★ D21 34078B/18 ★ J5 4037-815
Medicinal bath additive for easing rheumatism, piles etc. - contains extract of Laminaria seaweed and extract of Cyanophyta or Chlorophyta
NAKAZAWA T 25.08.77-JA-102046
(20.03.79) A61k-07/50

Bathing agent contains the homogeneous mixt. of the extract of seaweeds of Laminariales (e.g. sea tangle, 'wakame', etc.) and the extract of Cyanophyta (e.g. Spirulina) or Chlorophyta (e.g. chlorella) as the effective ingredient.

Bathing agent has medicinal effect on fatigue, stiff shoulders, muscle ache, lumbago, prickly heat, eczema, neuralgia, rheumatism, piles, skin disease etc. Typically 2 pt. wt. of fine piece of sea tangle and 1 pt. wt. of powdery Spirulina are mixed and the mixt. 4 g. is extracted with ethanol 30 ml. for 50 hrs. The extract is filtered and refined water added. Then ethanol is removed by distilling at 30-40°C. and obtd. aq. soln. is diluted with water. Finally perfume and antiseptic are combined in the soln. Thus obtd. bathing agent is transparent pale green aq. soln., with refreshing aroma. 25.8.77 as 102046 (2pp5)

NAKA/ ★ D21 34093B/18 ★ J5 4037-835
Skin nutrient - contg. homogeneous mixt. of extract of Laminariales and extract of Cyanophyta or Chlorophyta
NAKAZAWA T 25.08.77-JA-102047
(20.03.79) A61k-07

Skin nutrient contains a homogeneous mixt. of the extract of seaweeds of Laminariales (e.g. sea tangle, 'wakame', etc.) and the extract of Cyanophyta (e.g. Spirulina) or Chlorophyta (e.g. Chlorella) as the effective ingredient.

The homogeneous mixt. of both extracts nergic effect on the skin. The skin nutrient not only gives nutrients to the skin, but also improves the make-up of skin and prevents chapping. 25.8.77 as 102047 (2pp5)

UMEZ/ ★ D21 34094B/18 ★ J5 4037-838
Hair treatment compsn. - contg. polyhydroxylated phenol, e.g. tannic acid, and phosphoric acid ester type anionic surfactant
UMEZAWA F 26.08.77-JA-102361
A96 (20.03.79) A61k-07/06

Compsn. comprises a soln. contg. 0.5-5.0 wt.% of polyhydroxyphenol cpd. and 2.0-5.0 wt.% of phosphoric acid ester type anionic surfactant, the soln. being adjusted to pH 3-5.5 with weak organic acid. The compsn. can improve touch and appearance of hair.

The polyhydroxyphenol cpd. includes tannic acid, tannic acid albumin, tannic acid diphenylhydramine, and the like. The anionic surfactant includes tris(isooctyl)phosphoric acid ester, polyoxyethylene alkyl ether phosphoric acid ester, and the like. The weak organic acid to be used for adjustment of pH value includes citric acid, tartaric acid, succinic acid, etc. 26.8.77 as 102361 (4pp22)

NIEM- ★ D21 34095B/18 ★ J5 4037-839
Non-irritant cosmetic for treating hair - contains a (N)-acyl acidic aminoacid ester, the ester moiety being derived from polyoxyalkylene poly:hydric alcohol ether
NIPPON EMULSION KK (AJIN) 31.08.77-JA-103546
A96 (A25) (20.03.79) A61k-07/06

Cosmetics contain N-acyl acidic amino acid ester contg. 2-22C in the acyl gp. the ester moiety being derived from polyoxyalkylene polyhydric alcohol ether. The cosmetics are useful for treatment of hair to improve the hair in its touch and appearance. The cosmetics do not irritate the skin.

The N-acyl amino acid moiety includes N-acyl aspartic acid, N-acyl glutamic acid, and the like, The acyl gp. is derived from e.g. acetic acid, lauric acid, oleic acid, or stearic acid. The polyoxyethylene polyhydric alcohol ester moiety is prepd. by addn.polymerisation of polyhydric alcohol such as propylene glycol, glycerin, pentaerythritol, trimethylolpropane, etc. with 10-90 moles of propylene oxide, or with 10-90 moles of propylene oxide and 1-10 moles of ethylene oxide etc. 31.8.77 as 103546 (14pp22)

KANE ★ D21 34096B/18 ★ J5 4037-84
Hair cosmetic providing flexibility wetness and gloss - comprise fine particles of fluorine contg. olefin resin and lanolin deriv.
KANEBO KK 29.08.77-JA-104014
A96 (A14) (20.03.79) A61k-07/06

The cosmetics contain 0.1-50 wt.% of fine particles of fluorine-contg. olefin resin, and 0.1 to 10 wt.% of lanoli deriv. selected from hydrogenated lanolin, acetylated lan lin, isopropyl lanolin, lanolin alcohol, acetylated lanolin alcohol, ethylene oxide adduct of lanolin alcohol, lanolin fatty acid, and lanolin fatty acid isopropyl ester. The fluorine contg. olefin resin includes PTFE, polyhexafluo propylene, polychlorotrifluoroethylene, etc.

In an example, 5 pts. of cetyl alcohol, 10 pts. of fluid isable paraffin, 3 pts. of polyoxyethylene cetyl ether, 2 pts. of stearic acid monoglyceride, 1 pt. of PTFE ethylene particles and 15 pts. of lanolin fatty acid isopropyl ester were mixed and blended with one another and mixe with water to give 100 pts. of hair cream. 29.8.77 as 104014 (7pp22)

KANE ★ D21 34097B/18 ★ J5 4037-8
Hair shampoo compsn. - contg. natural aluminosilicate particl and anionic polymeric electrolyte
KANEBO KK 30.08.77-JA-104393
A96 (20.03.79) A61k-07/06

Compsn. contains 1 to 50 wt.% of fine particles of natur aluminosilicate zeolite, and 0.5 to 4 wt.% polymeric an ic electrolyte.

The compsn. has high deodorant effect, storage stab ity, and imparts high flexibility to hair.

The zeolite is of formula (I): $(RO)_w(Al_2O_3)_x(SiO_2)_y(H_2$ (where R is alkali metal, alkaline earth metal, etc. and w, x, y and z are positive integers). The zeolite particle are pref. of size ≯2 μ, on average and have a max. siz

10 u. The electrolyte includes CMC, carboxyvinyl polymer, alginic acid, polyacrylic acid, vinyl methyl ether-maleic anhydride copolymer, etc. 30.8.77 as 104393 (6pp22)

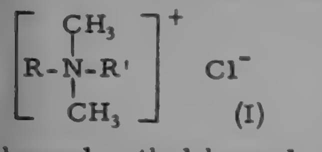
KANE ★ D21 34191B/18 ★J5 4038-303

Liq. shampoo compsns. - contg. aluminosilicate zeolite micropowder, nonionic polymer, tert. ammonium salt, potassium carboxylate and carboxylic di:ethanolamide

KANEBO KK 31.08.77-JA-105059

A96 E19 (E33) (22.03.79) A61k-07/06 C11d-10/02

The compsns. comprise 1-30 wt.% of naturally occurring aluminosilicate zeolite micropowder (e.g., soalite, chbazite and natrolite having maximum particle size of $<10\ \mu$, and average particle size of $<2\ \mu$), 0.5-4 wt.% of a nonionic polymer (e.g., polyvinyl alcohol, methyl/ethyl cellulose, polyvinylmethyl ether, polyvinyl pyrrolidone, hydroxymethyl cellulose, hydroxyethyl cellulose, hydroxypropyl cellulose, dextrin, gelatine. pectin, etc.) 0.1-2.0 wt.% of a tertiary ammonium salt of formula (I):



$$\left[\begin{array}{c} CH_3 \\ | \\ R\text{-}N\text{-}R' \\ | \\ CH_3 \end{array}\right]^{+} Cl^{-} \quad \text{(I)}$$

(where R is 6-17C alkyl or alkenyl, R' is benzyl-4-nitrobenzyl, 3, 4-dichlorobenzyl, 2-chlorobenzyl, 4-chlorobenzyl, 2, 4-dichlorobenzyl, isomeric trichlorobenzyl, methyl benzyl, ethyl benzyl, 2, 4-dimethyl benzyl or 3, 4-dimethyl benzyl, etc.), 0.1-2.0 wt.% of NaCl, 10-30 wt.% of potassium higher aliphatic carboxylate (e.g., potassium salt of 10-18C (un)satd. aliphatic carboxylic acids), 1-10 wt.% of higher aliphatic carboxylic diethanol amide (e.g., 8-18C (un)satd. aliphatic carboxylic diethanol amides) and 31-86 wt.% of water.

The shampoo compsns. have excellent washing, deodorising, combing, softening and dandruff-removing effects for hair, without irritating the skin. 31.8.77 as 105059 (8pp)

KURS D21 70545V/40 =J7 9007-765

Hexamethyltetracosa-11,13-diyne-10,15-diol derivs

KURARAY KK 19.03.73-JA-032274

*E17 H07 (10.04.79) *NL7403-589 +B01j-27/06 B01j-31/02 C07c-33/04*

New diols (I) have formula:

R-$(CH_3)(OH)C$-C$\equiv$C-C$\equiv$C-C$(OH)(CH_3)$-R' (where R and R' are each (un)satd. 11C hydrocarbon gps. with the C skeleton C-C(-C)-C-C-C-O(-C)-C-C-C-, which may be substd. by a gp. which can be replaced by an H atom by hydrogenolysis.

Prepn. of squalane (II) by hydrogenolysis, or partial hydrogenation and hydrogenolysis, of (I) is claimed. Thus (II) can be produced on the technical scale at low cost for use in cosmetics and as a lubricant. 19.3.73 as 032274 C07c-33/04; B01j-27/06; 31/02 (10.4.79) KURARAY CO. LTD. (3pp) (J49117413)

MATU D21 30527A/17 =US 4149-533

Appts. for fluoride iontophoresis on teeth - using intermittent direct current which decays with time to avoid polarisation

MATSUSHITA ELEC IND KK (LIOC) 13.10.76-JA-121949

*B06 P32 P34 (17.04.79) *DT2746-112 A61n-01/32*

In a device for injecting fluoride into a tooth a positive electrode is attached to the tooth and a negative electrode contacts the electrolyte around the tooth. A intermittent direct current is applied which has a waveform which immediately reaches a peak and then decays. The decay is pref. exponential and the application is repeated every 0.1 to 0.5 seconds.

The current is provided by a circuit which includes a supply of stabilised d.c. current, a timer, and a waveshaping means. The wave shaping means may include light emitting displays mounted on the positive terminal and include an oscillator producing a rectangular wave and a convertor to provide the desired waveform. 13.10.77 as 841921 (10pp1398)

PROC D21 70786A/40 =US 4149-551

Hair conditioning agent e.g. quat. ammonium salt - applied from flexible support e.g. nonwoven by rubbing

PROCTER & GAMBLE CO 28.03.77-US-781822

*E19 P24 (17.04.79) *BE-865-359 A45d-07*

Hair is conditioned to provide combing, detangling, static fly-away, softness, luster and manageability benefits. Hair is rubbed with an article comprised of a flexible substrate having 0.2-15 g per m^2 of a normally solid water-insoluble hair conditioning agent associated with it.

Agent is a quat. ammonium salt, a quat imidazolinium salt, fatty alcohol, sorbitan ester, polyhydric alcohol ester, fatty acid salt, aliphatic ether or their mixts. Rubbing causes the transfer of an effective amt. of agent to the hair.

Agent can be delivered using a flexible substrate of paper, woven or non-woven cloth. 28.3.77 as 781822 (6pp931)

GILL ★ D21 35027B/18 ★US 4149-815

Chewable tooth cleaning device - comprising skin-free closed cell resilient foam block, pref. of polyethylene

GILLETTE CO 23.06.77-US-809445

A96 P28 (A17) (17.04.79) A47k-07/02

The cleaner comprises 2.45-9.0 cm^3 of closed-cell compressible polymeric foam with a skin-free surface. The foam has a cell size of 12-50 cells/cm, a water absorptivity of less than 1.0 mg/cm^3 after 24 hrs immersion, a tensile strength of $\geqslant 3.4 \times 10^5$ Pa, a compressive strength of $\geqslant 5.5 \times 10^4$ Pa at 10% deflection and $\geqslant 8.3 \times 10^4$ Pa at 25% deflection, a tear strength of $\geqslant 1.38 \times 10^5$ Pa, and is resilient enough to return to 90% uncompressed height a after compression to 10%. The foam is pref. of polyethylene.

The cleaner has the required properties for chewing, and in addn. has added rigidity, and the shape and surface properties to effectively clean teetch. 23.6.77 as 809445 (6pp100)

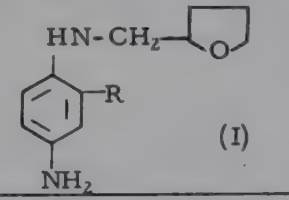
OREA D21 06301B/04 =US 4149-848

Dye compsns. for keratin fibres esp. hair - contain substd. para-phenylene-di:amine derivs. contg. a tetra:hydro-furfuryl gp.

L'OREAL SA 24.06.77-FR-019530

*E13 (17.04.79) *DT2827-658 A61k-07/13 +D06p-01/32*

A compsn. for dyeing keratin fibres comprises an aq. soln. contg. $\geqslant 1$ p-phenylenediamine deriv. of formula (I) or a salt of (I). In (I) R is H, Cl or CH_3. Pref. the salt is a hydrochloride, sulphate, phosphate or tartrate. Pref. the compsn. contains 0.05-6 wt.% (I) w.r.t. total wt. of compsn. Pref. the compsn. has a pH of 8-11.5. Pref. the compsn. contains $\geqslant 1$ coupler. The compsns. are esp. useful for dyeing hair. The compsns. impart natural shades which have good stability to light, bad weather and washing. 5.6.78 as 912977 (12pp992)



(I)

ASAO D21 88587Y/50 =US 4149-894

Apatite bodies for use as bone or tooth prostheses - sintered with addn. of calcium or magnesium orthophosphate to increase strength

ASAHI KOGAKU KOGYO 02.06.76-JA-064184

*L02 +P32 (17.04.79) *DT2724-972 C04b-35 +C01b-25/32*

An apatite powder suitable for sintering is produced having formula $Ca_5(PO_4)_3OH$, contg. 0.01-20 wt.% of $(Ca, Mg)_3(PO_4)_2$. Compsn. is prepd. by calcining a mixed powder of 0-20 wt.% $Ca(OH)_2$ $Ca(OH)_2$, $CaCO_3$ or CaO; 0.01-20 wt.% of $(Ca, Mg)_3(PO_4)_2$, $Mg_3(PO_4)_2$, $MgHPO_4$, $Mg(H_2PO_4)_2$, $MgSO_4$, $MgCO_3$, $Mg(OH)_2$ or MgO; and 99.99-60 wt.% of amorphous apatite of formula $Ca_{10-x}H_x(PO_4)_6(OH)_{2-x} \cdot yH_2O$.

In the formula $0 \leqslant x \leqslant 1$ and $y \leqslant x$. Upon moulding and sintering apatite powder, grain-growth is inhibited contributing to an increase in the mechanical strength of prod.

Prod. has good affinity with living tissue and cells, and is suitable as medical implant materials such as prosthetic teeth or bones. 17.3.78 as 887913 Div. ex. 4113500 (+2.6.77-US-802856) (2pp931)

MINN D21 55451A/31 =US 4150-012

Liq. two/part acrylic tooth filling compsn. - contg. filler to render it visible on the surface of the teeth

MINNESOTA MINING CO 21.01.77-US-761116

*A96 (A14) (17.04.79) *DT2803-016 C08k-09/06*

A mfr. is adapted for use in filling and sealing pits and fissures in tooth surfaces. Mfr. comprises 2 fluid materials, each of viscosity 200-600 centipoise, disposal in separate containers for dispensation by a dentist.

Mixt. of fluid materials produces a sealant which is discernible on tooth surfaces. First material is polymerisable resin system contg. acrylic monomer, finely divided hydrophobic opaquing filler in amt. 0.1-5 wt.%, hydroph-obic suspending agent in amt. 1-10 wt.% and free-radical-generating catalyst for system. Second material has mon-omer, filler and suspending agent as first material, plus an accelerator, reactive with catalyst of first material to promote polymerisation of resin system on tooth surface.

Placement of compsn. on dental surfaces is simplified and retention easily verified. 21.1.77 as 761116 (4pp931)

COOP- ★ D21 35161B/18 ★US 4150-106

Tooth paste for controlling tooth brushing time - contg. citrate-citric acid buffer, and chlorophenol red giving colour change after predetermined time

COOPER SA 16.02.78-CH-001690

A96 R16 (17.04.79) A61k-07/16 G01n-33/16

Toothpaste which changes colour after a predetermined brushing time contains the following reagents for controll-ing this time interval: 10-50% of a 0.07-0.35M citrate-citric acid buffer (pH 4-5.5), and 0.02-0.1% chlorophenol red (I).

Using non-toxic reagents the toothpaste effectively ind-icates when sufficient brushing has taken place. Pref. toothpastes contain ≯3.5% synthetic polymers (e.g. carboxy polymethylene) and modified celluloses. 12.4.78 as 895612 (3pp478)

GENM ★ D21 35162B/18 ★US 4150-112

Plaque-inhibiting chewing gum - contains alkyl sulphate salt with a zinc cpd.

GENERAL MILLS INC 28.11.77-US-855537

B05 E12 (17.04.79) A61k-09/68

The chewing gum contains 10-95 wt.% gum base and 0.001-20 wt.% of a mixt. of alkyl sulphate salt and Zn cpd. in a wt. ratio of 1000:1:1:1000.

The compsn. is highly effective in removing and inhibit-ing the growth of dental plaque, and provides for a sustain-ed release of the active ingredients. 28.11.77 as 855537 (7pp478)

TELE- D21 90119R/48 =US 4150-113

Toothpaste contng a hydrogen-peroxide - liberating enzyme

TELEC SA (TEL -) 03.06.69-NL-008379

*(17.04.79) *BE-751-390 A61k-07/28*

A enzyme dentifrice toothpase, tooth powder or mouth wash is prepd. contg. 0.5-20 units per gm/ml of glucose oxid-ase. Enzyme forms hydrogen peroxide by oxidative decom-position of a glucose substrate provided by glucose present in saliva and tooth plaque.

Hydrogen peroxide is formed in a continuous concn. 10^{-4}%. The unit of activity is the amt. of enzyme which will oxidise 1 µmol of substrate per min. at 30°C at pH 6. Prod. is effective when applied to a dental surface at pH < neutral, restoring pH to neutral.

Prod. renders the structure of plaque to be less firm, facilitating easy removal. Dentifrices exhibit excellent anti-caries activity. 19.1.78 as 870815 (+21.7.72, 9.4.73, 23.1.76-US-276390, 349377, 651862) (5pp931)

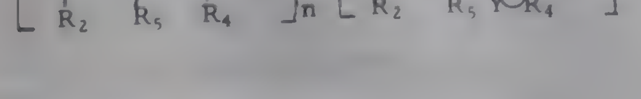
OREA D21 34501Y/20 =US 4150-115

Polymers contg. quat. ammonium groups - used in cosmetic compsns. for the hair and skin

L'OREAL SA 13.11.75-LU-073795

*A96 (A26) (17.04.79) *BE-848-338 A61k-07/06 +A61k-31/74*

A cosmetic compsn. is prepd. contg. ≥1 quat. polyamine polymer having recurring units of formula (I), where A is a 2-10C polymethylene; B is 3-10C polymethylene, xylyli-denyl, $-CH_2-C_6H_4-CH_2-$ortho, meta or para, $-(CH_2)_x-O-(CH_2)_x$, where x is 2 or 3, or $-CH_2-CHOH-CH_2$.



$$\left[-\overset{\oplus R_1}{\underset{R_2}{N}}-A-\underset{R_5}{N}-A-\overset{R_3}{\underset{R_4}{\overset{\oplus}{N}}}-B-\right]_n X^{\ominus}\,X^{\ominus}\quad\left[-\overset{\oplus R_1}{\underset{R_2}{N}}-A-\overset{R_6}{\underset{R_5}{\overset{\oplus}{N}}}-A-\overset{R_3}{\underset{R_4}{\overset{\oplus}{N}}}-B-\right] X^{\ominus}\,X^{\ominus}\,Y^{\ominus}\qquad (I)$$

R₁ and R₃ are each 1-12C alkyl; R₂ and R₄ are each 1-20C alkyl; R₅ is H or ≤20 C alkyl, aryl or aralkyl or 5-6C cycloalkyl; R₆ is ≤ 20C alkyl or aralkyl; X⁻ is a halide anion, Y⁻ is a halide, hydrogen sulphate or methyl sulph-ate anion; n and p are whole numbers with p ≥ o such that ratio p/n + p is 0-0.95. Polymer is present at 0.01-10 wt.% w.r.t. compsn.

Compsn. contains a cosmetic carrier for application to the hair or skin. 15.11.76 as 742118 (12pp931)

FORS- ★ D21 35163B/18 ★US 4150-116

Immunisation against dental caries - using vaccine contg. purified glucosyl transferase

FORSYTH DENTAL INFI 21.02.78-US-879432

B04 (D16) (17.04.79) A61k-07/28 A61k-37/48 A61k-39

Immunisation against dental caries is effected by administ-ering a vaccine consisting of purified glucosyl transferase (GTF) locally into or near to the oral cavity. The vaccine obtd. by culturing Streptococcus mutans in a medium contg glucose and dialysable nutrients, incubating the culture su-pernatant with sucrose, incubating the resulting water-insol. polysaccharide with a denaturing solvent to break the bond between the polysaccharide and the GTF, the poly saccharide from the solvent containing GTF, the solvent from the GTF and concentrating the GTF by gel filtration to obtain the vaccine. 21.2.78 as 879432 (18pp476)

UNIL ★ D21 35177B/18 ★US 4150-151

Germicide free antibacterial mouth-wash - contains ethanol, peppermint or spearmint oil, anionic surfactant and water

LEVER BROTHERS CO 12.12.77-US-859632

A96 (17.04.79) A61k-07/16

Liq. mouthwash comprises 5-15% EtOH; 0.1-2% pepper-mint and/or spearmint oil; 0.1-0.6% alkyl sulphate anioni surfactant (mainly dodecyl and tetradecyl sulphate salt having Na, K, Mg, NH_4 or substd. NH_4 cation; the ratio o the 2 salts is 4:1-1:1); 0-3% nonionic emulsifier; 0-2% alk ali metal halide; 0-1% buffering salt pair to produce pH 3-8; 0-25% humectant; 0-2% Na saccharin or other sweetene and water.

The mouthwash is germicide free but is antibacterial and it is stable and is physiologically acceptable to the us It has a pleasant taste. 12.12.77 as 859632 (18pp1248)

FARH D21 08578A/05 =US 4150-21

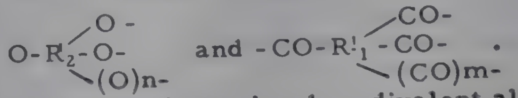
Hair fixative contg. branched polyester copolymer with sulphona gps. - prepd. from di:carboxylic acid, di:ol and branchi components (BE 25.1.78)

HOECHST AG 24.07.76-DT-633418

*A96 (17.04.79) *DT2633-418 +C08g-63/68*

Hair treatment agents have a content of branched copoly-esters dispersible or sol. in water and an apparent mol. of 600-5000, and have a content of SO_3M gps. (where M i alkali metal ion or NH_4 ion or the cationic radical of an ganic amine).

The copolyesters are made up of the radicals of form $-CO-R-CO-$, $-O-R_2-O-$,



$$O-R_2\begin{cases}-O-\\-O-\\(O)n-\end{cases}\quad\text{and}\quad -CO-R'_1\begin{cases}-CO-\\-CO-\\(CO)m-\end{cases}.$$

R_1 is a direct bond or divalent aliphatic, cycloaliphat or aromatic gp. which may also contain SO_3M gp., m is 2. R'_1 is an aliphatic, cycloaliphatic or aromatic gp. o contg. an SO_3M gp. and which when m = 0 is trivalent, when m = 1 is tetravalent and when m = 2 is pentavalent R_2 is divalent aliphatic, cycloaliphatic or araliphatic gp opt. contg. an SO_3M gp. and n is 0-2. R'_2 is an aliphat or cycloaliphatic gp. which when n = 0 is trivalent, whe n = 1 is tetravalent and when n = 2 is pentavalent and o contain an SO_3M gp.

Agents have very low water absorption and can be e washed out of the hair. 19.7.77 as 817054 (19pp393)

See Also

D15 EP ---1584 D23 J5 4039069 D24 BR 7706286

D22: BANDAGES; DRESSINGS

ARVE ★ D22 33329B/18 ★BE-871-543
Disposable sterilisable pouch esp. for medical supplies and equipment - has self-sealing flap providing long term protection against contamination
ARVEY CORP 26.10.77-US-845615
P34 Q32 (25.04.79) A61l B65d

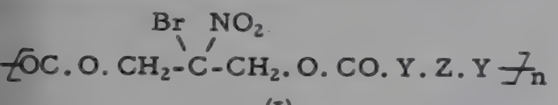
The pouch comprises super-imposed front and back sheets welded together along two opposed side edges and a joining bottom edge (if applicable). The top edges are unwelded and the back sheet extends beyond the top edge of the front sheet to form a foldover flap. One of the sheets has an adhesive, pref. pressure-sensitive adhesive, strip extending between the side edges to hold the foldover flap against the front sheet.

The adhesive strip is parallel to and slighly spaced from the top edge of the front sheet. The fold line for the flap coincides with the edge of the adhesive strip nearer to the top edge of the front sheet. When the flap is folded over and sealed down, the adhesive strip forms an outer seam between front and back sheets and an inner, adjacent, parallel seam between folded together margins either of the back sheet are of the front sheet.

The adhesive strip is pref. spaced from the edge of the front sheet by 9.5-12.7 mm and the width of the adhesive strip is 19-25 mm. 25.10.78 as 871543 (13pp448)

ICIL ★ D22 33362B/18 ★BE-871-665
Biocidal polyurethane(s) and polyester(s) - derived from 2-bromo-2-nitro-1,3-propane diol, used for water treatment and as additives for emulsion paints, water-based adhesives etc.
IMPERIAL CHEM INDS LTD 03.11.77-GB-045746
A97 C03 G02 P34 (A23 A25) (30.04.79) A61l C02b C08g

Polymers of formula (I) are new:-



$$\left[OC.O.CH_2\text{-}\overset{Br\ \ NO_2}{C}\text{-}CH_2.O.CO.Y.Z.Y \right]_n$$

(I)

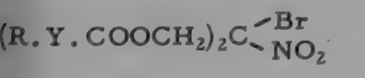
(where each Y is a direct bond or NH; Z is an opt. substd. divalent hydrocarbon radical; n ≥ 2).

The polyurethanes (where Y=NH) can be prepd. by reacting 2-bromo-2-nitro-1,3-propanediol (II) with a diisocyanate of formula $Z(NCO)_2$, pref. using a small molar excess of (II). Diols other than (II) can also be included in the reaction to form copolymers. The polyesters (where Y is a bond) can be prepd. by reacting (II) with a dicarboxylic acid of formula $Z(COOH)_2$ or its lower alkyl ester. Diols other than (II) can also be included in the reaction. (I) is pref. used at a concn. of 1-1000 ppm for water treatment and 500-10,000 ppm in paints.

(I) have biocidal activity against fungi, bacteria, algae and yeasts. They can be used for water treatment and as additives for metal-working fluids, emulsion painst, water-based adhesives, wood pulp etc. 30.10.78 as 871665 17pp367)

CIL ★ D22 33363B/18 ★BE-871-666
-Nitro-2-bromo-propane-1,3-diol ester and carbamate derivs. - seful as biocides e.g. in aq. systems, and as fungicides
IMPERIAL CHEM INDS LTD 03.11.77-GB-045747
C03 E19 G02 P34 (D15) (30.04.79) A61l C07c

Propanediol derivs. of formula (I) are new. In (I) Y is bond is bond or NH.



$$(R.Y.COOCH_2)_2C\genfrac{}{}{0pt}{}{\diagup Br}{\diagdown NO_2}$$

(I)

R= 2-18C unsubstd. alkyl, 1-18C substd. alkyl or opt. substd. alkenyl, cycloalkyl, aralkyl, alkaryl or aryl. (I) are prepd. by reacting -bromo-2-nitro-propane-1,3-diol with RNCO or RCOOH.

(I) are biocides with greater stability and lower toxicity han the corresp. diol. They are esp. useful for treating q. media (e.g. cooling water, papermaking streams, netal-working fluids, paints, or adhesives) and as fungiides for paints, wood and leather. They are also effective gainst yeasts and algae. 30.10.78 as 871666 (14pp1251)

SCHE/ ★ D22 33434B/18 ★BE-873-261
Moulding implants, esp. dental implants, from ceramic masses - the implants having a porous surface favouring penetration by growth of osseous tissue
SCHEICHER H 31.12.77-DT-759214
L02 P32 (17.04.79) A61c A61f

A moulding of the implant is produced by placing a model of the implant in a mixed coating mass at high temp. followed by cooling to harden and removal of the model. Using an opening discharging in the interior, the moulding is covered with a layer of ceramic mass which forms the exterior layer.

The moulding cavity is then completely filled with a mass of dentine or core material. The opening is then sealed with a pasty coating mass which is allowed to harden. The assembly is then heated to the fritting temp. of the ceramic masses used and calcined at this temp. for the normal time. 29.12.78 as 873261 (25pp597)

DALM/ ★ D22 B/18 ★BR 7706-248
Sterilisation of pharmaceutical products - automatically sealed in plastics packaging
DE ALMEIDA I C M 09.09.77-BR-006248
B07 P34 (17.04.79) A61l-01

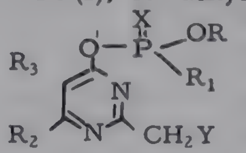
USSU D22 40341Y/23 =DS 2639-413
Surgical clamps comprising interlocking soluble strips - for rapid clamping of tubes or wounds of any size
US SURGICAL CORP 03.09.75-US-609949
*A96 P31 (26.04.79) *FR2322-578 A61b-17/08*

Device for positioning surgical clamps comprising 2 interlocking holding components of a meterial adapted to be absorbed by a patient's body and clamping the tissue to be connected between them, is claimed. One holding compon-ent has openings for receiving pegs (which have heads on them) of the other holding components.

The holding components are made of catgut, polyglycol acid, polylactic acid, regenerated collagen, erodable metal alloy, absorbable polyester, polyaminoacids, polymers of low-valent alcohols, cellullose glycolesters of cyanoaryl acid. 1.9.76 as 639413(5pp267)

FARB ★ D22 33536B/18 ★DT 2747-357
O-pyrimidinyl-phosphorus acid ester and amide derivs. - and thio analogues, useful as insecticides and acaricides
BAYER AG 21.10.77-DT-747357
C01 (26.04.79) A01n-09/36 C07f-09/65

Pyrimidine-derivs of formula (I) are new.

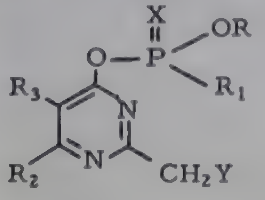


In (I), R= alkyl. R_1=alkyl, phenyl, alkoxy, alkylthio or alkylamino. R_2 and R_3 are each H, halo or alkyl. Y= alkoxy, alkylthio or mono- or di-alkylamino. X is O or S. (I) are made by reacting Hal. $P(X)(OR)(R_1)$ with the appropriate 4-hydroxypyrimidine

(I) are acaricides and insecticides more active than known cpds. of similar structure. They are useful in forestry, agriculture,protection of stored goods and for hygienic applications and have excellent residual activity on wood and clay, and are stable to alkali or white-washed surfaces. 21.10.77 as 747357 (46pp1251)

FARB D22 33536B/18 =EP ---1-602
O-pyrimidinyl-phosphorus acid ester and amide derivs. - and thio analogues, useful as insecticides and acaricides
BAYER AG 21.10.77-DT-747357
*C01 (02.05.79) *DT2747-357 A01n-09/36 C07f-09/65*
D/S: E(BE, CH, DT, FR, GB, NL).

Pyrimidine derivs. of formula (I) are new:



(I)

(R = alkyl;
R_1 = alkyl, phenyl, alkoxy, alkylthio or alkylamino;
R_2 and R_3 are each H, halo or alkyl;
Y = alkoxy, alkylthio or mono-

or di-alkylamino;
X is O or S).

(I) are acaricides and insecticides more active than known cpds. of similar structure. They are useful in forestry, agriculture, protection of stored goods and for hygienic applications and have excellent residual activity on wood and clay, and are stable to alkali on white-washed surfaces.

7.10.78 as 101097 (47pp1251).
(G) ISR: CH498871; US3367935; US2754243; DT2343931; GB1203026.

FARB ★ D22 33714B/18 ★EP ---1-623
Aryl-thiocarboxylic acid thiocyano-methyl ester derivs. - used as molluscicides, bactericides and fungicides, e.g. for plant protection or preserving materials
BAYER AG 26.10.77-DT-747825
B05 C03 E14 (02.05.79) A01n-09/18 C07c-153/07 C07c-161/02
D/S: E(BE, DT, FR, GB, NL, SW).

Esters of formula (I) are new:

$$R^{1}-CO-S-CH_2-SCN \qquad (I)$$

(R^1 is opt. substd. aryl, pref. phenyl opt. substd. by 1 or 2 same or different halogen, 1-6 C alkyl, 1-6 C halo-alkyl, 1-6 C alkoxy or NO_2 gps.).

(I) are pesticides having strong microbicidal or microbistatic activity against bacteria, fungi, yeasts, slime microorganisms, viruses and algae, e.g. E. coli, Staph. aureus, Ps. aeruginosa, Aspergillus niger, Candida albicans and Aerobacter aerogenes.

They can be used as microbicides for protecting technical materials, e.g. cold lubricants, adhesives, textile auxiliaries, plastics, leather, dispersions, aq. paints, plasters etc.

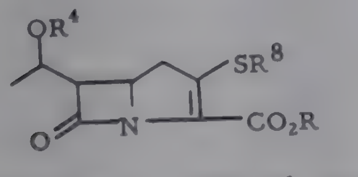
(I) are also molluscicides, and can be used for combatting snails which act as carriers for trematodes (schistosomes and fasciola), e.g. Biomphalaria glabrata and Bolinus truncatus.

(I) can also be used as bactericides and fungicides in plant protection, when they are esp. active against overground fungi such as Venturia inaequalis and Puccinia recondita.

14.10.78 as 101143 (41pp941).
(G) ISR: US3095437; US3845082; J73008492; 3 Journal References.

MERI ★ D22 33718B/18 ★EP ---1-627
3-Substd.-6-hydroxy:ethyl-7-oxo-1 aza:bi:cycloheptene carboxylic acids - antibiotics with activity against Gram positive and negative organisms
MERCK & CO INC 19.10.77-US-843375
B02 C02 E13 (02.05.79) A61k-31/40 C07d-205/08 C07d-209 C07d-487/04
D/S: E(BE, CH, DT, FR, GB, LU, NL, SW).

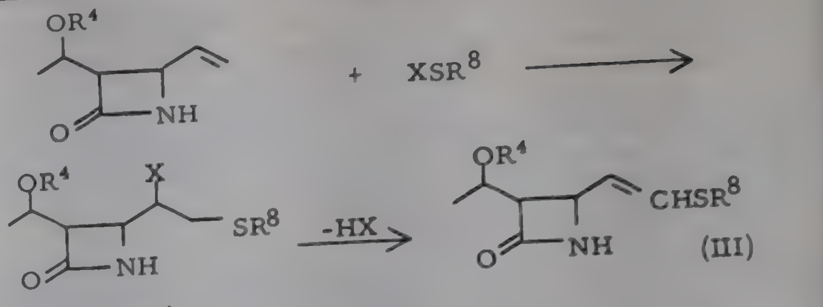
(A) Cpds. of formula (I) and their pharmaceutically acceptable salts are new



(I)

(where R^4 is H, aryl or 1-6C alkyl; R is H or a pharmaceutically acceptable cation or ester gp.; R^8 is H or 1-10C alkyl, alkenyl or alkynyl; cycloalkyl, cycloalkyl-alkyl or alkyl-cycloalkyl with 3-6C in the ring and 1-6C in the chain; phenyl, phenalkyl, phenalkenyl or phenalkynyl with 1-6C in the chain; heteroaryl, heteroaralkyl, heterocyclyl and heterocyclylalkyl; all opt.substd. by NH_2, mono-, di- or tri-alkylamino, OH, alkoxy, mercapto, alkylthio, phenylthio, sulphamoyl, amidino, guanidino, NO_2, Cl, Br, F, CN and/or carboxy gp(s).; the hetero-atom(s) in the heterocyclic gps. are 1-4 O, N or S atoms and the alkyl gps. in the substits. are 1-6C;
R^8 is not 2-aminoethyl or its N-deriv.).

(B) The following process is new:



(X = halogen).

(I) are antibiotics for human and animal use and for sterilising medical or dental appts. etc. and have activity against Gram +ve and -ve bacteria, e.g. S.aureus, Strep. pyogenes, B.subtilis, E.coli, Proteus morganii, Serratia, Pseudomonas and Klebsiella spp. (I) can also be used as animal feedstuff additives. Doses are e.g. 5-600 mg/kg p.o., opt. divided, pref. 15-240 mg/kg/day for adult humans.

16.10.78 as 101156 (85pp949).
(E) ISR: DT2652676; DT2751597; DT2751624; DT2552638.

UNIL D22 31891B/17 =EP ---1-706
Particulate absorption material with improved wettability with blood - treated with polyethylene glycol, polypropylene glycol or their block copolymer
UNILEVER LTD 10.04.78-GB-013951 (18.10.77-GB-043308)
*A96 +P34 (A25) (02.05.79) *DT2844-956 A61l-15 C08l-71/02*

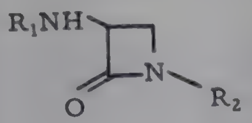
Particulate absorption material (I) swellable in water is surface treated with ≥ 1 polyether (II) $HO(C_2H_4O)_a(C_3H_6O)_b(C_2H_4O)_cH$ (where a + c or b is O) to improve dispersibility in blood. (II) is used in amt. to allow blood to flow by capillary action through (I).

(I) has better wettability i.e. blood is able to flow into the interior of (I) and may be used for tampons and surgical or medical prods.

16.10.78 as 300507 (27pp952)
(E) ISR: US3371666; FR2354184; US3978855; GB1131762; GB720363
+ 1 Journal Reference.

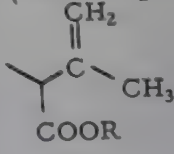
ELIL D22 31575B/17 =EP ---1-71
2-3-Amino-2-oxo-1-azetidinyl 3-methyl 2- or 3 butenoic acid derivs - are antibiotics which are administered parenterally or used a disinfectants
ELI LILLY & CO 26.10.77-US-845766
*B03 E13 (02.05.79) *BE-871-401 +A61k-31/39 C07d-205/0 C07d-401/06*
D/S: E(DT, GB, NL, SW).

Azetidinones of formula (I) are new, together with their hydrochlorides when R_1 = H and their pharmaceutically acceptable salts when R = H

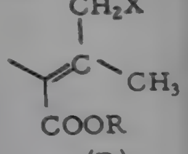


(I)

(where R_2 is a gp. A or B:



(A)



(B)

R is H or a carboxylic acid ester protecting gp.;
X is 1-3C acyloxy, hydroxy, 1-4C alkoxy, benzyloxy or pyridinium;
R_1 is H or R_5-CO-;
R_5 is H, 1-4C alkyl, halomethyl, phenyl. benzyloxy, 4-nitrobenzyloxy, 2,2,2-trichloroethoxy, t-butoxy, 4-meth oxybenzyloxy, R_6-$(O)_m$-CH_2-, R_7-CHW- or R_8CH_2-;
m = 0 or 1;
R_6 is 1,4-cyclohexadienyl, or phenyl opt.substd. by one two substituents chosen from hydroxy, nitro, cyano, CF 1-4C alkyl and 1-4C alkoxy;
R_7 is R_6 or 2- or 3-thienyl;
W is opt. protected hydroxy, opt. protected carboxy, op protected amino or $-NH-CO-N(CH_3)-CO-NH-CH_3$; and
R_8 = 2- or 3-thienyl, 2-furyl, 2-thiazolyl, 5- or 1-tetr

zolyl or 4-isoxazolyl).

(I) are antibiotics which inhibit the growth of pathogenic microorganisms. They are administered parenterally in doses of 100-500 mg/kg., or are used to prepare disinfectant solutions containing 10-50 g/l. of (I) e.g. used to sterilise dental and medical equipment.

24.10.78 as 300531 (34pp395).
(E) ISR: BE830934.

AKIY/ ★ D22 33952B/18 ★J5 4037-086
Purification of air - using clay pellets obtd. by calcining adsorbent clay contg. a powdery carbonaceous material
AKIYAMA T 29.08.77-JA-102740
E36 J01 (19.03.79) B01d-53/02

Method comprises calcining a spherical type insoluble clay of adsorbability contg. a powdery carbonaceous substance to obtain a sponge type adsorbing clay pellet, and contacting the clay pellet with the harmful air to remove the harmful components.

Partic., 100 pts. of a clay, e.g. zeolite, is mixed with 15 – 2 parts of a carbonaceous substance, such as, waste paper dust or wood dust, to obtain a mixt. The mixt. is shaped to a spherical substance. The spherical substance was calcined to obtain a spherical type adsorbing agent of 3-15 mm. of particle size. Air to be treated is passed through a bed of the spherical type adsorbing agent to remove SO_2, NO_2, NO, HCHO, and various bacteria. 29.8.77 as 102740 (3pp51)

KUSA/ ★ D22 33953B/18 ★J5 4037-087
Material for removing malodours e.g. from fish in a freezer - is prepd. by adsorbing amphoteric or nonionic surfactant on activated carbon pellets and rapidly cooling for dehydration
KUSANO K 30.08.77-JA-103139
A97 E19 J01 P14 (19.03.79) A01l-09/ B01d-53/02*

Method comprises adsorbing an amphoteric or nonionic surfactant on active carbon pellets and rapidly cooling the obtd. active carbon to below -30°C. so it is dehydrated.

The amphoteric surfactant is a lauryl dimethyl betaine, stearyl dimethyl betaine, lauryl hydroxyethyl betaine, rhodium aminopropionate, sodium stearylaminopropionate, laurylamino diacetate, palmitylamino diacetate or N, N-di-(nonylbenzyl)-N-hydroxyethylamino acetic acid. The nonionic surfactant is polyethylene glycol lauryl ether, polyethylene glycol stearyl ether, polyethylene glycol cetylether, polypropylene glycol stearate, sorbitol laurate, sorbitol stearate, sorbitan laurate or sorbitan stearate.

In an example, 100 pts. wt. active carbon, 15 pts. wt. lauryl dimethyl betaine and 5 pts. wt. polyethylene glycol laurate were mixed. Compressed CO_2 gas was introduced into the mixt. for cooling to -40°C. to obtain dehydrated active carbon. 30.8.77 as 103139 (3pp51)

SANN ★ D22 34019B/18 ★J5 4037-188
Water absorbent resin prodn. - from amylase, addn. polymerisable monomers, and crosslinking agent
SANYO KK 29.08.77-JA-103925
A97 F09 (A11) (19.03.79) C08f-251

A mixt. essentially comprising (a) amylase, (b) >1 monomer with addn. polymerisable double bond which is water soluble or is rendered water soluble upon hydrolysis and (c) crosslinking agent, is polymerised and if necessary, is subjected to hydrolysis.

The ratio of the three ingredients is 100:10-1000:0.001-10. The polymerisation is pref. effected by irradiation or by using cerium salt or H_2O_2 catalyst. When necessary, polymerisation catalyst may be used. In this case, the polymerisation is effected at 10-150, pref. 20-100°C. The hydrolysis is done by the known methods in water or mixt. of water and alcohol in the presence of sodium hydroxide, potassium hydroxide, etc.

The resin can be readily produced at a low cost. It has a higher water absorbing power (> 60 ml./g., partic. 100 to 500 ml./g.) and is biodegradable. It is capable of forming stable gel when it retains water. When dry, it absorbs very little moisture in the air. The resin finds an extensive use in paper diaper, sanitary napkin, gauze, paper towel, etc. 29.8.77 as 103925 (6pp172)

TORA ★ D22 34307B/18 ★J5 4038-951
Antiseptic, moisture-absorbing textile prod. - comprises ion exchange fibre contg. copper or silver ions, and moisture-absorbing fibre
TORAY INDS INC 29.08.77-JA-103503
A94 F01 P21 P34 (24.03.79) A41b-11 A61l-15/ D01f-06/54 D01f-11/06 D02g-03/04 D03d-15*

The textile prod. is composed of 5-40 wt.% of ion-exchange fibre (e.g. acrylic copolymer fibre contg. 0.1-3 meq./g. sulphonate gp.) contg. Cu^{++} or Ag^+ as gegen-ion; and moisture-absorbing fibre having $\geqslant$35% water retentivity (e.g. acrylic fibre, cotton fibre, rayon fibre, etc.).

The antiseptic fibre has ecellent antiseptic property, imparted by Cu^{++} or Ag^+ ion, combined with processability comparable to that of other fibre for clothing. The moisture-absorbing property is supplemented by blending with hydrophilic fibre. 29.8.77 as 103503 (8pp173)

SUMI/ ★ D22 34522B/18 ★J5 4039-983
Antithrombus material - comprising decomposition prod. of fibrin or fibrinogen on high mol. carrier
SUMI H 05.09.77-JA-106429
A96 P34 (28.03.79) A61m-01/03

An antithrombus material is obtd. by fixing a decomposition product of fibrin or fibrinogen on a high molecular carrier material.

A high molecular material is often used in the field of medicine. However, thrombus occurs when such a high molecular material is applied to the portion where it is in direct contact with blood in such an artificial kidney, an artificial blood vessel, an artificial valve, etc. A decomposition product of fibrin or fibrinogen is referred to in general FDP or FgDP and it is found to have antithrombus effect.

As the high molecular carrier, collagen, cellulose, agarose, nylon, polyester, polyamide, polystyrene, glass, etc. are used in a shape of tube, fibre, capsule, or film. 5.9.77 as 106429 (4pp30)

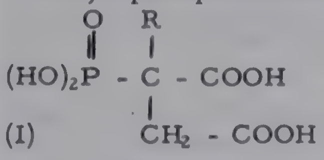
NIKU- D22 15185A/08 = J7 9007-622
Removal of bacteria contamination from air - by passing through filter, to remove dust, a liq. steriliser and an electric heater
NIPPON KUREA KK 30.06.76-JA-078008
*J01 +P34 (09.04.79) *J53003-960 +A61l-09*

Air, discharged from a laboratory or hospital, is passed through an air filter, to remove a substantial portion of the bacteria-carrying dust; a liquid steriliser and them through a dry steriliser which incorporates an electric heater.

Liquid steriliser uses an atomised spray of liquid disinfectant or gas is introduced as bubbles. The gas leaving the liquid steriliser is pressurised, e. g. to 10kg/cm^2 and then introduced to the second sterilising where the air is heated. 30.6.76 as 078008 A61k-9/00 (9.4.79) NIPPON KUREA KK (5pp) (J53003960)

FARB D22 63098S/39 = J7 9007-775
Alpha-alkyl-phosphonosuccinic acids assequestering agents
FARBEN FAB BAYER AG 28.03.70-DT-015068
*E11 (10.04.79) *BE-764-899 C07f-09/38 +C09k-03 C11d-07/36*

α-Alkyl-phosphonosuccinic acids of formula (I):



$$(HO)_2\overset{\overset{\displaystyle O}{\|}}{P}-\underset{\underset{\displaystyle CH_2-COOH}{|}}{\overset{\overset{\displaystyle R}{|}}{C}}-COOH$$

(I)

(where R is alkyl, pref. 1-4C, alkenyl, alkynyl, cycloalkyl or aralkyl) form complexes with alkaline-earth metal ions and are used as sequestering agents, esp. in solns. for washing bottles in the food industry.

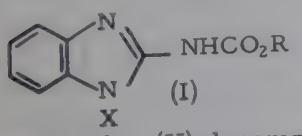
(I) are also used as wetting agents, emulsifiers, antifoam agents, organic builders and bleaching and disinfecting agents. 29.3.71 as 018025 C07f-9/38; C09k-3/00; C11d-7/36 (10.4.79) FARBENFAB BAYER AG (6pp) (J46003821)

WATA/ D22 85057V/49 = J7 9007-805
Germicidal dry cleaning solvent - contg. benzalkonium chloride and nonionic surfactant
WATANABE H 03.10.72-JA-099702
*E14 G04 (10.04.79) *J49057-008 +C11d-01/66 C11d-07/22*

Petroleum or synthetic dry cleaning solvents with sterilising power for finished garments are prepd. from benzalkonium chloride 1, nonionic surfactant 10, and petroleum or synthetic drycleaning solvent 2000 ml. 4.10.72 as 099702 C11d-1/66; 7/22 (10.4.79) WATANABE, H. (6pp) (J49057008)

TSUB D22 43439W/26 = J7 9007-856
Benzimidazole antimicrobial compsns. - using thiourea derivs.
KUMIAI CHEM IND KK 27.04.73-JA-047919
*E13 (10.04.79) *J49133-527 +A01n-09/22 A01n-23*

The benzimidazole derivs. (I) (X=acyl or alkylcarbamoyl, and R=alkyl) are stabilised by R'NHC(S)NH_2 (R'=H, alkyl, Ph or acyl) to various degrees:


(I)

In an example, Me N-(1-formyl) benzimidazol-2-ylcarbamate (II) decompd. 100% in 30 days when kept with 1,2-bis(3-methoxycarbonyl-2-thioureido)benzene (III) at 40°, but (II) decompd. only 4.4% when stored at the same temp. with thiourea. 27.4.73 as 047919 A01n-9/22; 23/00 (10.4.79) KUMIAI CHEM. IND. KK (6pp)(J49133527)

ODEL- ★ D22 B/18 ★OE 7708-644
Sterilising installation
ODELGA J ARZTLICH-T 02.12.77-OE-008644
P34 (15.04.79) A61l-03

STAP/ ★ D22 34633B/18 ★SU -611-611
Body joint function restoration after surgery - includes injection of aq. polyvinyl-pyrrolidone, novocaine, adrenalin and di:sodium ethylene di:amine-tetra:acetate
STAPONAS A V 19.07.76-SU-389557
A96 B05 P31 (A14) (23.05.78) A61b-17

The early restoration of human body joint function after the synovectomy includes the coating of wound surface with 5-15% aq. soln. of polyvinylpyrrolidone (mol. wt. 12000-20000) and subsequent sealing of the joint's capsules, followed by the injection into the joint's cavity of medicinal compsn. and physiotherapy.

The function of the joint is restored more quickly and with minimum pain if the medicinal compsn. for the injection into the cavity of the joint comprises 3-7 ml. 5-10% aq. soln. of polyvinyl pyrrolidone (mol. wt. 4000-6000), 5-10 ml. 2% novocaine soln. 0.1% adrenalin soln. and 2-2.3% soln. of disodium salt of ethylene-diamine-tetracetic acid. Staponos, A.V., Vasilenkaitis, V.V. Bul. 23/25.6.78. 19.7.76. as 389557(2pp938)

SHEL D22 08275A/05 = US 4149-675
Air freshener giving off perfume in variable quantity - accumulates vapour in reservoir which can be emptied arbitrarily
SHELL OIL CO 26.07.76-GB-031048
*P34 +P14 P15 Q32 (17.04.79) *BE-857-090 +A24f-25*

A vapour-emitter consists of a hollow container, pref. cylindrical, open at both ends having a slow release generator mounted within the container for movement between the ends. The generator is pref. a sphere or piston of a polymeric carrier having an incorporated volatile cpd.

The generator, when at one end of the container, forms a reservoir of stored vapour-contg. air, which is emptied when the generator is moved to the other end, e.g. by inverting the container. The device permits the continuous expelling of a boost of vapours, e.g. perfume, pesticides, etc. into the surrounding atmos. 25.7.77 as 818707 (5pp1379)

TOKM- D22 38480Y/22 = US 4149-893
Ceramic for implants - sintered from mixt. of whitlockite and crystalline hydroxy-apatite prepd. from calcium phosphate and calcium cpd.
TOKYO MED & DENT 21.11.75-JA-139328
*L02 P32 (17.04.79) *DT2652-611 +C09k-03*

An orthopaedic or dental implant ceramic compsn. is prepd. contg. hydroxyapatite and whittockite. Compsn. is prepd. by blending 50-99.5% of a crystalline hydroxyapatite and 0.5-50 wt.% of whittockite, then sintering blend at 900-1400° C.

Crystalline hydroxyapatite is prepd. by the solid phase reaction where a mixt. of a Ca phosphate of Ca/P ratio 1.5 1.67 by mole and at least stoichiometric amt. of a calcium cpd. is heated at 500-1000° C. Ca cpd. is the carbonate, oxide, hydroxide, fluoride, formate, nitrate or chloride.

Prod. can be safely buried in a human or animal body as a prosthesis for a bone or tooth damaged by an accident or disease, without rejection phenomena. 10.11.76 as 740776 (3pp931)

MERI ★ D22 35102B/18 ★US 4149-983
Microbe resistant metal working fluids - contg. 1,3,5-tris:furfuryl hexa:hydro:triazine
MERCK & CO INC 03.04.78-US-892724
E13 H07 M21 (17.04.79) C10m-01/06

Growth of microorganisms in metal working fluid is inhibited by addn. of an effective amt, esp. 0.1-5 wt.% of 1,3,5-tris(furfuryl)hexahydro-s-triazine (I). A premix for adding to cutting oils, contains 1-95 wt.% I, 4-99 wt.% carrier fluid and 0-30 wt.% surfactant.

(I) present few environmental hazards and may be used in a variety of cutting oils, grinding fluid, etc. and also in hydraulic fluids and lubricants. 3.4.78 as 892724 (5pp955)

OLIN ★ D22 35105B/18 ★US 4149-988
Sanitising, disinfecting storage stable chloroisocyanurate compsns. - contg. alkaline earth metal sulphate as stabiliser
OLIN CORP 26.05.77-US-800828
E13 (17.04.79) C11d-03/48

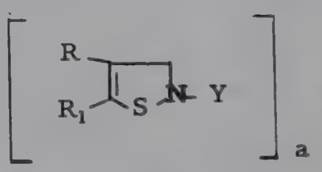
The compsns. comprise trichloroisocyanuric acid, dichloroisocyanuric acid or its salts, and an alkaline earth metal sulphate as decomposition inhibitor.

The inhibitors are inexpensive, and prevent evolution of noxious chloroamine cpds. Compsns. are useful as dry sanitising and disinfecting agents. 26.5.77 as 800828 (4pp955)

ROHM D22 76318T/48 = US 4150-026
Metal complexes of 3-isothiazolones - with biocidal activity
ROHM & HAAS CO 12.05.71-US-142775
*B03 C01 E12 +P34 (17.04.79) *NL7205-866 C07d-275/02 C07f-01/08 C07f-03 C07f-15*

Metal salt complexes of 3-isothiazolines of formula (I) are new.

In (I) Y is H or 1-18C alkyl. R is H, halogen or 1-4C

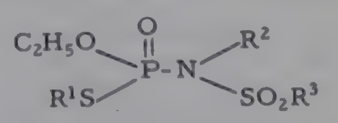

(MXn) (I)

alkyl,. R_1 is H, halogen, 1-4C alky or R and R_2 togeth can complete a ben zene ring obtd. substd. with ⩾1 halogen 1-4C alky cyano or 1-4C alkoxy gp. M is B, Cd, Cu, Cr, Co, Cu, F Ph, Li, Mg, Mn, Hg, Ni, Ag, Na, Sr, Sn, or Zn. X is Cl, Br, I, sulphate, acetate, perchlorate, bisulphate, bicarbonate, oxalate, maleate, p-toluenesulphonate, carbonate, or phosphate; a is 1 or 2 and n is the valency of m.

(I) exhibits biocidal properties including bacteriocidal, fungicidal and algaeocidal properties. 12.5.71 as 142775 (13pp964)

NITN D22 23603A/13 = US 4150-15
(N)-Sulphonyl phosphoric acid ester amide derivs. - havin insecticide, acaricide and nematocide activity and used in plar protection, hygiene and preservatives (BE 20.3.78)
NIHON TOKUSHU NOYAK 20.09.76-JA-111746
*B05 C01 (17.04.79) *DT2741-086 A01n-09/36 C07f-09/24*

O,S-dialkyl-N-substd. N-sulfonyl-phosphoramidothiolate of the formula (I) are new.


(I)

In (I) R^1 is ethyl, butyl or sec. butyl, is 1-6C and 2-6C alkenyl or phenyl substd. with ⩽2 of halogen or 1-6C alkyl. R^3 is halogen-substd. 1-6C alkyl, aralkyl, phenyl or substd. with < 2 substs. of halogen, 1-6C alkyl or nitro.

(I) possess insecticidal, acaricidal and nematicidal pr perties. They have low toxicity to warm blooded animal (I) are also active against animal parasites and can be us to protect stored products. 19.9.77 as 834862 (11pp)

MERI ★ D22 35181B/18 ★US 4150-156

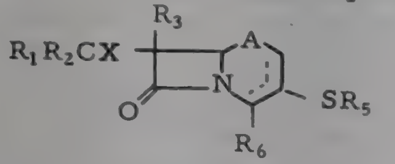
7-Substd. methyl-3-thio-cephalosporin derivs. - useful as broad spectrum antibacterials

MERCK & CO INC 08.05.78-US-903455 (21.11.75-US-634293)

B02 C02 E13 (17.04.79) A61k-31/54 C07d-501

Cephalosporin derivs. of formula (I) and their pharmaceutically acceptable salts are new.

In (I) R_1 and R_2 = H, or are 1-6C alkyl, phenyl, benzyl, phenethyl or thienylmethyl all opt. substd. by OH, NH_2 or COOH. X is OH, SH, NH_2 or (sic) = O or =NH. R_3 = H, CH_3O or lower alkylthio. R_5 = H, HCO or $(CH_2)_n$ Y. n=1-6. Y=H, OH, halo, SH, COOH, N_3, amino (opt. mono- or di-lower alkyl substd.,) acyloxy or acylthio (acyl is 2-6C lower alkanoyl), or phenyl or 1H-tetrazol-5-yl opt. substd. by NH_2, COOH, OH or 1-6C alkyl. R_6 is COOH, A is S or SO.



(I)

(I) are broad-spectrum antibiotics useful in human or veterinary medicine and as preservatives or disinfectants. 8.5.78 as 903455 (16pp1251)

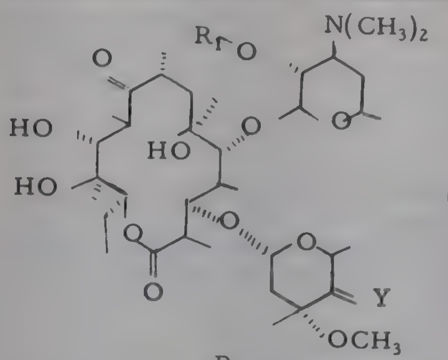
PFIZ D22 58751A/33 =US 4150-220

Antibacterial 4''-deoxy-4''-amino-erythromycin derivs. - and their 4''-oxo or imino precursors

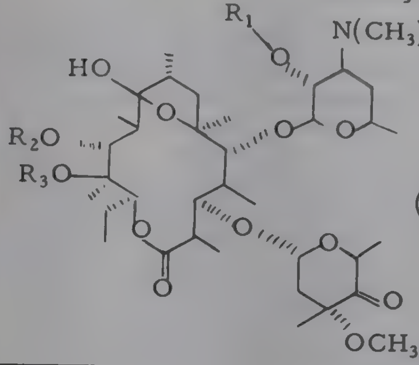
PFIZER INC 01.12.77-US-856479 (04.02.77-US-765480)

*B03 E13 G02 (D15) (17.04.79) *BE-863-621 A61k-31/70 C07h-17/08*

New semi-synthetic 4''-erythromycin A deriv s. are of formula (I) or (II).



(I)



(II)

In the formulae, R_1 is H or 2-3C alkanoyl; R_2 is 2-3C alkanoyl; Y is N-OH or N-OOCCH$_3$; R_3 is H; or R_2 and R_3 when taken together are -C(=O)-.

The derivs. are useful as antibacterial agents, for sterilising, water treatment, slime control, paint and wood preservation, etc. 1.12.77 as 856479 (18pp910)

See Also

D13 DS 2020303 D13 EP ---1628

D23: OILS; FATS; WAXES

THAL ★ D23 33377B/18 ★BE -873-079

Separator for dividing water from organic solvents - used in the extn. of vegetable oils

VEB SCHWERMASCH THALMANN 27.12.77-SU-559842

J01 (17.04.79) B01d

The separator comprises a tank with a conical base with internal decanting element and tubes for the introduction of the mixt. The decanting elements consist of a thin bed formed into a continuous spiral bonded on the outside by the wall of the tank and in the centre by the central pipe through which run the inlet and outlet pipes for the coolant.

The introduction of the separator into existing installations guarantees an increase by 3 or 4 fold of the productivity without increasing the principal dimensions of the installation and improves the efficiency of purificn. almost threefold with a constant productivity. 27.12.78 as 873079 (17pp1330)

HENK D23 31080T/20 =DS 2053-257

Fatty acid ester separation - into components of different melting points by modified hydrophilisation process

HENKEL KG AUF AKTIEN 30.10.70-DT-053257

*(26.04.79) *DT2053-257 C07c-67/48 C11b-03*

In an improved form of the continuous process for the separation of fatty acid ester mixtures, and esp. of triglyceride mixtures, the constituents of which have differing melting points, the conventional "re-wetting" technique is used. The starting mixture is converted into a dispersion of fluid and solid particles in an aqueous solution of a wetting agent, which may contain a non-surfactant electrolyte.

After centrifuging to divide the dispersion into a light fluid phase and a heavy phase, the solid particles are separated from the wetting agent solution. More than 10-70 wt.% of the wetting agent solution is drained away and replaced by water, wetting agent and possibly, electrolyte solution, before this is returned to the process. 30.10.70 as 053257 (11pp1045)

RAUW- ★ D23 33571B/18 ★DT 2747-765

Fat rich in 1,3-di:palmitoyl-2-oleoyl-glycerol - used as cocoa butter substitute, prepd. by palm oil crystallisation comprising solvent treatment

RAUW LEBENSMITTELW 25.10.77-DT-747765

B07 (B05 D13) (26.04.79) A23d-05 C11b-07

Fat having a high content of 1, 3-di-palmitoyl-2-oleyl-glycerol, (I), is prepd. by (a) crystallising a fat fraction having m. pt. >45°C from palm oils at 17-35°C, (b) sepg. the crystals formed, as a 1st crystal fraction, from the oil fraction, (c) crystallising the oil fraction at 10-25°C, (d) filtering off the crystals formed, as 2nd crystal fraction,(e) treating thses crystals with up to 8x their wt. of organic solvent at -5 to +15°C and (f) sepg. the crystals formed, as 3rd crystal fraction, rich in (I).

The (I)-rich fats are used as cocoa butter substitute fats in chocolate- and pharmaceutical industry. The oil residues from 2nd and 3rd crystal fractions can be used as edible oils. Palm oil contg. 30% (I) can be enriched to a 54-80 (60)% (I) concn. Organic solvent is needed only in last step, thereby saving solvent and reducing costs for providing a large plant protected against explosion. 25.10.77 as 747765 (12pp200)

BADI D23 26274B/14 =EP ---1-553

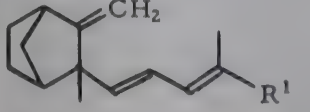
Substd. pentadienyl-bi:cycloheptane derivs. used as perfumes - are prepd. by reacting methylene-methyl-formyl bi:cycloheptane with a phosphorylide by Wittig reaction

BASF AG 20.09.77-DT-742185

*E15 (02.05.79) *DT2742-185 C07c-13/40 C07c-33/05 C07c-47/45 C07c-69/74 C07c-121/48 C11b-09*

D/S: E(CH, DT, FR, GB, NL).

(A) Bicycloheptane derivs. of formula (I) are new

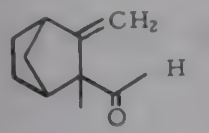


(I)

(where R^1 is -CH_2OH, -CHO, -COOMe, -COOEt, -CN or Me).

(B) 2-Methylene-3-methyl-3-formyl-bicyclo- [2,2,1]-

heptane of formula (II) is also new



(II)

(I) can be used as fully synthetic perfumes and have interesting organoleptic properties. E.g. (I; R^1 is -CH_2OH) has a balmy, woody, mild odour. (I; R^1 is Me), has a pleasant woody note. (II) is an intermediate for (I). 15.9.78 as 100895 (20pp200).

(G) ISR: ——

POLA D23 23317A/13 =GB 1545-171

Tri:methyl and di:methyl cyclo:hexene nitrile perfumery cpds. - prepd. from acrylonitrile or crotononitrile and 2 methyl 1,3-pentadiene

POLAK'S FRUTAL WORKS INC 26.10.76-US-735571

*E15 (02.05.79) *BE-858-818 A61k-07/46 C07c-121/48*

A perfume compsn. contains ≥1 of 2,4-dimethyl cyclohexene-3-nitrile, 3,5-dimethyl cyclohexene-3-nitrile, 3,5,6-trimethyl 2,4,6-trimethyl cyclohexene-3-nitrile and 3,5,6-trimethyl cyclohexene-3-nitrile, and a suitable carrier. Pref. the cpd. is present in an amt. of 0.01-6 wt.% of perfume. Prepn. is by Diels-Alder reactions using 2-methyl 1,3-pentadiene and either crotonitrile to produce the 2,4,6- and 3,5,6-derivs., or acrylonitrile.

Isomers or blends of the prod. can be used as perfumes having woody, cinnamic notes. Cpds. have a high degree of stability to acid or basic conditions, and to oxidative and thermal effects. 25.10.77 as 044329 (4pp931)

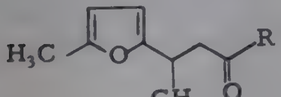
TAKS ★ D23 34354B/18 ★J5 4039-069

2-Methyl-furan derivs. - useful as flavours or aromas in creams, soaps etc.

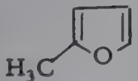
TAKASAGO PERFUMERY KK 30.08.77-JA-103219

E13 (D21 D25) (24.03.79) A61k-07/46 C07d-307/46

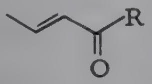
New 2-methylfuran derivs. are of formula (I), (R is methyl or ethyl):



(I)



(II)



(III)

(I) are rich in flavour. In partic., 3-(5-methyl-2-furyl)-pentan-2-one (R = methyl) has a flavour of methyl cinnamate and 5-(5-methyl-2-furyl)hexan-3-one (R = ethyl) has a flavour of rose and honey-like sweetness. Thus, they are useful as 'flavour' or 'aroma' for cream, soap, detergent, shampoo, etc.

(I) are prepd. by the addn. reaction between 2-methylfuran (II) and 3-penten-2-one or 4-hexen-3-one (III) in the presence of conc. H_2SO_4. 30.8.77 as 103219 (2pp140)

KHFA= ★ D23 34783B/18 ★SU -611-924

Distillation unit for treatment of fats - has chambers with perforated partitions set above the bottom

KHARK FAT PRODN COM (HOUS=) 09.02.76-SU-324021

(01.06.78) B01d-03/16 C11b-03/14

Increased contact area between liquid and steam and coolant in the unit for distillative neutralisation or deodorising of fats improves the process efficiency. The steam is distributed by the perforated vertical ring wall held in the inner zone of the chamber and featuring a bottom curved and perforated part. The latter acts as the chamber bottom while the fat overflow is controlled by a ring wall set between the inner wall of the chamber and the perforated wall.

Lozheshnik, V.K., Plekhno, I.D., Lozheshnik, G.N. et al. Bul. 23/25.6.78. 9.2.76. as 324021 (3pp89)

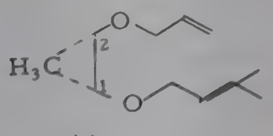
FIRM D23 88086A/49 =US 4150-000

Bis:allylic ether(s) of propylene glycol - useful as perfume ingredients (NL 20.11.78)

FIRMENICH SA 16.05.77-CH-006054

*E17 (17.04.79) *DT2821-011 A61k-07/46 C11b-09*

New allyl ethers of formula (I) are prepd. is bound to the carbon atom of the main chain in position 1 or 2, as 1-[3'-methyl-but-2'-en-1'-oxy]-2-[prop-2'-en-1'-oxy]-propane and 1-[prop-2'-en-'1'oxy]-2-[3'-methyl-but-2'-en-1'-oxy]-propane.



(I)

Compsn. is used for modifying, enhancing or improving the odour properties of perfumes and perfume bases, by adding a cpd. of formula (I), pref. in amt. 1-20 wt.% w.r.t. total compsn.

Cpds. have a natural fugacious scent of green, slightly flowery-aromatic character. Can be incorporated into technical prods such as soaps, detergents, air fresheners as well as beauty creams, talcs, deodorisers and shampoos. 5.5.78 as 903244 (2pp931)

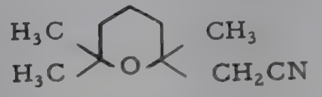
ANIS D23 76212X/41 =US 4150-037

Cyanomethyl-substd tetrahydropyran- or -furane derivs - useful perfumes for detergent compsns (BE270976)

ANIC SPA 27.11.75-IT-029726 (27.03.75-IT-021724)

*E13 (17.04.79) *DT2612-749 C07d-309/04*

2,6,6-Trimethyl-2-cyanomethyl tetrahydropyran of formula (I) is new. (I) may be prepd. by cyclisation of 3,7-dimethyl-3-hydroxy-6-octenenitrile in toluene in the presence of a cationic ion-exchange resin, esp. a sulphonic resin, as catalyst. Reaction is carried out at the b.pt. of the nitrile/toluene mixt. (about 111°C).



(I)

(I) has odoriferous properties and good stability to alkalies. It is useful as a perfuming agent in detergent formulations. 23.6.78 as 918445 (+26.3.76-US-670728) (6pp927)

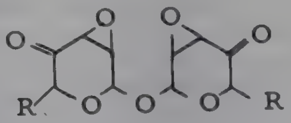
SAKB D23 72549Y/41 =US 4150-039

Bis-epoxy-tetrahydropyranone ethers - useful as bactericides, fungicides and intermediates for hydroxy-pyranones

OTSUKA KAGAKU YAKUHIN 15.06.76-JA-070819

*B03 C02 E13 +P34 (17.04.79) *BE-855-649 +C07d-309/10*

2,2'-bis(3,4-Epoxy-5-oxotetrahydropyran)ethers of formu (I) (where R is H or straight-chain or branched-chain 1-6 alkyl) are new.



(I)

(I) act to inhibit or prevent the growth of bacteria, yeasts, etc. when heated with acid catalyst, (I) give 3-ox -4H-pyran-4-one or alkyl derivs. Useful as flavoring agents. 24.5.77 as 800032 (3pp)

CALG D23 85970A/47 =US 4150-04

Magnesium oxide-impregnated activated carbon mfr. - by admixin activated carbon with magnesium salt soln., drying, admixing wi sodium hydroxide soln. and calcining

CALGON CORP (MERI) 22.03.77-US-779954 (24.04.78-U 898742)

*E36 J01 (E33) (17.04.79) *US4125-482 +C11b-03/04*

Prepn. of a refined edible vegetable oil comprises (a) de umming a crude vegetable oil; (b) passing the degummed vegetable oil through a bed of granular activated carbon impregnated with 1-15 wt.% MgO; and (c) subjecting the treated vegetable oil to steam distillation at reduced pre ssure.

The method provides a straightforward and efficient means for the prodn. of edible vegetable oils, and is app icable to e.g. soybean oil, corn oil, peanut oil, etc. Th parent patent claims the mfr. of the MgO-contg. activat carbon. 24.4.78 as 898742 Div. ex. 4125482 (9pp918)

See Also

D13 EP ---1660 D13 NL 7711393

D24 : SOAP ; SOAP DETERGENTS

VIDA/ ★ D24 B/18 ★BR 7706-286
Coloured soap mfr. - produces separate primary and secondary columns combined in set proportions
VIDAL A M C 21.09.77-BR-006286
(D21) (17.04.79) C11d-13/18

D25 : OTHER DETERGENTS

UNIL ★ D25 33336B/18 ★BE -871-575
Stain removing compsn. esp. for use in cold rinse - contg. complex of poly:carboxylic acid and polyoxyalkylene nonionic cpd.
UNILEVER NV 26.10.77-GB-044580
A97 (A14 A25) (26.04.79) C11d

The compsn. comprises an aq. soln. of acid pH contg. 0.1-10% of a dissolved complex of a water-soluble polycarboxylic polymer and 0.1-1.2 mol. equiv. of a nonionic polyoxyalkylene detergent cpd. per carboxy radical of the polymer, also sufficient of an insolubilising cationic organic cpd. to ppte. the complex when the aq. soln. is diluted with water at 20 °C and pH 6-8 to a 0.005% polymer concn.

The polymer has a water solubility at pH 4 and 20 °C of $\geqslant$1%. The compsn. is prepd. by forming the complex in aq. soln. and dispersing the cationic cpd. before or after forming the complex. The compsn. is diluted to a 0.001-0.1% polymer concn. which is used to rinse clothes fabrics etc. followed by drying.

The compsn. removes hydrophobic liq. and solid stains from different surfaces and it can be applied in a cold rinse. 26.10.78 as 871575 (16pp597)

DEGS ★ D25 33354B/18 ★BE -871-633
Stabilisation of sodium percarbonate particles against moisture - by adding water mixing with silicic acid and drying
DEUTSCHE GOLD & SILBER 31.10.77-DT-748783
E34 (27.04.79) C01b

Sodium percarbonate contg. 1-10 wt.% water is mixed with highly dispersed silicic acid, then dried. The mean particle size of the silicic acid is pref. 2-100, partic. 7-20 mu. This yields sodium percarbonate particles coated with sodium silicate.

Sodium percarbonate is very unstable in the presence of moisture, and so cannot be used in untreated form in detergent compsns. The invention provides a way of giving sodium percarbaonte a coating contg. silicic acid which is simple to perform. The resultatn particles are stable to storage in a moist atmosphere. 27.10.78 as 871633 (8pp)

UNIL ★ D25 33373B/18 ★BE -871-714
Fabric softener compsn. - contg. complex of quaternary ammonium salt with one long chain and anionic surfactant
UNILEVER NV 31.10.77-GB-045254
E19 (30.04.79) C11d D06m

A dispersion in an isotropic aq. medium contains a cation (A) complexed with an anion (B). (A) is derived from a quat. ammonium salt which is a softening agent, and has a m.pt. $<$ 95°C. It contains one 12-24C straight chain aliphatic hydrocarbon radical, and forms a chloride with a Krafft point in water of $<$95°C. (B) is derived from an anionic surfactant contg. a 12-24C straight chain aliphatic hydrocarbon radical.

The ratio of normalities of (A) to (B) lies between 1.1:1 and 5:1. (A) and (B) together make up 2-15 wt.% of the compsn., which has a cloud point $>$ 95°C.

The compsn. is used as a fabric softener, which can be added during rinsing and after washing. Cationic surfactants contg. only one long hydrocarbon chain are more soluble than those contg. two, but suffer from the disadvantages of high aqueous viscosities, or phase separation. These problems are avoided by complexing with an anionic surfactant in the defined ratio. 31.10.78 as 871714 (25pp1331)

RHON ★ D25 33374B/18 ★BE -871-715
Anti-soil and anti-redeposition detergent compsn. - partic. for polyester, contains hydrophilic polymer with solubiliser and water-repellent
RHONE-POULENC INDUSTRIES 02.11.77-FR-033486
A97 (A23 A25) (30.04.79) C11d D06l

The compsn. contains: a polymer (A) having anti-soil and anti-redeposition properties; a solubilsing and dispersing agent (B) for this polymer; and a water-repellent (C). (A) can be a hydrophilie polyurethane, a copolyester, or a mixt. of these.

If (A) is a polyurethane, it can be prepd. by reacting 10-70 wt.% of a polyester, based on an acid value of $<$ 3 mg KOH/g and OH value $\leqslant$ 375 mg KOH/g, with 90-30 wt.% of a prepolymer with terminal isocyanate gps. obtd. by reaction of at least one nonionic hydrophilic macrodiol with at least one diisocyanate, the NCO/OH ratio being 0.8-1. If (A) is a copolyester, it can have repeat units of alkylene, pref. ethylene, terephthalate and polyoxyalkylene pref. polyoxyethylene terephthalate.

The compsn. can be incorporated in detergent compsns. for textiles, partic. for articles contg. polyester fibres, which are difficult to clean. 31.10.78 as 871715 (42pp1331)

GIUL ★ D25 33490B/18 ★DT 2746-844
Hydrothermal prodn. of zeolite with low iron content - from inexpensive raw and waste materials by pptn. in presence of complexing agent, pref. tri:ethanolamine
GIULINI CHEMIE GMBH 19.10.77-DT-746844
E33 (26.04.79) C01b-33/26

In the hydrothermal prodn. of zeolites low in Fe from starting materials contg. Al_2O_3, SiO_2 and alkali oxide, the zeolite is pptd. in the presence of a complexing agent, pref. triethanolamine (I) in an amt. of 0.25-0.75, esp. 0.45-0.55 wt.% w.r.t. the dry zeolite.

The process is esp. useful for the prodn. of type A zeolites from relatively cheap raw and waste materials, without the need for costly measures. The prods are suitable for use in detergents without the need for additional stabilisation of the peroxide component (preborate). 19.10.77 as 746844 (7pp016)

PQCO- ★ D25 33607B/18 ★DT 2843-709
Non-agglomerating detergent mixts. for laundering - contain hydrophilic silane-zeolite builder consisting of silane, water and crystalline sodium aluminosilicate
PQ-CORP 14.10.77-US-842425
E33 (26.04.79) C11d-01/22 C11d-03/12

Detergent mixt. consists, by wt., of (a) 8-30% organic anionic, nonionic, ampholytic and/or zwitterionic surfactant(s), (b) 5-60% hydrophilic silane-zeolite builder consisting of 0.05-3.35% hydrophilic silane, 15-33% water, balance, to 100%, crystalline Na aluminosilicate, (c) 8-25% soluble silicate solids, (d) 0-2% substance inhibiting the re-deposition of dirt, (e) 0.0.5% standard detergent additives and (f) fillers and moisture, to 100%.

The mixts. can be used as heavy duty laundry detergents. The addn. of silane- zeolite builder, as replacement for phosphates, allows presence of high silicate contents, without agglomeration during processing, storage or use. 6.10.78 as 843709 (22pp200)

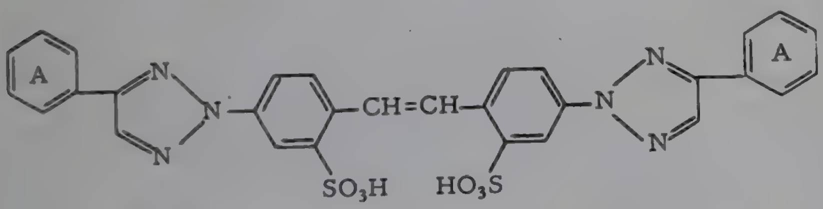
GOOR ★ D25 33695B/18 ★EP ---1-561
Water-soluble carboxylic polymer-phosphorous acid reaction prods. - used e.g. as scale inhibitors, in detergents and selective flocculants (BR 17.4.79)
GOODRICH B F CO 03.05.78-US-902326
A14 C03 (A26 A97 D15) (02.05.79) C02b-05/06 C08f-08/40 C08f-220/06
D/S: E(BE,DT,FR,GB,NL,SW).

A novel reaction product is prepd. from a water soluble carboxyl contg. polymer of m,wt. 400-10000 and phosphorus acid or precursors in a mole ratio of titratable carboxyl gps. in the polymer to phosphorous acid of 10:1 to 1:1.

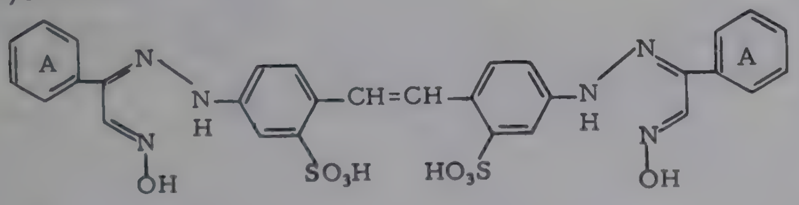
The products are used in water treatment e.g. to inhibit the nuclei growth of $CaSO_4$ scale, in detergents, agricultural applications, complexing trace elements, agricultural micronutrients, soil stabilisers, selective flocculants, stabilisation of peroxides against metal ion catalysed decomposition, electroplating baths, soaps and cosmetics.
20.9.78 as 100943 (22pp966).
(E) ISR: US3890228.

FARB D25 49880A/28 =EP ---1-582
Optically-brightening bis:triazolyl stilbene(s) prodn. - in high yields and purity of cyclisation of bis:oximino-hydrazono-stilbene(s)
BAYER AG 13.10.77-DT-746000
*E23 F06 (02.05.79) *DS2746-000 C07d-249/06 +D06l-03/12*
D/S: E(CH, DT, FR, GB).

Bis-triazolyl-stilbene cpds. having, as the free acids, formula (I)



(where the Ph gps. A may be substd. by halogen, 1-4C alkyl, or 1-4C alkoxy) are prepd. by reacting bis-oximino-hydrazone-stilbene cpds. having formula (II):



with lower carboxylic acid anhydrides, in the presence of urea and polar solvents, at 10-60 (25-45)°C.

(I) and its alkali salts are optical brighteners and whiteners for textiles and detergents.

Over 90%-pure (I) can be obtd. in high yields, e.g. > 80%, on an industrial scale.
30.9.78 as 101043 (14pp200).
(G) ISR: DT2423091; DT1670914; DT2242784; DT2254300; DT2338881; DT2210261.

SHEL D25 15880B/08 =EP ---1-651
Acid catalysed alkylene glycol alkylation with olefin - using liq. sulphur di:oxide as solvent, giving mono:ether cpds. useful as detergents
SHELL INT RES MIJ BV 03.10.77-US-838506
*E17 (02.05.79) *US4139-566 C07c-41/06 +C07c-43/10*
D/S: E(DT, FR, GB, NL).

(Poly)alkylene glycol monoalkyl ethers are prepd. by reacting at least one olefin with at least one (poly)alkylene glycol at 20-250°C. in the presence of an acid catalyst and sulphur dioxide as solvent.

The SO_2 improves the conversion of the olefin and enhances the selectivity to the desired ether, which may be a detergent or intermediate in its prepn. The (poly) alkylene glycol selectively adds cleanly to the olefin without polymerizing to higher glycols.
25.9.78 as 200207 (14pp558)
(E) ISR: US3431308; NL6401246; 2 Journal References.

FARH D25 26933A/15 =GB 1545-193
Mixed orthophosphate ester(s) prepn. - from phosphorus pentoxide, alcohol and poly:ol in defined ratio
HOECHST AG 07.10.76-DT-645211
*E11 H07 M12 (02.05.79) *BE-859-433 C07f-09/09*
Mixts. of acid orthophosphate esters are made by reacting P(V) oxide with an alcoholic component by mixing or kneading the oxide with a blend of or contg. a monohydric alcohol and 2-12C (cyclo)aliphatic polyol with 2-6(n)OH gps. at a molar ratio of 1: ≥ 2: ≥ 4/n.

The reaction is at 0-120°C with the exclusion of moisture, in the presence of an inert gas and over 1-6 hrs. The reaction prod. is cooled after this time.

Process avoids difficulties of sepg. prods. from aq. solns. 3.10.77 as 040976 (7pp974)

PROC ★ D25 B/18 ★J5 4039-390
Peroxy acid bleaching composition
PROCTER & GAMBLE CO 03.06.77-US-803107
E37 (26.03.79)
30.5.78 as 064876

SHIV ★ D25 34434B/18 ★J5 4039-407
Cleaning compsn. e.g. for household baths - comprises surfactants and alkylene oxide adduct of aliphatic higher alcohol
NEW JAPAN CHEM 02.09.77-JA-105987
E19 (26.03.79) C11d-03/20
Cleaning compsn. for bathrooms, baths, washing machine etc. consists of several kinds of surfactants, and alkylene oxide adduct of aliphatic higher alcohol having iodine valu 20-80.

The compsn. has superior bath scum removability. Th amt. of the cleaning compsn. used is small. Pref. aliphatic alcohol is unsatd. higher alcohol prepd. from natural animal or vegetable oil by reducing with metallic Na, by hydrolysis, or by the selective hydrogenation. Other unsatd. higher alcohols, or a mixt. of the alcohols, are also usable when the iodine value is adjusted to 20-80. Pref. alkylene oxide is ethylene oxide, propylene oxide, or butylene oxide. Pref. adduct is an adduct of the alkyle oxide to the unsatd. higher alcohol having >11 HLB. The amt. of adduct is pref. >2 wt.% based on the amt. of the base surfactant. 2.9.77 as 105987 (3pp126)

KAWA- ★ D25 34435B/18 ★J5 4039-40
Solid detergent compsn. with good lathering properties - contain N-long chain acyl acidic aminoacid salt and N-long chain açyl imin di:basic acid and/or its salt
KAWAKEN FINE CHEMIC 05.09.77-JA-106422
E19 (26.03.79) C11d-01/37
Solid detergent contains a base material consisting of ≥ salt of a N-long-chain acyl acidic aminoacid, and a modi er consisting of a N-long chain acyl imino dibasic acid a or its salt.

Pref. the acyl residue of the N-long chain acyl acidic aminoacid is a 8-22C (un)satd. fatty acid residue, and th acidic aminoacid salt is pref. aspartic acid salt, glutam acid salt, cysteic acid salt, or homocysteic acid salt. Pref. the salt is alkali metal salt, ammonium salt, wate sol. amine salt, or basic aminoacid salt.

Pref. the N-long chain acyl imino dibasic acid (salt) are of formula $RCON(R_1COOM)(R_2COOM')$, (where RCO is 8-22C (un)satd. fatty acid residue; R_1 and R_2 are each 1-3C alkylene and M and M' are each H, alkali metal atoms, ammonium gp., cationic residue of alkanolamine, cationic residue of basic aminoacid). Pref. the dibasic ac is diacetic acid, dipropionic acid or -3:3'-iminodibutyri acid. Pref. the amt. of the N-long chain acyl imino diba ic acid and/or the salt is 1-40 wt.% based on the amt. o the solid detergent.

The solid detergent has improved lathering property, smooth lathers, improved resistance to crumbling by dis solution, etc. It gives a soft and gentle feeling to the ski after washing. It is less irritative to the skin. 5.9.77 a 106422 (5pp126)

PROC ★ D25 B/18 ★J5 4039-411
Washing detergent composition - excellent in removal of granular stains
PROCTER & GAMBLE CO 26.06.78-US-919341 (29.06.77-US-811221)
(26.03.79)
29.6.78 as 079226 (+17.11.77-US-852428)

PROC ★ D25 B/18 ★J5 4039-413
Washing detergent compsn. - with excellent cleaning and fabric handling properties
PROCTER & GAMBLE CO 26.06.78-US-919344 (29.06.77-US-811218)
(26.03.79)
29.6.78 as 079229

PROC ★ D25 B/18 ★J5 4039-414
Detergent composition - with excellent granular strain removing properties and anti-re-soiling properties
PROCTER & GAMBLE CO 26.06.78-US-919340 (29.06.77-US-811419)
(26.03.79)
29.6.78 as 079230

COLG D25 56931S/35 =J7 9007-804
Clear liquid detergent composns
COLGATE PALMOLIVE CO 09.11.70-FR-040196 (09.03.70-FR-008310)
*(10.04.79) *BE-763-311 C11d-01/12*

Clear liquid detergent compsn. consists of(A) hydrosoluble sulphonated paraffins, (B) - higher hydrosoluble alkyl ether sulphates so that ratio A:B is 10:1-1:1, and (C) - a system for adjusting the viscosity and transparency of the detergent.

Pref. compsn. is 20-35 wt.% sodium sulphonate of a 13-18C paraffin 6-15 wt.% of a mixture contg. an 12-15C alcohol and $(NH_4)_2SO_4$ in the ratio 3:1, 0-6 wt.% of lauric and myristic acid monoethanolamides, 0.5-5 wt.% urea and 2-10% ethanol. 9.3.71 as 012247 (clg. 9.3.70; 9.11.70-FR-008310; 040196) C11d-1/12 (10.4.79) COLGATE-PALMOLIVE CO. (6pp) (J46002331)

DICK/ ★ D25 35104B/18 ★US 4149-986
Long lasting toilet bowl cleaner - contg. sodium sulphate, urea, nonionic surfactant, sodium stearate and dye
DICKSON D J 03.11.77-US-848108
A97 E19 (E34) (17.04.79) C11d-03/04 C11d-07/10 C11d-09/30

Toilet bowl cleaner comprises (by wt.) 50-60 (55)% Na_2SO_4; 17-24 (23)% urea; 8-20 (10)% nonionic prim. alcohol ethoxylate surfactant (I); 8-11 (10)% moisture; 0.25-2 (0.4)% Na stearate and 1-2 (1.3)% water-sol. dye. The compsn. pref. also contains minor amts. of silicone and methyl salicylate.

The compsn. has a longer life than known compsns. since, because the density is greater, 13 ounces can be accommodated in a standard 9 ounce container. The proportion of expensive (I) can be reduced without loss of cleaning effect and since liq. rather than waxy (I) are pref. mfg. time and energy costs are lower. 3.11.77 as 848108 (3pp1251)

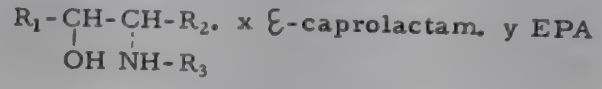
UNIL ★ D25 35109B/18 ★US 4150-001
Detergent bar contg. alkaline earth metal hydrogen orthophosphate and sodium alkaline silicate to reduce sogginess
LEVER BROTHERS CO 26.05.77-US-800773
E33 (E12 E34) (17.04.79) C11d-03/06 C11d-17

Detergent bar comprises (by wt.) 15-65% active detergent components; 5-60% builder; 1-40% $XHPO_4$ (X=Ca and/or Mg), 5-30% Na alkaline silicate and the remainder conventional detergent ingredients. Pref. $XHPO_4$ is $\geqslant$ 5% and he active detergent is a water-sol. salt of a 8-20C linear alkyl benzene sulphonate.

Addition of $XHPO_4$ reduces sogginess during use and storage, and reduces the time necessary between mixing and stamping to, e.g. Y_2 hr. The silicate assists $XHPO_4$ in providing a bar of improved hardness and reduces sogginess. 26.5.77 as 800773 (4pp1251)

HENK D25 57076A/32 =US 4150-024
Detergent compsns. esp. for cold-washing textiles - contain surfactant(s) and opt. oxyalkylated reaction prods. of epsilon-caprolactam and vicinal hydroxyalkyl-amine
HENKEL KG AUF AKTIEN 02.02.77-OE-000666 (17.12.76-DT-657193)
*E13 P34 (17.04.79) *DT2752-658 C07d-223/10*

Reaction prods. of ε-caprolactam with vicinal hydroxyalkylamines and possible adducts with epoxyalkanes have formula:



$$R_1-\underset{OH}{CH}-\underset{NH-R_3}{CH}-R_2.\ x\ \varepsilon\text{-caprolactam.}\ y\ EPA$$

(where R_1 and R_2 are H or 1-16C alkyl provided that the sum of the carbon atoms in R_1 and R_2 is from 6 to 30 when R_1 and R_2 are alkyl and from 6 to 16 when R_1 or R_2 is H. R_3 is H, 1-5C alkyl and $(CH_2)_m-NR_4R_5$ where m is an integer from 2-10, and R_4 and R_5 are H and 1-3C alkyl. EPA is an epoxide selected from ethylene oxide, propylene oxide and glycide, x is 1-5 and y is 0-5. The reaction prods. and their salts are useful as antimicrobials in the treatment of aq. media and in detergents together with other surface-active cpds. 14.12.77 as 860552 (16pp)

MONS ★ D25 35139B/18 ★US 4150-069
Phosphato-substd. di:carboxylic acid salts - useful as detergent builder, and their phosphoro di:chloridate ester precursors
MONSANTO CO 16.12.77-US-861477
E11 (17.04.79) C07f-09/14

Dicarboxylic acid derivs. of formula $R-C(COOM)_2-O-P(O)(R')_2$ (I) are new. In (I) R is H or 1-4C alkyl; R' is OB or halo; B is alkali metal, NH_4 or 1-20C trialkanolammonium. M is B or 1-20, esp. 1-4C alkyl.

The salts are compatible with chlorine bleaches and superior to prior art cpds, such as Na_4 phosphomalate. 16.12.77 as 861477 (4pp1251)

PQCO- ★ D25 35159B/18 ★US 4150-100
Prepn. of zeolite NaA with a short crystallisation time - from single-phase, high viscosity aluminosilicate gel having specific compsn. and temp.; used as detergent builder
PQ CORP 13.06.78-US-915327
E33 (17.04.79) C01b-33/28

Zeolite, NaA is obtd. by (a) forming Na aluminate and Na silicate solns. such that on combining equal amts. of alumino silicate gel is formed having a mol. ratio 1.00 ± 0.02 Al_2O_3:1.80 ± 0.20 SiO_2: 2.90 ± 0.90 Na_2O : 45.0 ± 15.0 H_2O, the gel temp. being 65°±2°C, (b) placing a vol. of the Na aluminate soln. in a high shear mixing vessel, (c) adding an equal amt. of the Na silicate soln. in $<$ 2 mins., (d) intensively mixing during the addn. and for 7-25 mins. afterwards to reduce any initial immobile gel to a fluid gel within 5 secs., the final gel being single-phase, having density 1.23-1.29, viscosity $>$ 2000 cps., and a 'centrifuged solids' vol. of 89-90% (e) heating the gel to 97°C, (f) holding at 95°±2°C for a time (in mins) given by the expression: time = 0.002369 (mol. ratio H_2O/Al_2O_3)$^{2.1}$ to form zeolite NaA as a slurry and (g) cooling, washing and drying.

Method requires less than half the time of prior art processes. 13.6.78 as 915327 (5pp314)

See Also

D23 J5 4039069

CPI INDEXES

ALERTING PATENTEE INDEX (II)

Weekly by section and overall, lists all current patents in patentee code order and, within a given patentee, in earliest priority date order. The first line gives patentee code, earliest priority date, patentee name, CPI classes and finally the current patent number. The second line gives the first part of the title, followed by the accession number.

```
EIGE/ 24.01.75  EIGENMANN L    A93  *DT 2602-948
    Bonding fluid for road marking strips - 60224X/32
EIGE/ 27.01.75  EIGENMANN L    A93 L02(A21)  *DT 2602-947
    Bonding fluid for road marking strips - 60223X/32
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Not in Basic Abstracts Journal

CPI CLASS INDEX (IV)

Weekly only. Headings are all the CPI classes within the section to which an Alerting Bulletin relates, arranged in numerical order. Posted under each class heading is a list, in country then patent number order, of all basic or equivalent documents referenced or cross-referenced under that heading.

```
    M22
*BE -836-489
*CA -987-881
=DS 1569-023
=DS 2245-330
*DS 2517-206
*DS 2519-679
=DS 2520-359
*DT 2450-918
*DT 2451-494
=DT 2451-607
```

In Country Alerting Bulletin only

BASIC NUMBER INDEX (V)

Weekly by section and overall, lists all entries by accession number. Each heading consists of the accession number in bold, followed by the CPI section letters. There then follows a list of all the family members, commencing with the basic and finishing with the current week's patent. For each family member the CPI week of issue is quoted, and a plus sign indicates that a multiple priority has been claimed.

```
09125-X ACDF
  US 3933-788   X05+
  CA -990-674   X26
09192-X BC
  US 3933-948   X05
  BE  -832-423  X10
  NL 7509-762   X10
  DT 2535-514   X11
  SW7509-042    X15
  NO7502-837    X16
  SF 7502-292   X19
  ZA 7504-766   X21
```

In all Editions

PATENT NUMBER INDEX (VII)

Weekly by section and overall. Lists left to right the patent type (* for basic, = for equivalent or # sign for non-convention equivalent or where the priority has been artificially "added" to the specification), patent number, accession number and CPI classes.

```
US 3963
#636 36477U  A97D15M14
*645 49861X  A41E19J04
=646 19776V  A41E19J04
=647 21100X  A17+R4
=650 06289S  A22
#651 24399W  A97K05L02M22
=652 73248V  A12
=653 70544V  A81G03
*654 49862X  A88H01Q4
*655 49863X  A81G03
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In all Editions

BASIC PATENTEE INDEX (X)

Weekly by section in BAJ only. Entries under any given patentee code heading are in earliest priority date order. The title, truncated to 105 characters, is followed by the accession number and current patent number. The last line of each entry consists of the patentee name, the priority details (earliest then latest if there is more than one) and finally the Derwent classes. This index is cumulated quarterly and annually by section as hard copy. Overall A—M cumulations of from a quarter up to 5 years are available as COM.

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CALI
Nitrile rubber smooth rolled sleeve for well impression packer - also contg
natural rubber, hydrated                              49862X/26  *US 3963-654
   CHEVRON RESEARCH CO 25.06.73-US-373341 +29.07.74-US-492377 A88 H01
Mica contg. plastified sulphur mixt - for coating walls and floors or solidifying
earth in dams                                         49433X/26  *DT 2554-327
   CHEVRON RESEARCH CO 03.12.74-US-529258 +13.11.75-US-631781 A82L02
CANA
Emulsifying agents of microbial origin - used esp. for oil spills, are made by
cultivating a species of                              48076X/26  *CA -990-668
   CANADIAN PAT & DEV LTD 31.08.72-US-285159 A97 D16 H03
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In Basic Abstracts Journal only

MANUAL CODE INDEX IN Basic Abstracts Journal only

At the start of each main group of codes, the manual code and its descriptor are printed in the middle of the column. Each sub-division of a manual code group appearing during the week is given, accompanied by its descriptor. All manual codes occurring during the week within each sub-division are then listed, with accession numbers posted against them.

In all there are about 3,600 manual codes in CPI, each one having an average of less than 200 documents assigned to it per year. The full classification is set out in the Manual Code Instruction Manual, which also contains a keyword index of terms for easy reference.

COUNTRY COVERAGE

"Major" Countries

Covered completely in CPI and WPI from the commencement of the service except: Research Disclosure 1978, Europe and PCT 1979, Sweden transferred from "Minor Countries" 1979. Average weekly numbers are listed alongside.

Fast publishing

Belgium	180	
Europe	150	
France	740	
Germany, W. unexamined	1050	
Japan unexamined	845*	
Netherlands unexamined	240	
PCT	40	
Research Disclosure	20	
South Africa	100	
Sweden	260	
United Kingdom unexamined	600	3325

Slow publishing

Canada	450	
Germany, E.	100	
Germany, W. examined	465	
Japan examined	340*	
Netherlands examined	60	
Soviet Union	1200	
Switzerland	260	
United Kingdom examined	300	
United States	1200	4375

*Only CPI coverage for Japan.

"Minor" Countries

Complete coverage, but only introduced during 1975, with exception of Italy 1978.

Fast publishing

Brazil	140	
Denmark	120	
Finland	60	
Norway	80	
Portugal	30	430

Slow publishing

Austria	125	
Czechoslvakia	180	
Hungary	35	
Israel	40	
Italy	155	
Rumania	25	560

MINOR AND MAJOR COUNTRIES

If the first publication of an invention takes place in one of the 'major' countries listed above, then this publication is called the basic patent, a WPI accession number is assigned, and this is used for all subsequent members of the family.

If, however, the first publication occurs in one of the 'minor' countries listed above, then the document is regarded as a provisional basic. No accession number is assigned, since an abstract is not provided. If this provisional basic is then followed by further family members also from 'minor' countries, these produce entries in the same indexes even though an accession number has still not been assigned.

However, as soon as a member of the family is published in one of the 'major' countries, then this is regarded as the first disclosure. An accession number is assigned, and will apply also to all the earlier members of the family (from the 'minor' countries). Hence it is possible to see, in Index V, entries where the basic has a later week number than some of its equivalents.

For CPI, if the first publication occurs in Sweden, South Africa or Japan — in the case of Non-Japanese nationals — then the document is treated as a provisional basic as outlined above. Other than for Japan where a heading is given, an Alerting abstract is included in CPI at this stage.

Subsequently, when a documentation abstract is available an accession number is assigned to the document and the abstract published in the BAJ and related products. Headings will be included in the Alerting Bulletins for Sweden and South Africa together with abstracts for the Japanese at this later stage.

Entries are included in WPI Gazettes at both stages. At the later stage both a basic and an equivalent heading will be given for each such patent number.

COUNTRY CODES

For patent number (not priority) purposes, DS distinguishes accepted West German specifications (DAS) from the unexamined applications (OLS) which are given the normal DT code. in the case of Japan J5 represents the unexamined applications, and J7 the examined of the present series.

Argentina	AR	Luxembourg	LU
Australia	AU	Malawi	MW
Austria	OE	Mexico	MX
Belgium	BE	Monaco	MC
Brazil	BR	Netherlands	NL
Bulgaria	BG	New Zealand	NZ
Canada	CA	Norway	NO
Chile	CE	Pakistan	PK
Colombia	CO	PCT	WP
Czechoslovakia	CS	Philippines	RP
Denmark	DK	Poland	PO
Europe	EP	Portugal	PT
Finland	SF	Rhodesia	RH
France	FR	Rumania	RU
Germany, East	DL	South Africa	ZA
Germany, West	DS	South Korea	KS
Germany, West	DT	Spain	ES
Greece	GR	Sudan	SD
Hungary	HU	Sweden	SW
Iceland	IS	Switzerland	CH
India	IN	Syria	SR
Ireland	EI	Trinidad	TD
Israel	IL	Turkey	TR
Italy	IT	Untd. Kingdom	GB
Japan	JA	U.S.A.	US
Japan, unex.	J5	U.S.S.R.	SU
Japan, ex.	J7	Yugoslavia	YU

*AAZP= 23.06.76 AS AZERB PETROCHEM D15 *SU -611-892
Hard waste water contg. petroleum and metal ions purificn. - 34758B/18

*AAZP= 23.06.76 AS AZERB PHYS INST D15 *SU -611-892
Hard waste water contg. petroleum and metal ions purificn. - 34758B/18

ABBO 19.10.77 ABBOTT LABORATORIES A60 C02 D22 E13 =DT 2845-408
Bactericidal and fungicidal 2-methyl-1-naphthyl maleimide - 19938B/10

AGEN 11.01.74 AGENCY OF IND SCI TECH D17 (D16) =SU -611-596
Enzymatic prodn. of maltose - 49706W/30

*AGEN 29.08.77 AGENCY OF IND SCI TECH D15 E36 *J5 4037-367
Removing phosphate ion from waste water - 34049B/18

AIRL 25.04.77 AIR LIQUIDE L' D13 =ZA 7802-165
Rapidly freezing liq. and pasty foods to form granules - 74428A/42

AIRP 25.07.77 AIR PRODUCTS & CHEM INC C03 D16 (C04 D13) =FR 2398-700
Biomass with high phosphorus and nitrogen content - 14434B/08

AJIN 10.08.77 AJINOMOTO KK B02 C02 D16 =GB 2006-185
Purine arabinoside(s) enzymatic prodn. - 16275B/09

*AJIN 30.08.77 AJINOMOTO KK B04 D16 *J5 4037-888
Pullulan prepn. by cultivating aureobasidium genus bacteria - 34112B/18

*AJIN 30.08.77 AJINOMOTO KK D16 (D17) *J5 4037-889
Fermentative prodn. of polysaccharide(s) - 34113B/18

*AJIN 31.08.77 AJINOMOTO KK A96 D21 (A25) *J5 4037-839
Non-irritant cosmetic for treating hair - 34095B/18

*AJIN 31.08.77 AJINOMOTO KK B05 D16 E16 *J5 4037-886
L-threonine prodn. by fermentation - 34110B/18

*AKIY/ 29.08.77 AKIYAMA T D22 E36 J01 *J5 4037-086
Purification of air - 33952B/18

*ALBE/ 17.10.77 ALBERSMEYER W D15 *DT 2746-648
Liq. purificn. in contact beds - 33474B/18

ALBR 26.07.77 ALBRIGHT & WILSON LTD D25 =FR 2398-797
Conc. dilutable aq. surfactant compsn. - 14454B/08

ALBR 26.07.77 BUSH BOAKE ALLEN LT D16 =FR 2398-799
Isomerising hops extract to form iso-alpha-acids for beer - 08010B/05

ALBR 27.07.77 BUSH BOAKE ALLEN LT D16 =FR 2398-800
Isomerising hops extract to form iso-alpha-acids for beer - 08017B/05

ALTE- 12.10.77 ALTENBURGER MASCH KG C03 D15 (D13 D17) =NL 7711-211
Treatment of waste water from wheat starch prodn. plant - 31944B/17

AMCY 25.01.74 AMERICAN CYANAMID CO B03 C02 D13 =OE 7500-426
Cycloalkano/B/thienyl-urea derivs. - 52741W/32

AMCY 16.05.77 AMERICAN CYANAMID CO D22 =ZA 7802-038
Surgical suture package - 88071A/49

AMCY 23.05.77 AMERICAN CYANAMID CO A14 D15 =ZA 7802-073
Aq. acrylamide polymer gel purification - 89973A/50

AMCY 20.06.77 AMERICAN CYANAMID CO B04 C03 D16 =PT --68-148
Antibiotic BL 580 ZETA useful as anticoccidiosis agent - 00004B/01

AMLA= 22.01.74 AS MOLD APPL PHYS D14 (D16) =DS 2402-947
Vegetable juice extraction by electro-plasmolysis - 51156W/31

AMMX 23.03.77 AMAX INC D15 E13 M14 =US 4149-969
Corrosion-proofing of metal parts in water - 83280A/46

ANDE/ 14.09.77 ANDERSEN B C D12 =DK 7704-073
Poultry liver and heart separation - 24224B/13

ANIS 27.03.75 ANIC SPA D23 E13 =US 4150-037
Cyanomethyl-substd tetrahydropyran- or -furane derivs - 76212X/41

*AOKI/ 29.08.77 AOKI S D13 *J5 4037-896
Enhancing flavour of soybean paste - 34116B/18

*AQUA- 27.10.77 AQUARIUM PHARM INC C03 D13 *US 4150-162
Timed release fish feeding block mfr. for use in aquariums - 35182B/18

*ARVE 26.10.77 ARVEY CORP D22 *BE -871-543
Disposable sterilisable pouch esp. for medical supplies and equipment - 33329B/18

ASAH- 22.09.77 ASAHIMATSU KORIDOFU D14 =GB 2006-047
Steam pressure cooking autoclave for soya beans etc. - 08060B/05

ASAO 02.06.76 ASAHI KOGAKU KOGYO D21 L02 =US 4149-894
Apatite bodies for use as bone or tooth prostheses - 88587Y/50

AURA/ 19.11.75 AURACHER W D22 =OE 7608-368
Cylindrical elastic bandage for limbs and joints - 21965Y/13

AUTO- 29.09.72 AUTOTROL CORP D15 =US RE29-970
Upgrading wastewater treatment plant - 75591W/45

AUTO- 14.11.73 AUTOTROL CORP D15 =US RE29-969
Biological degradation sewage treatment plant - 27500V/15

BADI 09.10.76 BASF AG C03 D13 E13 =OE 7707-167
Preservation agents for fodder and silage - 25183A/14

BADI 02.04.77 BASF AG D18 =OE 7802-302
Calcium oxide and sulphide free liming - 73034A/41

BADI 27.07.77 BASF AG A97 D25 =FR 2398-798
Cold bleaching activators for washing compsns. - 08009B/05

BADI 20.09.77 BASF AG D23 E15 =EP ---1-553
Substd. pentadienyl-bi:cycloheptane derivs. used as perfumes - 26274B/14

BADI 19.10.77 BASF WYANDOTTE CORP A25 D25 E17 (D21) #DT 2746-904
Nonionic surfactant with hydrophilic polyglycerol backbone - 43949A/24

BAKU/ 01.03.76 BAKUNTS G V D12 *SU -612-173
Sausage-meat products mechanical properties tester - 34866B/18

BANY 30.08.77 BANYU PHARM CO LTD B02 C02 D16 *J5 4037-887
7-2-Thienyl:acetamido cephalosporanic acid prodn. - 34111B/18

*BEAF 14.11.77 BEATRICE FOODS CO D13 *US 4150-163
Creamy confectionery contg. dried yoghurt powder - 35183B/18

*BECK/ 01.03.78 BECKER D J C03 D15 (D13) *DS 2808-703
Treatment of effluent waters contg. fats and proteins - 33446B/18

BEEC 20.04.74 BEECHAM GROUP LTD B02 C02 D16 =OE 7702-053
Clavulanic acid and derivs. - 72840W/44

BEGH- 20.10.75 BEGHIN-SAY SA A11 D22 F09 =OE 7607-634
Crosslinking cellulose with formaldehyde - 27116Y/16

BEGH- 25.07.77 BEGHIN-SAY D22 =FR 2398-468
Disposable nappies with integral elastic tie tapes - 72808A/41

BEHW 29.04.74 BEHRINGWERKE AG B04 D16 =US 4150-107
Schistosome antigens prodn. - 74341W/45

*BEHW 27.10.77 BEHRINGWERKE AG B04 D16 *BE -871-612
Stabilising meningococcal polysaccharide for use in vaccine - 33342B/18

BENC 21.12.76 BENCKISER J A GMBH D15 E15 =GB 1545-179
Compsn. for preventing lime deposition in aq. systems - 30297A/17

*BERT/ 20.09.77 DA SILVA BERTAO J D14 *BR 7706-277
Coffee, rice or wheat drying plant - B/18

BETT- 17.10.77 BETTCHER IND INC D12 =GB 2006-081
Hand-held trimming knife - 31907B/17

BETT- 17.10.77 BETTCHER IND INC D12 =NL 7810-369
Hand-held trimming knife - 31907B/17

BOEF 28.03.73 BOEHRINGER MANNHEIM GMBH B04 D16 =DS 2315-501
Cholesterol determination - 71173V/41

BOEF 16.11.76 BOEHRINGER MANNHEIM GMBH D15 =OE 7706-448
High vol. loading activated sludge plant for waste water purificn. - 36618A/21

*BOEF 26.10.77 BOEHRINGER MANNHEIM GMBH B04 D16 *BE -871-530
Maltose-phosphorylase and beta-phosphoglucomutase prodn. - 33326B/18

*BONG- 19.10.77 GROUPE BONGRAIN D13 *DT 2845-430
Hydrolysed conc. lactoserum for human nutrition - 33645B/18

BOOT 26.03.77 BOOTS CO LTD C01 D22 E12 F06 (F09) =ZA 7801-579
Fungicidal metal complexes of (N)-carbamoyl imidazole cpds. - 71158A/40

*BOSS/ 29.07.77 BOSSE J D11 *FR 2398-460
Baker's dough dividing machine with volumetric depositing cylinder - 33772B/18

*BOUL- 31.05.77 BOULIGNY R H INC D15 J03 *US 4149-953
Appts. for treating waste water - 35085B/18

*BRAD/ 21.09.78 BRADSHAW J C D18 E13 *US 4149-548
Cigarette substitute including two chemicals - 34992B/18

BRBL 22.10.77 BRAUNSCHWEIG MASCH C04 D15 H09 =DT 2747-506
Drying aq. sludge to mfr. fertiliser, solid fuel, pigments, etc. - 16030B/09

BRBL 22.10.77 BRAUNSCHWEIG MASCH C04 D15 H09 =GB 2006-414
Drying aq. sludge to mfr. fertiliser, solid fuel, pigments, etc. - 16030B/09

*BREA= 20.11.75 BREAD BAKING IND D11 *SU -612-672
Bread and confectionery baking oven - 34879B/18

BRIK- 10.10.77 BRIK PAK INC B04 D16 (D13) #NL 7711-114
Purifying sulphydryl oxidase enzyme derived from whole milk - 29946B/16

BRIM 30.03.77 BRISTOL MYERS CO A96 D21 (A14) =ZA 7801-733
Treating hair with compsn. contg. fluoro:polymer copolymer - 70780A/40

BRPE 19.03.74 BRITISH PETROLEUM LTD D16 H04 =SU -611-594
Single-celled micro organism-contg. creams - 65913W/40

*BRPE 06.10.77 BP CHEMICALS LTD D16 E17 J01 (E15) *EP ---1-681
Dehydration of aq. alcohol(s) - 33743B/18

*BRPE 14.10.77 BP CHEMICALS LTD D16 E17 J01 (E15) *EP ---1-694
High purity anhydrous ethanol prepn. - 33748B/18

BRTA 17.03.76 BRIT AMER TOBACCO LTD D18 =US 4149-546
Mfr. of grooved element for cigarette filter tip - 52242Y/30

BUCL 25.10.77 BUCKMAN LABS INC A97 D15 E11 M14 =DT 2807-222
Compsn. used to prevent corrosion and incrustation in aq. systems - 44129A/25

BUCL 25.10.77 BUCKMAN LABS INC A97 D15 E11 M14 =ZA 7801-847
Compsn. used to prevent corrosion and incrustation in aq. systems - 44129A/25

BUNZ 30.06.77 BUNZL & BIACH AG A96 D22 F04 =J5 4039-990
Wound dressing material formed of wet-laid nonwoven fabric - 02468B/02

BURN- 02.08.77 BURNS FOODS LTD D12 =GB 1545-125
Food product similar to bacon prepd. by extrusion - 19718A/11

CALG 24.04.78 CALGON CORP D23 E36 J01 (E33) =US 4150-045
Magnesium oxide-impregnated activated carbon mfr. - 85970A/47

CALP- 28.07.77 CALPIS FOOD IND CO B04 D16 =FR 2398-502
Antibacterial protein C-3603 - 14419B/08

CARG- 22.10.77 CARGO FLEET CHEMI D25 E19 F06 =DT 2845-562
Concentrate of quaternary ammonium cpd. and oily material - 31587B/17

*CARO 02.12.77 CARBORUNDUM CO D15 E36 J01 *US 4149-994
Hard, granular, activated carbon for water treatment - 35107B/18

*CARO 30.12.77 CARBORUNDUM CO D15 E36 J01 *US 4149-995
Hard granular activated carbon for water treatment - 35108B/18

CARP- 27.07.77 CARPIGIANI BRUTO MA D13 =FR 2398-464
Scraper blade for ice cream mixer - 10452B/06

CASM 01.02.77 CASTLE & COOKE INC D13 (D16) =GB 1545-168
Prepn. of food prod. from mushroom stumps - 42127A/23

CASS 02.07.77 CASSELLA AG D18 E19 F06 =US 4149-979
Brightening and waterproofing cellulose textiles and leather - 02324B/02

CHEM 28.09.77 CHEM WERKE HULS AG D25 E17 =GB 2006-255
Aq. cleaning solns. contg. alkyl glycol ether sulphate(s) - 25905B/14

*CHOK/ 27.08.77 CHOKAN K D16 *J5 4037-876
Cultivating microorganism of species Saccharomyces cerevisiae - 34105B/18

CHUS 31.10.66 CHUGAI PHARMACEUTICAL KK B04 D16 =SU -611-597
Anti-tumour substance from cells of hemolytic - 31931F/00

CHUS 18.08.77 CHUGAI PHARMACEUTICAL KK B02 C02 D13 =J5 4040-178
Animal e.g. cattle, sheep or pigs growth promotion - 16289B/09

CIBA 25.03.77 CIBA GEIGY AG D22 E12 F06 =ZA 7801-708
Water-soluble phthalocyanine cpds. as antimicrobials - 71128A/40

CIBA 04.07.77 CIBA GEIGY AG A60 D25 E23 F06 =BR 7804-276
Bis:triazinyl-amino-stilbene derivs. - 01921B/02

CINT/ 30.07.77 CINTER J A84 D14 (A14) =FR 2398-476
Deep frying non-stick drum and heater for potato chips - 08036B/05

*COAT- 07.09.76 COATED SEED LTD A97 C03 D16 (A11) *US 4149-869
Legume seeds coated with viable rhizobia bacteria - 35044B/18

COLG 05.08.68 COLGATE PALMOLIVE CO A96 D21 E37 =DS 1966-449
Agglomerated particles which form a water-insol dental polishing agent - 07345R/05

COLG 09.03.70 COLGATE PALMOLIVE CO D25 =J7 9007-804
Clear liquid detergent composns - 56931S/35

COLG 16.08.76 COLGATE PALMOLIVE CO B06 D21 =ZA 7704-694
Stabilised dentifrice with separate storage of reacting components - 88304Y/50

COLG 17.08.76 COLGATE PALMOLIVE CO D25 E33 (E19) =ZA 7704-818
Agglomerated insoluble detergent adjuvant contg. a zeolite - 90111Y/51

COLG 19.08.76 COLGATE PALMOLIVE CO D22 =ZA 7704-650
Tape fastener for disposable diaper - 68422Y/38

COLG 19.08.76 COLGATE PALMOLIVE CO D22 =ZA 7704-781
Disposable diaper - 68423Y/38

COLG 19.08.76 COLGATE PALMOLIVE CO A96 D22 =ZA 7704-782
Absorbent pad for use as disposable napkin, sanitary towel etc. - 02136A/02

COLG 20.08.76 COLGATE PALMOLIVE CO A96 D22 =ZA 7704-617
Diaper having absorbent cellulosic pad - 72135Y/40

COLG 14.10.77 COLGATE PALMOLIVE CO A97 D25 (A25) =NL 7810-341
Abrasive liquid detergent compsn. - 88305A/49

COLG 25.10.77 COLGATE PALMOLIVE CO D21 E34 =DT 2845-861
Deodorant stick based on alkali metal bi:carbonate - 18051B/10

COMB- 26.04.72 COMBUSTION POWER CO D15 =J7 9007-274
Treatment of sewage and town waste - 07796V/05

*COOP- 16.02.78 COOPER SA A96 D21 *US 4150-106
Tooth paste for controlling tooth brushing time - 35161B/18

CORG 14.09.77 CORNING GLASS WORKS D16 =US 4149-936
Composites of microbes bound to porous support - 24332B/13

CORG 14.09.77 CORNING GLASS WORKS D16 =US 4149-937
Composites of microbes bound to porous support - 24332B/13

CORP 16.06.77 CPC INTERNATIONAL INC B03 C02 D13 (D16 D17) =BR 7803-835
Syrups of high fructose content prodn. from sucrose - 91482A/51

CRIN- 13.09.77 CRINA CENT RECH INT C03 D13 =NO 7803-067
Ruminant feedstuff - B/17

*CUVE- 28.07.77 CUVES ET REVETEMENT A82 D16 (A21 A92) *FR 2398-677
Stainless steel vat for storage of wine - 33792B/18

*DAIZ 29.08.77 DAIDO TOKUSHOKO KK A91 D15 E36 *J5 4037-368
Phosphorus component removal from waste water - 34050B/18

DALE/ 19.09.77 DALE J A97 D15 (A25) =DK 7804-055
Removing salts from aq. soln. - 26470B/14

*DALM/ 09.09.77 DE ALMEIDA I C M B07 D22 *BR 7706-248
Sterilisation of pharmaceutical products - B/18

DASU- 21.09.78 DE DANSKE SUKKERFAB A91 D13 (A25 A97) =GB 2006-238
Anion exchanger resins for purificn. of fruit juice - 28122B/15

*DCOS/ 20.09.77 DA COSTA C P D11 *BR 7706-301
Soft mass compression and extruding machine - B/18

DECI- 05 01.77 DEC INT INC D13 =US RE29-967
Agitated vat for cheese prodn. - 41975V/23

DEGS 29.06.73 DEUTSCHE GOLD & SILBER D15 J01 =OE 7707-543
Powdered molecular sieves of zeolite type - 03814W/03

DEGS 29.07.77 DEUTSCHE GOLD H SILBE D25 E33 =FR 2398-697
Prepn. of cation-exchanging aluminosilicate(s) - 08024B/05

*DEGS 31.10.77 DEUTSCHE GOLD & SILBER D25 E34 *BE -871-633
Stabilisation of sodium percarbonate particles against moisture - 33354B/18

DEGS 31.10.77 DEUTSCHE GOLD & SILBER D25 E34 =PT --68-236
Stabilisation of sodium percarbonate particles against moisture - 33354B/18

DERI- 05.10.73 LAB DERIVATI ORGANI B04 D16 =SU -611-595
Isolation of protease inhibitc- from animal organs - 26235W/16

DEUS 20.12.75 DEGESCH GMBH D13 E13 (E17) =OE 7608-380
Treating mouldy foodstuffs to neutralise toxic products - 43477Y/25

DEXC 11.10.77 DEXTER CORP A96 D22 F07 =NL 7810-133
Antislip sheet material for covering surgical sheets - 31808B/17

*DICK/ 03.11.77 DICKSON D J A97 D25 E19 (E34) *US 4149-986
Long lasting toilet bowl cleaner - 35104B/18

DIST 29.04.77 DISTILLERS CO LTD D16 =ZA 7802-107
Bitter essence extn. from hops - 63484A/36

*DORO 17.10.77 DORR OLIVER INC D13 *NL 7810-138
Cream cheese mfr. - 34622B/18

DOWO 27.07.77 DOW CORNING CORP A96 C03 D21 (A26) =FR 2398-537
Emulsions of polar liq. in methyl-siloxane fluid - 80048A/44

DYNL 24.02.75 DYNAPOL A12 B07 D13 =J5 4039-499
Polymers having hydroquinone structural units - 54246X/29

*DYNL 16.05.77 DYNAPOL B02 D13 E13 *US 4150-038
High purity, crystalline hesperetin prepn. - 35124B/18

EAST 07.11.75 EASTMAN KODAK CO A97 B04 D16 =GB 1545-237
Cholesterol oxidase prodn. in surfactant-contg. medium - 32799Y/19

*EBAR 06.09.77 EBARA MFG KK C04 D16 *J5 4040-170
Urban refuse purificn. before or after compost prodn. - 34536B/18

EGYE 21.11.74 EGYT GYOGYSZERVEGYESZETI B02 C02 D13 =SU -612-628
Bactericidal quinoxaline 1,4,-dioxides - 30206X/17

EINH- 16.07.75 HANS EINHELL GMBH D15 J03 =OE 7604-509
Electrolysis cell for water purificn. - 05655Y/04

EISA 02.03.72 EISAI KK D13 (D16) =J7 9007-860
Food preservation with enzymes - 12253V/07

ELEX 17.10.77 ELECTROLUX AB D22 =GB 2006-013
Autoclave sterilisation by evaporating formalin - 31887B/17

ELEX 17.10.77 ELECTROLUX AB D22 =NL 7810-415
Autoclave sterilisation by evaporating formalin - 31887B/17

ELIL 20.10.77 ELI LILLY & CO B03 C02 D13 E13 =EP ---1-709
Antibiotics 20-deoxy-narasin and 20-deoxy-epi-17 narasin - 19939B/10

ELIL 26.10.77 ELI LILLY & CO B03 D22 E13 =EP ---1-715
2-3-Amino-2-oxo-1-azetidinyl 3-methyl 2- or 3 butenoic acid derivs. - 31575B/17

EMEY 21.09.77 EMERY INDUSTRIES INC A35 D23 E13 (A23) =BR 7806-190
Hetero-macrocyclic perfume ingredients - 08055B/05

EQUI- 21.02.77 EQUIPOS IND LLOYD D11 =FR 2398-991
Continuous oven for baking bread - 45908A/26

ERRI- 01.03.77 GES ERRICHTUNG UMWELTS D16 =OE 7801-421
Machine to putrefy moist biodegradable waste to mfr. compost 49755A/28

EXTR- 30.07.77 EXTRAKTIONSTECHNIK D23 H02 =FR 2398-796
Recovery of oils from filter cake of decolourising earth - 89673A/50

*FABR/ 26.07.77 FABRE H S D11 *FR 2398-459
Bakery tunnel oven partic. for rapid baked girdle cakes - 33771B/18

FARB 28.03.70 FARBEN FAB BAYER AG D22 E11 =J7 9007-775
Alpha-alkyl-phosphonosuccinic acids assequestering agents - 63098S/39

FARB 09.03.77 BAYER AG D18 E31 (E34) =ZA 7801-396
Chromium tanning material and sodium sulphate deca:hydrate prepn. 67216A/38

FARB 16.07.77 BAYER AG B02 C02 D22 E13 =J5 4039-091
Penicillin and cephalosporin analogues - 08255B/05

FARB 13.10.77 BAYER AG D25 E23 F06 =EP ---1-582
Optically-brightening bis:triazolyl stilbene(s) prodn. - 49880A/28

*FARB 21.10.77 BAYER AG C01 D22 *DT 2747-357
O-pyrimidinyl-phosphorus acid ester and amide derivs. - 33536B/18

FARB 21.10.77 BAYER AG C01 D22 =EP ---1-602
O-pyrimidinyl-phosphorus acid ester and amide derivs. - 33536B/18

*FARB 25.10.77 BAYER AG B02 C02 D13 *EP ---1-618
Quinoxaline-di-(N)-oxide derivs. - 33712B/18

*FARB 26.10.77 BAYER AG B05 C03 D22 E14 *EP ---1-623
Aryl-thiocarboxylic acid thiocyano-methyl ester derivs. - 33714B/18

*FARE= 20.12.74 FAR EASTERN POLY D12 *SU -611-600
Automatic adjuster for cutters of fish processing machine - 34629B/18

FARH 04.12.75 HOECHST AG D25 =OE 7608-933
Free flowing spray dried washing powders - 39826Y/23

FARH 24.07.76 HOECHST AG A96 D21 =US 4150-216
Hair fixative contg. branched polyester copolymer with sulphonate gps 08578A/05

FARH 07.10.76 HOECHST AG D25 E11 H07 M12 =GB 1545-193
Mixed orthophosphate ester(s) prepn. - 26933A/15

FARH 29.10.76 HOECHST AG D11 =OE 7707-685
Low calorie oven cooked products - 32042A/18

*FARH 05.08.77 HOECHST AG A97 D12 (A11 A14) *EP ---1-545
Cellulose hydrate hose used as sausage skin - 33689B/18

FARH 11.04.78 HOECHST AG B04 D16 #ZA 7802-064
Alpha-amylase inhibitor for treating diabetes and obesity - 53463A/30

*FERM= 30.07.76 FERMENTATION PRODS D16 *SU -611-927
Ferment soln. concentrator - 34786B/18

FIND- 29.09.77 PROD FINDUS SA D11 =GB 2005-979
Pizza bottom mfr. - 28140B/15

FIRM 16.05.77 FIRMENICH SA D23 E17 =US 4150-000
Bis:allylic ether(s) of propylene glycol - 88086A/49
*FIRM 11.10.77 FIRMENICH SA B07 D13 E13 (B03) *NL 7711-135
Tetra:methyl-oxa-spiro-deca:diene cpds. - 34615B/18
FMCC 28.03.77 FMC CORP D25 E19 F06 (D22) =ZA 7801-732
Crystalline percarboxylic acids prepn. from carboxylic acids - 68934A/39
*FORE= 13.10.75 FOREST CHEM IND RES D15 E16 G02 J04 (E21) *SU -612-165
Qualitative determination of quaternary ammonium surfactants - 34860B/18
FORS- 03.02.77 HERMANN FORSTER AG D13 =OE 7800-620
Cold preservation of beverages fruits and vegetables - 80544A/45
*FORS- 21.02.78 FORSYTH DENTAL INFI B04 D21 (D16) *US 4150-116
Immunisation against dental caries - 35163B/18
FREI- 27.09.74 FREIE & HANSESTADT D15 J01 M11 =DS 2446-117
Removal of complexed transition metals from effluents - 28465X/16
FROL/ 28.04.69 FROLICH M D13 (D22) =DS 2020-303
Sterilisation of apparatus for thermal - 83320R/45
*FRUC- 06.10.77 FRUCHT KOSMETISCH E A96 B03 D21 *DT 2744-976
Ascorbic acid-contg. compsn. effective against pigment disorders - 33451B/18
*FUKO 29.08.77 FUJI OIL KK D13 *J5 4037-846
Frozen protein prepn. - 34099B/18

*GENM 28.11.77 GENERAL MILLS INC B05 D21 E12 *US 4150-112
Plaque-inhibiting chewing gum - 35162B/18
GENO 06.08.71 GENERAL FOODS CORP D13 #J7 9007-867
Sausage analog prodn - 09092U/07
GENO 15.03.77 GENERAL FOODS CORP D13 =US 4150-161
Two-component chewing gum, esp. bubble gum - 67030A/38
GENT/ 12.05.77 GENTIL A D22 =FR 2398-505
Vapour disinfection using antiseptic soln., esp. of respirators - 67131A/38
*GERA/ 24.05.76 GERAIMOVICH O A D13 *SU -611-599
Automatic control system for fat standardisation in flowing milk - 34628B/18
*GILL 23.06.77 GILLETTE CO A96 D21 (A17) *US 4149-815
Chewable tooth cleaning device - 35027B/18
*GIUL 19.10.77 GIULINI CHEMIE GMBH D25 E33 *DT 2746-844
Hydrothermal prodn. of zeolite with low iron content - 33490B/18
GIVA 07.07.67 GIVAUDAN L & CIE SA D23 E17 =DT 1793-854
Terpene derivs prepn intermediates for - 44193S/26
GIVA 25.07.77 GIVAUDAN L & CIE SA D23 E13 (D13 D21 D25) =FR 2398-751
1,4-Epoxy-1,3,3-tri:methyl-2-cyclohexane prepn. - 12275B/07
GODA/ 24.10.78 GODAR S D15 *BE -871-512
Installation to collect and purify water or aq. effluent - 33323B/18
GODO 29.08.77 GODO SHUSEI KK D16 *J5 4037-893
Wine prodn. - 34114B/18
GOLI/ 19.08.76 GOLIKOV V A D14 *SU -612-694
Hammer type fodder crusher - 34890B/18
GOOR 03.05.78 GOODRICH B F CO A14 C03 D25 (A26 A97 D15) =BR 7806-282
Water-soluble carboxylic polymer-phosphorous acid reaction prods. - 33695B/18
GOOR 03.05.78 GOODRICH B F CO A14 C03 D25 (A26 A97 D15) *EP ---1-561
Water-soluble carboxylic polymer-phosphorous acid reaction prods. - 33695B/18
GOUP/ 04.04.77 GOUPIL J J B06 D13 E34 (D21) =ZA 7801-902
Chewing gum contg. water soluble fluoride - 58774A/33
GRAN- 29.07.77 GRAND BRASSER PATRI D16 =FR 2398-801
Prepn. of non-alcoholic beer from low concn. must - 84188A/47
GRAN/ 22.10.77 CAMPAS GRANJA M C B02 D13 E13 *DT 2842-419
Water-soluble calcium saccharin salt - 33600B/18
GREA- 22.06.77 GREAT WESTERN SUGAR D17 E13 (D16) =J5 4037-842
Glucose prepn. by enzymatic hydrolysis of cellulosic material - 63250A/35
GRFJ 12.05.69 GRIFFITH LABS INC D13 =J7 9007-858
Vegetable protein concentrate for human - 84477R/45
GROT/ 10.10.77 GROTZ W D15 J02 =NL 7810-209
Motorised rotary agitator to aerate liq. manure etc. - 14204B/08

HAAS/ 06.10.77 HAAS F D11 =OE 7707-126
Cooler for baked wafer sheets - 30148B/16
HART/ 07.04.77 HARTMANN K D12 =DS 2715-535
Two/stage press/cutting of frozen fish blocks - 58798A/33
HAYB 01.04.69 HAYASHIBARA CO D17 =DS 1916-721
Low-molecular amylose from starch - 81198R/44
HEBE- 25.03.72 HEBENSTREIT GMBH D11 =OE 7605-624
Automatic filled wafer machine - 61989U/42
HELM= 19.09.77 HELMINTHOLOGY INST B04 C03 D16 #BR 7706-244
Isolation of Trichinella larvae - 72389A/40
HENK 30.10.70 HENKEL KG AUF AKTIEN D23 =DS 2053-257
Fatty acid ester separation - 31080T/20
HENK 22.12.75 HENKEL KG AUF AKTIEN A97 D15 E19 G02 (A26 A60 D16 D17) =OE 7609-495
Foam inhibitor derived from hydroxy-amine - 45452Y/26
HENK 17.12.76 HENKEL KG AUF AKTIEN D25 E13 =US 4150-024
Detergent compsns. esp. for cold-washing textiles - 57076A/32
HENK 02.04.77 HENKEL K AKTIEN D21 E33 =ZA 7801-868
Employing water-insol. aluminosilicate particles in shampoo - 72703A/41
HENK 02.04.77 HENKEL KG AUF AKTIEN D25 E16 =ZA 7801-869
Textile detergent for use in cold water - 72701A/41
HENK 29.07.77 HENKEL KG AUF AKTIEN D25 E33 =FR 2398-697
Prepn. of cation-exchanging aluminosilicate(s) - 08024B/05
HENK 29.07.77 HENKEL KG AUF AKTIEN D23 E13 (D21) =FR 2398-743
2,2,5-Tri:methyl-5-phenyl-1,3-dioxan - 12190B/07
HENK 07.10.77 HENKEL KG AUF AKTIEN B05 C04 D15 E11 (B03 C01 D13 D21) =EP ---1-584
1-Hydroxy-alkane-1,1-di:phosphonic acid derivs. - 29922B/16
*HENK 17.10.77 HENKEL KG AUF AKTIEN D21 E16 *DT 2746-644
Cosmetic agents esp. skin-care preparations - 33473B/18
*HENK 17.10.77 HENKEL KG AUF AKTIEN D21 E13 *DT 2746-650
Skin care, protection and cleansing compsns. - 33475B/18
HENR/ 12.07.76 HENRIKSON S A D15 =OE 7704-972
Lime water soln. for sewage treatment - 06711A/04
HITA 24.02.75 HITACHI KK D15 J03 =J7 9007-381
Electrolytic treatment of acidic waste water contg fluorine - 76701X/41
HITA 17.12.75 HITACHI KK D15 E33 =J7 9007-380
Removing calcium sulphate from water - 54776Y/31
*HITA 02.09.77 HITACHI KK D15 *J5 4038-660
Ammoniacal nitrogen removal from waste water - 34281B/18
*HITG 02.09.77 BABCOCK-HITACHI KK A81 D15 J04 *J5 4039-373
Dehydration and calcination of waste sludge - 34412B/18
HOEK- 29.03.77 HOEKA SIERPLEISTERS A82 C03 D22 F09 =ZA 7801-703
Wood preservative treatment - 70810A/40
HOFF 26.07.77 HOFFMANN-LA ROCHE SA B05 D16 E19 =FR 2398-713
Optically active alpha-hydroxy-carboxylic acid prepn. from racemate - 10296B/06
HOHN 21.06.74 HOHNEN OIL KK D16 =J7 9007-696
Mushrooms cultivation medium - 13694X/08
HOHN 18.07.74 HOHNEN OIL KK D16 =J7 9007-697
Pleurotus ostreatus Ouel mushroom cultivation - 21409X/12
*HOUS= 09.02.76 HOUSEHOLD CHEM PRODS D23 *SU -611-924
Distillation unit for treatment of fats - 34783B/18
HUNT- 26.07.77 HUNTER VALLEY COOPE D13 =FR 2398-525
Prodn. of instant powders, esp. of whole milk - 13588B/07
HURK/ 21.10.77 HURKMANS A D11 =DT 2845-248
Volumetric depositor for paste esp. edible paste - 31576B/17
HURK/ 21.10.77 HURKMANS A D11 =GB 2006-096
Volumetric depositor for paste esp. edible paste - 31576B/17

ICHW 02.10.75 ICHIKAWA WOOLEN TEX LTD D15 =GB 1545-250
Continuous thickening and dewatering of slurries - 27463Y/16
ICIL 19.05.76 IMPERIAL CHEM INDS LTD B04 C03 D16 =OE 7703-587
Aureolic acid type cpds. used as animal growth promoters - 82986Y/47
*ICIL 03.11.77 IMPERIAL CHEM INDS LTD A97 C03 D22 G02 (A23 A25) *BE -871-665
Biocidal polyurethane(s) and polyester(s) - 33362B/18
*ICIL 03.11.77 IMPERIAL CHEM INDS LTD C03 D22 E19 G02 (D15) *BE -871-666
2-Nitro-2-bromo-propane-1,3-diol ester and carbamate derivs. - 33363B/18
IDEK 29.08.77 IDEMITSU INDUSTRIES KK D16 =J5 4037-880
Treating yeast cell suspension with carbon di:oxide - 20419B/11
INFL 07.08.73 INT FLAVORS & FRAGR INC D13 E17 (E14) =SU -612-625
3-Thia-alkane-1,4-dicarbonyl cpds. - 15382W/09
INFO- 13.09.77 SENTRALINST IND FOR D15 =BR 7805-950
Water waves concn. appts. - B/18
*INFO- 13.09.77 SENTRALINST IND FOR D15 *NO 7703-154
Water waves concn. appts. - B/18
*INGR- 12.02.75 IND GRAIN PRODUCTS D11 E19 *US 4150-016
Dry powdered gluten modified by a chelating agent - 35114B/18
INMR 31.05.77 INST MERIEUX B04 D16 =J5 4037-817
Bacterial esp. Bordetella pertussis endotoxin fractionation - 00267B/01
INSF 25.07.77 INST FRANCAIS DU PETROLE D17 E34 H01 (D16) =FR 2398-874
Extraction of oil by flooding with bio:polymer solns. - 14436B/08
INTE- 08.04.76 INTERCHEMIE AG C01 D13 =CE 7701-225
Zinc methionate as feed additive - 77770Y/44
ITDI- 16.12.76 INT INST DIFFERENT B04 D16 =OE 7708-950
Human cell line LDV/7 - 44049A/25

JOHO 03.03.75 JOHNSON MATTHEY LTD D21 M26 =GB 1545-054
Dental alloy based on gold and palladium - 57860X/31
JOUL/ 21.10.77 JOULIN G D11 =DT 2819-752
Mfr. of loaves of bread, esp. French sticks - 14242B/08
*JOUL/ 21.10.77 JOULIN G D11 *DT 2846-248
Bran bread prepn. - 33679B/18
*JOUL/ 21.10.77 JOULIN G D11 *GB 2005-980
Prodn. of partially baked bread products - 33846B/18
JOUL/ 21.10.77 JOULIN G D11 =GB 2005-982
Bran bread prepn. - 33679B/18

*KAGO- 01.09.77 KAGOME KK D15 *J5 4038-659
Treatment of pectin contg. effluent from orange processing - 34280B/18

*KAME- 04.09.77 KAMEI DIECAST KOGYO D15 *J5 4039-951
Water treatment with magnetic particles e.g. of ferrite - 34518B/18

*KANE 29.08.77 KANEBO KK A96 D21 (A14) *J5 4037-840
Hair cosmetic providing flexibility wetness and gloss - 34096B/18

*KANE 29.08.77 KANEBO KK B04 D16 *J5 4037-882
Stabilising activity of urokinase - 34107B/18

*KANE 30.08.77 KANEBO KK A96 D21 *J5 4037-841
Hair shampoo compsn. - 34097B/18

*KANE 31.08.77 KANEBO KK A96 D21 E19 (E33) *J5 4038-303
Liq. shampoo compsns. - 34191B/18

*KAOS 26.08.77 KAO SOAP KK D13 E17 *J5 4037-843
Emulsifier prodn. for foodstuffs - 34098B/18

*KARI- 21.10.77 KARISA SPA A88 D11 *DT 2845-555
Biscuit shaping cutter - 33650B/18

*KASH- 01.09.77 KASHIWA KAGAKU KOGY D13 G04 *J5 4038-282
Scorching inhibitor for cooking utensils - 34177B/18

KASP- 12.07.72 FA KASPER J D11 =DS 2234-099
Dough elongation attachment - 09482V/06

*KASP= 23.06.76 KASPMORNEFT REAGENTS D15 *SU -611-892
Hard waste water contg. petroleum and metal ions purificn. - 34758B/18

*KAWA- 03.09.77 KAWATETSU KAGAKU KK D15 E36 H09 J01 *J5 4039-958
Treating waste water from coke oven gas desulphurisation - 34520B/18

*KAWA- 05.09.77 KAWAKEN FINE CHEMIC D25 E19 *J5 4039-408
Solid detergent compsn. with good lathering properties - 34435B/18

*KAWI 06.09.77 KAWASAKI STEEL KK D15 J01 *J5 4040-280
Removal of water soluble impurities in solid filtration cake - 34579B/18

*KEIL/ 25.11.77 KEIL W A91 D15 J01 *DS 2752-581
Water softening appliance - 33443B/18

*KELL/ 03.11.77 KELLERSCH J D21 *DS 2749-166
Hair lotion and restorer - 33440B/18

KEND 01.07.77 KENDALL CO D22 F07 =BR 7803-992
Full length therapeutic elastic stockings - 78453A/44

*KHFA= 09.02.76 KHARK FAT PRODN COM D23 *SU -611-924
Distillation unit for treatment of fats - 34783B/18

*KHNO= 06.07.76 KHARK NON-ALCOHOLIC D16 *SU -611-926
Hops extract prepn. for use in beer prodn. - 34785B/18

*KIFO= 01.06.76 KIEV FOOD IND D16 *SU -611-925
Control of pure culture microorganisms cultivation - 34784B/18

KIRI 31.08.77 KIRIN BEER KK D16 =J5 4037-892
Brewers wort prepn. - 47091A/26

KLEE- 16.06.75 KLEEN-RITE/ARUNDALE D15 =OE 7603-523
Purificn of waste water polluted with synthetic detergent - 77622X/42

*KLEI/ 15.09.77 KLEIN M A25 D15 F09 J01 (A94 A97) *EP ---1-679
Particulate polyurethane foam tripodal strands - 33742B/18

KNOL 10.04.76 KNOLL AG B04 D16 =OE 7702-448
Compsns. contg. fibrinogenase and soluble polysaccharide - 68820Y/39

KUBI 24.11.73 KUBOTA KK D15 J04 (D16) =J5 0082-847
Gas-liq. contact by three/phase fluidisation - 34593B/18

*KUBI 24.11.73 KUBOTA KK D15 J04 (D16) *J7 9007-273
Gas-liq. contact by three/phase fluidisation - 34593B/18

KUBI 09.02.76 KUBOTA KK D15 =J7 9007-627
Water spray device for contact oxidation of waste water - 69493Y/39

*KUBI 27.08.77 KUBOTA KK D15 *J5 4037-363
Treating sludge from domestic night soil purificn. vessel - 34045B/18

*KUBI 27.08.77 KUBOTA KK D15 *J5 4037-364
Biological denitrification of polluted water contg. organic material - 34046B/18

*KUNK- 20.10.77 KUNKEL J MUHLEN D11 *DT 2747-091
Unsold bread prepn. for recycling - 33518B/18

*KUPI/ 05.05.76 KUPIEC A R A35 D15 J04 L02 *US 4149-968
Treatment of liquid contg. industrial waste - 35097B/18

*KURK 24.11.73 KURITA WATER IND KK D15 J04 (D16) *J7 9007-273
Gas-liq. contact by three/phase fluidisation - 34593B/18

KURS 19.03.73 KURARAY KK D21 E17 H07 =J7 9007-765
Hexamethyltetracosa-11,13-diyne-10,15-diol derivs - 70545V/40

*KURS 05.09.77 KURARAY KK A88 D15 J01 (A14) *J5 4039-952
Water purification - 34519B/18

*KUSA/ 30.08.77 KUSANO K A97 D22 E19 J01 *J5 4037-087
Material for removing malodours e.g. from fish in a freezer - 33953B/18

KYOD 00.00.75 KYODO SHIRYO KK C03 D13 =J7 9007-711
Dry, porous feed for silkworms - 50869X/27

*KYOK- 31.08.77 KYOKUYO KK D12 *J5 4037-856
Alkaline bleached fish meat prepn. - 34102B/18

*KYOW 30.08.77 KYOWA FERMENTATION KK D16 *J5 4037-884
Choline dehydrogenase enzyme prepn. - 34108B/18

*KYOW 01.09.77 KYOWA FERMENTATION KK D16 *J5 4037-885
Cholesterol oxidase purificn. - 34109B/18

*KYOW 07.09.77 KYOWA FERMENTATION KK D16 *J5 4040-138
Large scale prodn. of begonia seedlings - 34532B/18

KYOX 31.10.66 KYOWA KAKO KK B04 D16 =SU -611-597
Anti-tumour substance from cells of hemolytic - 31931F/00

LAND- 19.10.77 LANDUSTRIE SNEEK D15 =DT 2844-957
Aerator with vertically adjustable drive mechanism - 31567B/17

LAND- 19.10.77 LANDUSTRIE SNEEK MA D15 =GB 2006-032
Aerator with vertically adjustable drive mechanism - 31567B/17

*LAZO/ 11.05.76 LAZOVSKII YA K D15 *SU -611-891
Iron-contg. coagulating agent removal from waste water ppte. - 34757B/18

*LEME= 20.02.76 LENGD MEAT IND REG D12 *SU -612-864
Overhead conveyor for moving and weighing animal carcasses - 34961B/18

*LICN 19.10.77 LICENTIA PATENT GMBH D15 J04 K08 *DT 2746-917
Liquid irradiation device - 33503B/18

LIND/ 28.06.78 LINDMAN W E D15 J01 #PT --68-229
Waste liquids purificn. - 18498B/10

LINM 25.08.77 LINDE AG D15 (D17) =BR 7805-506
Purifying organically contaminated waste waters contg. calcium - 18363B/10

LIOC 13.10.76 LION DENTIFRICE CO LTD B06 D21 =US 4149-533
Appts. for fluoride iontophoresis on teeth - 30527A/17

LIOY 31.08.77 LION FAT & OIL KK A17 B07 D21 H07 (A96 A97 B04) =J5 4038-386
Olefin oligomerisation esp. to lubricating oils - 20281B/11

LIQF 21.10.75 LIQUIFEEDS LTD C03 D13 =GB 1545-046
Liquid animal feed for prevention of hypomagnesiemia - 29103Y/17

*LIVE= 11.02.76 LIVESTOCK RES INST C03 D13 *SU -611-601
Substitute of plain milk for calves and piglets - 34630B/18

LYCK 18.10.77 LYCKEBY STARKEISEFORADIN D13 =NL 7810-395
Enzyme hydrolysis of whole grain esp. wheat - 16027B/09

*MAGA= 22.11.76 MAGARACH VINICULT D16 *SU -611-930
Sparkling wine production line - 34789B/18

MARP 28.01.77 MARPHA A14 B04 D16 J04 (A89) =FR 2398-762
Copolymers based on N-tris-hydroxymethyl-methyl acrylamide - 51630A/29

*MATC- 19.10.77 MATCON RAADGIVENDE D12 *DT 2845-208
Small fish processing method - 33640B/18

MATC- 19.10.77 MATCON RADGIVENDE D12 =GB 2005-984
Small fish processing method - 33640B/18

MATH/ 27.03.75 MATHEWS R W D13 =GB 1545-203
Stripping Brussels-sprouts from stalks - 63473X/34

MATU 13.10.76 MATSUSHITA ELEC IND KK B06 D21 =US 4149-533
Appts. for fluoride iontophoresis on teeth - 30527A/17

MAYR/ 01.04.77 MAYR A B04 C03 D16 =ZA 7801-505
Compsn. for treatment of Herpes zoster - 55129A/31

*MAZN 07.07.77 MARUZEN OIL KK D15 *J5 4037-362
Purificn. of waste water contg. organic acids or salts - 34044B/18

MCDD 29.08.77 MCDONNELL DOUGLAS CORP B04 D16 =J5 4037-881
Testing Escherichia coli sensitivity to antibacterials - 84100A/47

MEAC 22.08.77 MEAD CORP A92 D13 =GB 2006-153
Aseptic packaging of acid foodstuffs - 15978B/09

*MEAT= 11.02.76 MEAT IND RES INST C03 D13 *SU -611-601
Substitute of plain milk for calves and piglets - 34630B/18

*MEAT= 15.03.76 MEAT IND RES INST D13 (D12) *SU -612-677
Freezing foodstuffs in blocks - 34884B/18

MEIJ 16.12.74 'MEIJI SEIKA B04 D16 =J7 9007-879
Purifying antibiotic matl contg phosphorus - 58970X/31

MEIJ 31.08.77 MEIJI KK D16 =J5 4037-892
Brewers wort prepn. - 47091A/26

MEMM- 01.07.77 MEMM SPA B04 C03 D16 =FR 2398-503
Neoplasm diagnosis and treatment - 08311B/05

MERE 20.05.77 MERCK PATENT GMBH D21 E24 (E23) =FR 2398-493
Hexadiene acetal cpds. - 84121A/47

*MERI 21.11.75 MERCK & CO INC B02 C02 D22 E13 *US 4150-156
7-Substd. methyl-3-thio-cephalosporin derivs. - 35181B/18

MERI 02.08.76 MERCK & CO INC B04 C03 D13 =ZA 7704-628
Cyclic hexa:peptide animal food additives - 10241A/06

MERI 05.05.77 MERCK & CO INC B02 C02 D22 (D13) =DK 7801-706
N-Substd.-N-acyl-thienamycin derivs. - 80170A/45

MERI 05.05.77 MERCK & CO INC B02 C02 D22 E13 (D13) =DK 7801-707
n-Alkyl-N-imino:methyl-thienamycin derivs. - 80171A/45

MERI 15.09.77 MERCK & CO INC B02 C02 D22 E13 =DK 7804-051
N-Substd.-thienamycin S-oxide and S-di:oxide derivs. - 26433B/14

MERI 15.09.77 MERCK & CO INC B02 C02 D22 E13 =DK 7804-053
(N)-Methylene-thienamycin S-oxide and S-di:oxide derivs. - 26432B/14

*MERI 19.10.77 MERCK & CO INC B02 C02 D22 E13 *EP ---1-627
3-Substd.-6-hydroxy:ethyl-7-oxo-1 aza:bi:cycloheptene carboxylic aci
33718B/18

*MERI 19.10.77 MERCK & CO INC B02 C02 D13 E13 (D22) *EP ---1-628
3-Substd.-7-oxo-aza-bi:cycloheptene-2-carboxylic acids - 33719B/18

*MERI 03.04.78 MERCK & CO INC D22 E13 H07 M21 *US 4149-983
Microbe resistant metal working fluids - 35102B/18

*MICH- 31.08.77 MICHIGAN TECK FUND D15 *J5 4038-271
Treating waste solids and sewage sludge - 34167B/18

MICH/ 21.10.77 MICHAELS E B D22 E16 #DT 2747-355
Antimicrobial compsn. contg. acyl-betaine and amine oxide - 19587A

MINA 24.08.76 UK SEC FOR DEFENCE B04 D16 =ZA 7704-778
Heat-stable glycero-kinase enzyme - 18113A/10

MINN 21.01.77 MINNESOTA MINING CO A96 D21 (A14) =US 4150-012
Liq. two/part acrylic tooth filling compsn. - 55451A/31

MINN 29.07.77 MINNESOTA MINING CO A96 D21 (A14) =FR 2398-496
Sun protection compsns. - 14474B/08

MINN 26.09.77 MINNESOTA MINING CO D21 M22 =BR 7806-319
Infiltrated, homogeneous metal object - 28158B/15

MITN 24.08.77 MITSUBISHI GAS CHEM IND A97 D13 E36 G04 =GB 2006-040
Two-component oxygen-absorbing compsn. for food preservation - 20271B/11

*MITN 30.08.77 MITSUBISHI GAS CHEM IND A92 D13 E36 G04 *J5 4037-088
Oxygen absorbent used in enclosed environment with moist food - 33954B/18

*MITN 01.09.77 MITSUBISHI GAS CHEM IND D16 *J5 4037-879
Yeast cell body prepn. in high concn. - 34106B/18

*MITO 29.08.77 MITSUBISHI HEAVY IND KK D15 J09 M12 *J5 4037-365
Treatment of organic acid-contg. waste washing liquor - 34047B/18

*MITO 31.08.77 MITSUBISHI HEAVY IND KK A35 D15 (A25 D16) *J5 4038-657
Biological degradation of waste polyurethane foam - 34278B/18

*MITU 05.09.77 MITSUBISHI CHEM IND KK A91 D15 F09 *J5 4040-279
Treating pulp digested waste soln. - 34578B/18

*MITU 14.10.77 MITSUBISHI CHEM IND KK B01 D16 *EP ---1-622
Steroidal alcohol(s) prodn. by fermentation with Mycobacterium species - 33713B/18

*MITU 22.10.77 MITSUBISHI CHEM IND KK B04 D16 J04 *DT 2845-820
Fluid glucose content measurement - 33664B/18

MITY 05.09.77 MITSUBISHI PAPER MILL A91 D15 F09 *J5 4040-279
Treating pulp digested waste soln. - 34578B/18

MIUR/ 27.07.77 MIURA Y A96 B04 D16 =FR 2398-488
Anticoagulant for blood or plasma - 10449B/06

MIYA- 30.08.77 MIYASAKA KORYO KK D13 *J5 4037-847
Frozen bean curd prepn. - 34100B/18

MOEN/ 12.09.77 MOEN C D15 =NO 7703-141
Toilet for biological decomposition - B/17

MOFO= 05.07.76 MOSC FOOD IND TECHN D11 *SU -612-673
Breadcrumb biscuits prodn. - 34880B/18

MOFO= 25.10.76 MOSC FOOD IND TECHN D13 *SU -612-676
Laurel leaf tablets prodn. - 34883B/18

MONS 16.12.77 MONSANTO CO D25 E11 *US 4150-069
Phosphato-substd. di:carboxylic acid salts - 35139B/18

MONT- 13.06.74 MONTCLAIR RES CORP D18 *US 4149-549
Tobacco smoke filter contg. inorganic fibres - 34993B/18

MORA/ 06.10.77 MORALES A J D17 J01 *US 4149-901
Smoke stack for purifying waste gases - 35057B/18

MORE/ 28.07.77 MORENO A D15 *FR 2398-465
Vessel for gasifying esp. carbonating water - 33774B/18

MOTA 21.10.77 MOTALA VERKSTAD AB D15 H09 *DT 2747-424
Refuse fired gas generator - 33540B/18

MRSC 10.10.77 MARS LTD D13 (D12) =NL 7810-185
Reducing odour of fish-based food prods. - 27884B/15

MUAG 25.10.77 HUNGARIA MUANY AGFELDOL A97 D15 #DT 2747-769
Packing unit for process column or sewage purification - 82239A/46

MUND 16.05.77 MUNDIPHARMA AG A96 B04 D22 E19 =ZA 7802-026
Storage-stable iodophor germicide compsns. prepn. - 63439A/36

NAAR 12.10.77 NAARDEN INT NV C03 D15 (D13 D17) =NL 7711-211
Treatment of waste water from wheat starch prodn. plant - 31944B/17

NAKA/ 25.08.77 NAKAZAWA T D21 *J5 4037-815
Medicinal bath additive for easing rheumatism, piles etc. - 34078B/18

NAKA/ 25.08.77 NAKAZAWA T D21 *J5 4037-835
Skin nutrient - 34093B/18

NAKA/ 25.08.77 NAKAZAWA T B04 D13 *J5 4037-850
Alkaline refreshing drink with therapeutic properties - 34101B/18

NARE- 30.08.77 NAT RES LABS D22 E12 #J5 4037-824
Antimicrobial heavy metal complexes with polyfunctional acids - 79262Y/44

NATR 15.12.69 NATIONAL RES DEV CORP A96 D21 L01 =DS 2065-824
Aluminium fluorosilicate glass powder for use in dental cement - 22747X/13

NDEN 29.08.77 NISSHIN ELECTRICAL KK D15 *J5 4037-366
Treating ionic surfactant-contg. waste water - 34048B/18

NEST 26.05.76 SOC PROD NESTLE SA D13 =OE 7703-730
Cocoa flavouring for foodstuff - 16025A/09

NEST 15.04.77 NESTLES PRODUCTS LT B04 D13 =ZA 7801-607
Milk protein concentrate contg. immunological factors - 78595A/44

NEST 27.04.77 NESTLES PRODUCTS LT D13 =ZA 7801-980
Milk food used esp. for premature infants - 76250A/43

NEST 29.07.77 SOC PROD NESTLE SA D13 =FR 2398-463
Removing caffeine and/or chlorogenic acid from aq. vegetable extracts - 86149A/48

NEST 29.07.77 SOC TECH PROD NESTL D13 =PT --68-207
Removing caffeine and/or chlorogenic acid from aq. vegetable extracts - 86149A/48

*NEST 25.10.77 SOC PRODS NESTLE SA D11 *DT 2846-045
Instant pasta prepn. with high liq. absorption capacity - 33671B/18

*NIDE 02.09.77 NIPPON ELECTRIC KK D15 J04 *J5 4039-383
Appts. for continuous treatment, e.g. oxidn. or redn., of liq. - 34418B/18

*NIEM- 31.08.77 NIPPON EMULSION KK A96 D21 (A25) *J5 4037-839
Non-irritant cosmetic for treating hair - 34095B/18

*NIKK- 20.10.77 NIKKI KK D15 E36 J04 *GB 2006-408
Regenerator for wet spent active carbon - 33878B/18

*NIKO- 30.08.77 NIPPON KONNYAKU KYO D13 *J5 4037-847
Frozen bean curd prepn. - 34100B/18

NIKU- 30.06.76 NIPPON KUREA KK D22 J01 =J7 9007-622
Removal of bacteria contamination from air - 15185A/08

NILL- 12.10.77 NTHERN ILLINOIS RES A96 D22 (A14) #DT 2745-796
Sealing plug for skin opening e.g. after colostomy - 28745A/16

NILL- 12.10.77 NORTH ILLINOIS RES A96 D22 (A14) #NL 7711-189
Sealing plug for skin opening e.g. after colostomy - 28745A/16

NIMI 30.08.75 NIPPON LIGHT METAL KK D15 L02 =J7 9007-382
Defluorination of waste waters - 27878Y/16

*NIOF 31.08.77 NIPPON OILS & FATS KK D13 *J5 4037-858
Storage stable whipped cream prepn. - 34103B/18

NIPS 18.08.77 NIPPON SODA KK B02 C02 D13 =J5 4040-178
Animal e.g. cattle, sheep or pigs growth promotion - 16289B/09

*NISB 30.08.77 JAPAN TOBACCO & SALT PUB D18 E13 *J5 4039-070
Tetra:hydro:furan derivs. - 34355B/18

*NISS 05.09.77 NISSHIN FLOUR MILL KK C03 D13 J04 *J5 4039-693
Checking state of minor constituents in blended animal feed - 34504B/18

NITN 20.09.76 NIHON TOKUSHU NOYAK B05 C01 D22 =US 4150-155
(N)-Sulphonyl phosphoric acid ester amide derivs. - 23603A/13

NKKA 31.03.76 NIKKI KK D15 E36 J01 =GB 1545-013
Activated carbon regnerated in annular upright chamber - 74412Y/42

*NMHB 20.03.78 NORDISCH MASCH R BAADER D12 *ZA 7801-596
Fish (fillet) skinning machine - B/18

NORM- 12.11.75 NORM AMC AG C04 D15 =DS 2559-324
Composted humus continuously produced from wet biological sludge - 19990Y/12

*NORM/ 15.11.77 NORMINGTON S M D14 *ZA 7706-795
Appts. for sorting articles by size - B/18

*NORQ 25.08.77 NORIINSHO D16 *J5 4040-136
Rearing mutant by tissue-cultivation of plants - 34531B/18

OAKE- 27.07.77 ET OAKES LTD D13 =FR 2398-597
Porous chocolate prodn. using continuous mixer - 14447B/08

*ODEL- 02.12.77 ODELGA J ARZTLICH-T D22 *OE 7708-644
Sterilising installation - B/18

*ODFO= 09.11.76 ODESS FOOD IND TECH D13 *SU -611-603
High quality buckwheat groats prodn. - 34631B/18

*ODPR= 01.09.76 ODESS PROVISION MAC D14 *SU -612-139
Heat exchanger for thermal treatment of viscous food prod. - 34845B/18

*OHSA- 30.08.77 YK OHSAKA SEIKEN D16 F09 *J5 4038-901
Cellulose- based pulp prodn. from algae - 34294B/18

*OHTA/ 03.09.77 OHTA J A88 D15 J01 *J5 4039-386
Membrane sepn. appts. for treating waste liq. - 34420B/18

OKAZ/ 16.10.74 OKAZAKI T D15 J03 =J7 9007-513
Anode protection in water control device - 41012X/22

*OKHO/ 16.06.76 OKHOTNIKOVA N A D18 *SU -611-889
Leather and fur chrome tanning soln. prodn. - 34755B/18

*OLIN 26.05.77 OLIN CORP D22 E13 *US 4149-988
Sanitising, disinfecting storage stable chloroisocyanurate compsns. - 35105B/18

OLSS/ 31.03.67 OLSSON I T H D13 =DS 1767-049
Butter like spread from cream separated - 94523R/51

OREA 13.11.75 L'OREAL SA A96 D21 (A26) =US 4150-115
Polymers contg. quat. ammonium groups - 34501Y/20

OREA 24.06.77 L'OREAL SA D21 E13 =US 4149-848
Dye compsns. for keratin fibres esp. hair - 06301B/04

OREA 12.07.77 L'OREAL SA A96 D21 =J5 4037-836
Water-in-oil emulsion used in cosmetic compsns. - 04035B/03

*OREA 25.07.77 L'OREAL SA B03 C02 D13 *FR 2398-501
Antiparasitic, antifungal and antibacterial pharmaceutical compsns. - 33778B/18

OREA 28.07.77 L'OREAL SA B03 D21 E12 (D22) =FR 2398-732
Aluminium tris-2-pyridine-thiol-N-oxide - 08016B/05

OREA 29.07.77 L'OREAL SA A97 D22 E12 =FR 2398-495
Deodorant agents for personal hygiene, animal litter etc. - 12309B/07

OREA 20.09.77 L'OREAL SA A96 D21 =BR 7806-143
Cosmetic compsn. for hair or skin contg. cationic polymers - 22076B/12

OREA 20.09.77 L'OREAL SA A96 D21 =GB 2006-237
Cosmetic compsn. for hair or skin contg. cationic polymers - 22076B/12

*ORIY 06.09.77 ORIENTAL YEAST KK C03 D13 *J5 4040-197
Feedstuff for plankton - 34538B/18

OSAY 01.07.77 ENSO GUTZEIT OY D15 E14 F09 =BR 7802-028
Purifying waste waters, esp. sulphate pulp bleaching waters - 04344B/03

• OSHI- 02.09.77 OSHIO SANGYO KK A81 D15 J04 *J5 4039-372
Conversion of waste sludge from filtration plant to landfill material - 34411B/18

• PASE 30.01.78 PASSAVANTW MICHELBACHER D15 J01 *BE -873-186
High rate overflow assembly for purified water from gravity separator - 33410B/18

PFIZ 04.02.77 PFIZER INC B03 D22 E13 G02 (D15) =US 4150-220
Antibacterial 4''-deoxy-4''-amino-erythromycin derivs. - 58751A/33

PFIZ 26.10.77 PFIZER INC B04 C03 D16 (D13) =EP ---1-720
Poly:cyclic ether antibiotic 47224 - 35178B/18

• PFIZ 26.10.77 PFIZER INC B04 C03 D16 (D13) *US 4150-152
Poly:cyclic ether antibiotic 47224 - 35178B/18

PILL 18.07.77 PILLSBURY CO D11 =FR 2398-461
Paste base for pizzas, etc. pref. for freezing - 06060B/04

POLA 26.10.76 POLAK'S FRUTAL WORKS INC D23 E15 =GB 1545-171
Tri:methyl and di:methyl cyclo:hexene nitrile perfumery cpds. - 23317A/13

POLA 26.07.77 POLAK'S FRUTAL WORKS INC D25 E19 =FR 2398-831
Quat. ammonium salt dispersants - 68716A/38

• POMP- 26.07.77 POMPES MACH HYDRA D16 *FR 2398-679
Elevating band conveyor for winemaking grapes etc. - 33793B/18

• POTA= 25.10.76 POTATO FOOD PRODS D14 *SU -611-604
Dried vegetable pieces cleaning appts. - 34632B/18

• POTT/ 26.07.77 POTTHEARST T C D15 *J5 4024-274
Fresh water prodn. from sea water - 33894B/18

• PQCO- 14.10.77 PQ-CORP D25 E33 *DT 2843-709
Non-agglomerating detergent mixts. for laundering - 33607B/18

PQCO- 14.10.77 PQ CORP D25 E33 =GB 2006-257
Non-agglomerating detergent mixts. for laundering - 33607B/18

• PQCO- 13.06.78 PQ CORP D25 E33 *US 4150-100
Prepn. of zeolite NaA with a short crystallisation time - 35159B/18

PROC 21.12.70 PROCTER & GAMBLE CO D13 =J7 9007-865
Synthetic meat - 43245T/27

PROC 05.03.75 PROCTER & GAMBLE CO D21 E19 (D24 D25) =OE 7601-596
Toilet soap with skin conditioning activity - 72524X/39

PROC 28.03.77 PROCTER & GAMBLE CO D21 E19 =US 4149-551
Hair conditioning agent e.g. quat. ammonium salt - 70786A/40

• PROC 03.06.77 PROCTER & GAMBLE CO D25 E37 *J5 4039-390
Peroxy acid bleaching composition - B/18

PROC 23.06.77 PROCTER & GAMBLE CO D25 E17 (E36) =J5 4039-409
Suds regulated detergent compsn. - 02332B/02

PROC 27.06.77 PROCTER & GAMBLE CO D25 =J5 4039-410
detergent compsn. - B/15

• PROC 29.06.77 PROCTER & GAMBLE CO D25 *J5 4039-411
Washing detergent composition - B/18

PROC 29.06.77 PROCTER & GAMBLE CO A97 D25 E19 (A25) =J5 4039-412
Low phosphate laundry detergent compsn. - 02345B/02

• PROC 29.06.77 PROCTER & GAMBLE CO D25 *J5 4039-413
Washing detergent compsn. - B/18

• PROC 29.06.77 PROCTER & GAMBLE CO D25 *J5 4039-414
Detergent composition - B/18

PROC 29.06.77 PROCTER & GAMBLE CO A97 D25 E19 =J5 4039-415
Detergent compsn. water-releasably loaded on a substrate - 02340B/02

PROC 29.06.77 PROCTER & GAMBLE CO A97 D25 E19 (A25) =J5 4039-416
Anionic, nonionic and quat. ammonium surfactant contg. liq. detergent - 02338B/02

PROC 29.06.77 PROCTER & GAMBLE CO A97 D25 E19 (E33) =J5 4039-417
Anionic, nonionic and quat. ammonium surfactant contg. solid detergent - 02339B/02

• PROT= 16.07.76 PROTEIN BIOSYNTH D16 *SU -611-928
High purity microbial biomass continuous prodn. - 34787B/18

PUJO/ 28.06.78 PUJOL J F D13 #PT --68-230
Olive oil extn. appts. - 78711A/44

RAIN- 20.10.70 RAINIER COMPANIES D16 =J4 7009-744
Enclosed brewery vat - 29530T/19

RAIN- 20.10.70 RAINIER COMPANIES D16 =J7 9007-880
Enclosed brewery vat - 29530T/19

RALS 18.09.74 RALSTON PURINA CO C03 D13 =J7 9007-706
High moisture content meat/expanded protein petfood - 41028W/25

• RAUW- 25.10.77 RAUW LEBENSMITTELW B07 D23 (B05 D13) *DT 2747-765
Fat rich in 1,3-di:palmitoyl-2-oleoyl-glycerol - 33571B/18

RECA 25.04.77 RECHERCHES & IND THERAPE B04 C03 D16 =ZA 7801-832
Fowl pest vaccine - 77499Y/44

• REDK- 25.10.77 REDKEN LABS INC A96 D21 *DT 2817-866
Hair cosmetic compsns. for treating damaged hair - 33589B/18

REGC 23.09.77 UNIV OF CALIFORNIA B04 D16 =PT --68-127
Purifying nucleotide sequences for insertion into microorganisms - 80247A/45

RENA 09.06.77 REGIE NAT RENAULT D15 =PT --68-142
Incinerator for industrial waste water treatment sludge - 70839A/40

RETO 09.07.71 REYNOLDS TOBACCO D16 (D17)
Whole microbial cells - 05747U/05

RETO 09.07.71 REYNOLDS TOBACCO CO D16 (D17) =J7 9007-873
Whole microbial cells - 05747U/05

RHON 27.09.73 RHON-POULENC SA A91 D17 (D16) =J5 0058-283
Enzymatic glucose isomerisation to laevulose - 24652W/15

RHON 27.09.73 RHONE-POULENC SA A91 D17 (D16) =J7 9007-874
Enzymatic glucose isomerisation to laevulose - 24652W/15

RHON 03.06.77 RHONE-POULENC INDUSTRIES D25 E33 =PT --68-129
Type 4A aluminosilicate prepn., esp. as detergent additive - 87857A/49

RHON 25.07.77 RHONE-POULENC IND D17 E34 H01 (D16) =FR 2398-874
Extraction of oil by flooding with bio:polymer solns. - 14436B/08

RHON 27.07.77 RHONE-POULENC INDUSTRIES A97 D16 E13 (A11 D17) =FR 2398-754
Cells contg. glucose-isomerase enclosed in cellulose ester - 08012B/05

RHON 04.08.77 RHONE-POULENC INDUSTRIES B02 C02 D13 =J5 4039-087
Antibiotic 35665 RP useful as animal growth promoter - 09974B/06

RHON 07.10.77 RHONE-POULENC INDUSTRIES B03 C02 D16 =GB 2006-198
Antibiotic 37454 RP for control of coccidiosis - 30048B/16

• RHON 02.11.77 RHONE-POULENC INDUSTRIES A97 D25 (A23 A25) *BE -871-715
Anti-soil and anti-redeposition detergent compsn. - 33374B/18

RICT 19.08.76 RICHTER GEDEON VEGY C03 D13 E19 =ZA 7705-038
Blemish-preventing compsn. for apples, esp. with red skins - 14040A/08

RICT 27.04.77 RICHTER GEDEON VEGY D15 J04 =ZA 7801-951
Packing elements for gas-liquid contact apparatus - 61958A/35

• ROAN= 20.05.76 ROST ATNI-PLAGUE RE D16 *SU -611-933
Bacteriological nutrient medium purification - 34791B/18

• ROHG 19.10.77 ROHM GMBH D13 *DT 2746-884
Clear or cloudy flocculation- resistant citrus juice prepn. - 33497B/18

ROHM 12.05.71 ROHM & HAAS CO B03 C01 D22 E12 =US 4150-026
Metal complexes of 3-isothiazolones - 76318T/48

RONE- 27.05.75 RONEY PROD DEV LTD D21 =GB 1545-206
Cosmetic formulation contg. milk - 94626X/51

• ROSS/ 17.03.78 ROSS M M D13 *US 4149-455
Popcorn cooking pan - 34988B/18

ROUS 17.10.77 ROUSSEL UCLAF D11 =GB 2005-981
High protein cellular diet food, e.g. wafer - 31894B/17

ROUS 17.10.77 ROUSSEL UCLAF D11 =NL 7810-405
High protein cellular diet food, e.g. wafer - 31894B/17

• RUTH/ 02.11.77 RUTHNER O D16 *OE 7707-808
Mushrooms prodn. - B/18

• SACH- 22.10.77 SACHS SYSTEMTECHNIK D18 *DT 2747-500
Device for discouraging smoking habit - 33546B/18

SAKB 15.06.76 OTSUKA KAGAKU YAKUHIN B03 C02 D23 E13 =US 4150-039
Bis-epoxy-tetrahydropyranone ethers - 72549Y/41

• SANN 29.08.77 SANYO KK A97 D22 F09 (A11) *J5 4037-188
Water absorbent resin prodn. - 34019B/18

SAOC 25.03.74 SANRAKU OCEAN B03 D16 =J7 9007-877
Deltamycins A1, A2, A3, A4 produced by the genus Streptomyce
87089Y/49

SCAD 16.06.78 SCA DEVELOPMENT AB A11 D22 F04 (A96) #PT --68-178
Cellulosic material for absorbent sanitary prods. - 46196A/26

• SCHE/ 31.12.77 SCHEICHER H D22 L02 *BE -873-261
Moulding implants, esp. dental implants, from ceramic masse
33434B/18

• SCHO- 02.11.77 VEB SCHOKOLADEN VER D13 *BE -871-672
Continuous tempering of chocolate mass - 33364B/18

SCHU 26.11.76 SCHULKE & MAYR GMBH D22 E14 (D15) =OE 7707-45
Solid antimicrobial agents contg. stable percarboxylic acids - 21575A/

SCHU- 13.01.77 SCHULKE & MAYR GMBH D22 E14 =OE 7707-857
Stable solid giving disinfectant soln. - 25265A/14

SCHW- 28.07.77 VEB SYNTHES SCHWARZ A96 D22 (A25) =FR 2398
596
Medical dressing prepd. from soft polyurethane foam - 86171A/48

SEKI 16.02.77 SEKISUI KAGAKU KOGY A88 D15 =US 4149-972
Aerobic sewage treatment device - 60866A/34

• SHEB= 20.11.75 SHEBEKINO MECH ENG WKS D11 *SU -612-672
Bread and confectionery baking oven - 34879B/18

SHEL 26.07.76 SHELL OIL CO D22 =US 4149-675
Air freshener giving off perfume in variable quantity - 08275A/05

SHEL 03.10.77 SHELL INT RES MIJ BV D25 E17 =EP ---1-651
Acid catalysed alkylene glycol alkylation with olefin - 15880B/08

• SHIA 24.11.73 SHINKO PFAUDLER KK D15 J04 (D16) *J7 9007-273
Gas-liq. contact by three/phase fluidisation - 34593B/18

SHIS 26.08.77 SHISEIDO KK A96 D21 (A18) =J5 4037-837
Make/up compsn. for use around eyes - 18297B/10

• SHIV 02.09.77 NEW JAPAN CHEM D25 E19 *J5 4039-407
Cleaning compsn. e.g. for household baths - 34434B/18

SIMM- 13.10.77 SIMMERING-GRAZ-PAUK C03 D13 =NL 7809-065
Activated feedstuffs prepn. - 31817B/17

SMHL 20.10.77 SIMON HARTLEY LTD B04 D16 (D13 D15) =GB 200
181
Biological purificn. of waste water, fermentation of yeasts e
14223B/08

SNAM 30.03.73 SNAMPROGETTI SPA A97 D16 E17 =J7 9007-875

SNAM 14.09.77 SNAMPROGETTI SPA D15 =DK 7803-956
Multistage evapn. plant to desalinate sea-water, etc. - 18035B/10

SNAM 14.09.77 SNAMPROGETTI SPA D15 =NO 7803-083
Multistage evapn. plant to desalinate sea-water, etc. - 18035B/10

SNAM 13.10.77 SNAMPROGETTI SPA D16 J04 =NL 7809-787
Radial flow catalytic enzyme reactor for isomerisation of fructose - 29762B/16

SNAM 20.10.77 SNAMPROGETTI SPA B07 D13 E13 (B03) =DT 2845-843
2,5-Di:alkyl-4-hydroxy-di:hydro:furanone prodn. - 31582B/17

SNAM 20.10.77 SNAMPROGETTI SPA B07 D13 E13 (B03) =GB 2006-205
2,5-Di:alkyl-4-hydroxy-di:hydro:furanone prodn. - 31582B/17

SOMA- 25.10.77 SOMAT CORP D15 *DT 2838-899
Dewatering sewage sludge - 33597B/18

SOUL/ 28.07.77 SOULIE Y A H D13 *FR 2398-462
Making cheeses with firm paste from goats milk - 33773B/18

SQUI 30.07.75 SQUIBB E R & SONS INC B02 C02 D13 =GB 1545-242
Antibacterial (alpha)-thioureido cephalosporins - 11549Y/07

STAL 20.06.77 STALEY A E MFG CO A11 C03 D22 F06 (A87 A97) =BR 7803-883
Water absorbent starch copolymer contg. hydrophilic gps. - 70620A/39

STAL 27.07.77 STALEY A E MFG CO D17 E13 #FR 2398-802
Non-compacting solid anhydrous dextrose - 86388Y/48

STAM 18.10.77 STAMICARBON BV D13 E14 (D23) =EP ---1-660
Pure benzaldehyde prodn. - 34621B/18

STAM 18.10.77 STAMICARBON BV D13 E14 (D23) *NL 7711-393
Pure benzaldehyde prodn. - 34621B/18

STAN/ 02.09.77 STANFORD E D12 *US 4149-296
Fish scraping and gutting glove - 34970B/18

STAP/ 19.07.76 STAPONAS A V A96 B05 D22 (A14) *SU -611-611
Body joint function restoration after surgery - 34633B/18

STER 07.11.77 STERLING DRUG INC D15 *BE -871-644
Compressing injection air for wet oxidn. purificn. of organic waste - 33356B/18

STTN 14.10.77 STATNI VU TEXTILNI A11 D22 (A96) #DT 2746-246
Oxidised cellulose prods. useful as haemostatic agents - 32684B/17

UGA= 01.07.76 SUGAR IND RES INST D17 J08 *SU -612-134
Free-flowing material fluidised layer drying and cooling - 34840B/18

UGI/ 31.08.77 SUGIURA K D15 *J5 4038-658
Waste water treatment to lower BOD and COD - 34279B/18

UMI/ 05.09.77 SUMI H A96 D22 *J5 4039-983
Antithrombus material - 34522B/18

UMO 26.08.77 SUMITOMO CHEMICAL KK A96 B04 D16 (A11) =J5 4037-83
Enzymes immobilised on pullulan gels - 62139A/35

UMO 29.08.77 SUMITOMO CHEMICAL KK D13 *J5 4037-860
Preserving eggs during storage by application of a coating agent - 34104B/18

UMO 01.09.77 SUMITOMO CHEMICAL KK A97 D15 E37 J03 *J5 4038-294
Bromide ion recovery from soln. contg. organic acid or salt - 34185B/18

ZCZ/ 21.10.77 SZCZESNY A D12 *DT 2747-213
Sweet, juicy roast chicken piece prodn. - 33525B/18

AKE 31.03.76 TAKEDA YAKUHIN KOGYO KK D15 E36 J01 =GB 1545-013
Activated carbon regnerated in annular upright chamber - 74412Y/42

AKE 31.03.77 TAKEDA CHEMICAL IND KK B02 C02 D16 =ZA 7801-862
Antibiotic complex C-15003 prepd. from Nocardia species - 72710A/41

AKE 31.03.77 TAKEDA CHEMICAL IND KK B02 C02 D16 =ZA 7801-863
Antibiotic complex C-15003 prepd. from Nocardia species - 72710A/41

AKE 31.08.77 TAKEDA CHEMICAL IND KK B04 D16 *J5 4039-001
Physiologically active material P-725 - 34319B/18

AKE/ 22.11.74 TAKEUCHI M D16 (D13) =J7 9007-699
Culture medium for mushroom - 54970X/29

AKS 28.07.77 TAKASAGO PERFUMERY KK D23 E15 =FR 2398-712
Substd. norbornene and norbornane cpds. - 12307B/07

AKS 30.08.77 TAKASAGO PERFUMERY KK D23 E13 (D21 D25) *J5 4039-69
2-Methyl-furan derivs. - 34354B/18

ANA 30.08.74 TANABE SEIYAKU KK B04 D16 =J7 9007-878
Immunity-promoting peptide prodn - 30984X/17

ANA 23.10.74 TANABE SEIYAKU KK D14 =J7 9007-859
Coating for dough foods to be cooked by microwave heating - 44590X/24

ANA 26.08.77 TANABE PHARMACEUTICAL KK D16 *J5 4037-894
Seasoning agent soln. prodn. - 34115B/18

ATL 14.03.77 TATE & LYLE LTD D17 (D16) =ZA 7801-472
Polysaccharide(s) prepd. by culture of Azotobacter vinelandii - 51675A/29

ECD 14.10.77 TECHNICON INSTRUM A89 D13 E13 J04 =NL 7807-960
Analytically determining uric acid esp. in food samples - 27851B/15

EKH= 05.07.76 TEKHRYBPROM EXP PRD D12 *SU -612-674
Fish internal organs removal device - 34881B/18

LE- 03.06.69 TELEC SA D21 =US 4150-113
Toothpaste contng a hydrogen-peroxide - 90119R/48

MC- 12.11.75 TEMCA CHEM UNION GM A96 D22 =OE 7607-403
Supporting plaster bandage of polyvinyl alcohol foam strip - 42285A/24

XC 11.10.77 TEXACO DEV CORP A25 D25 E16 (A97) =NL 7808-078
Amphoteric surfactants having good solubility at isoelectric point - 08033B/05

*TEXC 31.10.77 TEXACO DEV CORP D15 *BE -871-700
Treating waste water contg. cyanide and formate(s) - 33367B/18

*THAL 27.12.77 VEB SCHWERMASCH THALMANN D14 J01 *BE -873-078
Distn. and evapn. plants for chemical and food industries - 33376B/18

*THAL 27.12.77 VEB SCHWERMASCH THALMANN D23 J01 *BE -873-079
Separator for dividing water from organic solvents - 33377B/18

THIE/ 02.07.76 THIELE H D13 =OE 7704-394
Dietetic medical or snack food contg. bran and pectin - 79416Y/45

*TIPE- 28.12.78 TIPE REVENT AB D11 *BE -873-161
Pre-steaming hot air bread oven for industrial bakery - 33404B/18

TIVE- 14.09.77 TIVET DEV LTD D12 =DK 7804-031
Moulding sausages etc. with coherent skin-like surfaces - 22039B/12

TIVE- 14.09.77 TIVET DEV LTD D12 =NO 7803-103
Moulding sausages etc. with coherent skin-like surfaces - 22039B/12

*TOAD- 31.08.77 TOA DENPA KOGYO KK D15 E36 J04 *J5 4038-187
Removing sulphur ions from liq. sample e.g. river water - 34119B/18

*TOKE 29.08.77 TOKYO SHIBAURA ELEC LTD D15 *J5 4037-067
Controlling rate of addn. of chemical into sludge treating appts. - 33936B/18

*TOKE 01.09.77 TOKYO SHIBAURA ELEC LTD D15 J01 *J5 4038-266
Ozone-oxidn. deodorising appts. - 34162B/18

TOKM- 21.11.75 TOKYO MED & DENT D22 L02 =US 4149-893
Ceramic for implants - 38480Y/22

*TONO/ 02.09.77 TONO-OKA K C03 D13 *J5 4040-176
Granular feedstuff prepn. - 34537B/18

*TORA 29.08.77 TORAY INDS INC A94 D22 F01 *J5 4038-951
Antiseptic, moisture-absorbing textile prod. - 34307B/18

*TOYJ 06.09.77 TOYO SODA KK D15 J01 L02 *J5 4040-291
Adsorbent compsn. with excellent sedimentation property - 34583B/18

TOZK 24.10.74 TOYODA MACH WORKS KK D15 J01 =J7 9007-512
Fractional distillation appts - 44721X/24

TSUB 27.04.73 KUMIAI CHEM IND KK D22 E13 =J7 9007-856
Benzimidazole antimicrobial compsns. - 43439W/26

TSUK 26.10.74 TSUKIBOSHI RUBBER A97 D13 =J7 9007-862
Preservative compsn. for agricultural prods. - 50975W/31

*TYLE/ 21.10.77 TYLER T V D15 *DT 2844-375
Water purification plant - 33615B/18

*UEDA- 26.08.77 UEDA KASAKU KOG KK D16 *J5 4037-894
Seasoning agent soln. prodn. - 34115B/18

UGIN 29.07.77 PROD CHIM UGINE KUH D15 J01 =FR 2398-698
Continuous prepn. of zeolite-A of uniform quality - 06080B/04

UGIN 29.07.77 UGINE KUHLMANN D15 J01 =PT --68-245
Continuous prepn. of zeolite-A of uniform quality - 06080B/04

UHDE 24.05.77 UHDE F GMBH D15 =J5 4039-950
Demineralised water prodn. - 70828A/40

*UMEZ/ 26.08.77 UMEZAWA F A96 D21 *J5 4037-838
Hair treatment compsn. - 34094B/18

*UNEL- 12.12.77 ELEC SERVICE D12 *US 4149-414
Multiple sample extn. from frozen meat block - 34984B/18

UNIC 26.11.75 UNION CARBIDE CORP D12 =OE 7608-746
Filling gauge for large dia. sausage casings - 38101Y/22

UNIC 31.03.77 UNION CARBIDE CORP A97 D12 =ZA 7801-813
Neutralised aq. liq. smoke mixt. - 73150A/41

UNIC 15.09.77 UNION CARBIDE CORP D24 E17 =NO 7803-110
Soap tablets contg. at least one per cent free carboxylic acid - 20034B/11

UNIC 14.04.78 UNION CARBIDE CORP B02 D16 E17 #ZA 7802-164
Glutaraldehyde sterilisation of fermentation media - 76297A/43

UNIL 15.06.70 UNILEVER NV D12 =DS 2128-463
Reconstitution of meat - by extrusion in the form of irregularly - 81270S/51

UNIL 07.11.75 UNILEVER NV A97 D25 E17 (A25) =OE 7608-269
Nonstreaking, dish-washing compsns. - 32794Y/19

UNIL 20.08.76 UNILEVER NV D25 E17 =ZA 7705-042
Toilet soap contg. opt. acetylated citric acid ester(s) - 14001A/08

UNIL 11.10.76 UNILEVER NV A97 D25 E12 (A18 A25 E34) =OE 7707-162
Liquid detergent compsn. - 25248A/14

UNIL 15.10.76 UNILEVER NV A96 B05 D21 (A25) =OE 7707-368
Compsn. for treating acne contg. an alkyl lactate - 28816A/16

*UNIL 26.05.77 LEVER BROTHERS CO D25 E33 (E12 E34) *US 4150-001
Detergent bar contg. alkaline earth metal hydrogen orthophosphate - 35109B/18

UNIL 28.07.77 UNILEVER NV A96 D21 =FR 2398-494
Sprayable hair lacquer compsn. - 08019B/05

UNIL 15.09.77 UNILEVER NV D24 E17 =DK 7804-039
Soap tablets contg. at least one per cent free carboxylic acid - 20034B/11

UNIL 26.09.77 UNILEVER NV D24 =BR 7806-247
Striped soap cake extrusion - 28147B/15

UNIL 18.10.77 UNILEVER LTD A96 D22 (A25) =EP ---1-706
Particulate absorption material with improved wettability with blood - 31891B/17

UNIL 18.10.77 UNILEVER NV A96 D22 (A25) =NL 7810-349
Particulate absorption material with improved wettability with blood - 31891B/17
• UNIL 26.10.77 UNILEVER NV A97 D25 (A14 A25) *BE -871-575
Stain removing compsn. esp. for use in cold rinse - 33336B/18
• UNIL 31.10.77 UNILEVER NV D25 E19 *BE -871-714
Fabric softener compsn. - 33373B/18
• UNIL 12.12.77 LEVER BROTHERS CO A96 D21 *US 4150-151
Germicide free antibacterial mouth-wash - 35177B/18
UNIS- 01.11.77 UNISCOPE INC A97 C03 D13 =ZA 7801-523
Lubricating binder for animal feeds - 65374A/37
UNIX 10.10.77 UNISEARCH LTD B01 D23 =DT 2843-993
Wool wax lanolin prepn. from wool degreasing extract - 14214B/08
UNTC 17.10.77 ECODYNE CORP D15 =GB 2006-036
Clarification tank with circumferential inlet trough - 89470A/49
UNTC 17.10.77 ECODYNE CORP D15 =NL 7810-137
Clarification tank with circumferential inlet trough - 89470A/49
UPJO 17.10.77 UPJOHN CO B04 C03 D16 H07 =NL 7809-639
Antibiotic CC-1065 - 31828B/17
• USAS 30.11.77 NAT AERO & SPACE ADMIN D16 J04 *US 4149-938
Detecting microorganisms in solution - 35076B/18
• USMC 19.10.77 USM CORP D17 *DT 2844-034
Sugar cane crushing mill - 33608B/18
USSU 03.09.75 US SURGICAL CORP A96 D22 =DS 2639-413
Surgical clamps comprising interlocking soluble strips - 40341Y/23
• UTIN= 05.05.76 UKR TIN FOOD IND D14 *SU -612-689
Catering industry mixer for salad preparation - 34888B/18
UYMA- 20.10.77 UNIV MANCHESTER INS B04 D16 (D13 D15) =GB 2006-181
Biological purificn. of waste water, fermentation of yeasts etc. - 14223B/08
UYVI- 26.01.76 UNIV OF VIRGINIA D21 =OE 7700-437
Filling teeth with dental amalgam - 56966Y/32

• VEOS 20.12.77 VER OSTERR EISEN & STAHL D15 *OE 7709-144
Wire cloth press for dewatering materials - B/18
• VESE/ 20.12.76 VESELOV YU S D15 J01 *SU -611-641
Compact filter for water - 34653B/18
• VICO= 12.04.76 VILIN CONFECTIONERY D13 *SU -612-675
High quality toffee prodn. - 34882B/18
• VIDA/ 21.09.77 VIDAL A M C D24 (D21) *BR 7706-286
Coloured soap mfr. - B/18
• VIRO- 29.07.77 INST VIROLOGIE TOUR B04 D16 *FR 2398-504
In vitro culture of hepatitis A virus - 33779B/18
VITZ 11.12.76 VITAZAHNFAB RAUTER KG D21 L02 =OE 7706-812
Muffle furnace for baking dental ceramics - 45951A/26
• VOTE= 21.04.76 VORON TECHNOL INST A91 D16 (A14) *SU -611-929
Storage-stable blended sparkling wine prodn. - 34788B/18
VZUI/ 21.10.77 VAN ZUILICHEM D J D13 =DT 2831-073
Shelling cocoa pods by IR irradiation - 31580B/17

WADL 25.08.77 WADLEY RES INST BLOOD BK B04 D16 =J5 4037-816
Fungal growth medium containing purified saponin - 23813B/12
WAKP 29.07.77 WAKO PURE CHEM IND KK B04 D13 E13 J04 =FR 2399-023
Hydrogen peroxide determination - 12313B/07
• WAKP 31.08.77 WAKO PURE CHEM IND KK B04 D16 J04 *J5 4037-798
determn.. of substrate quantity or enzyme activity - 34071B/18
WATA/ 03.10.72 WATANABE H D22 E14 G04 =J7 9007-805
Germicidal dry cleaning solvent - 85057V/49
WEIS- 24.04.78 GEBRUDER WEISS KG D16 (D15) #ZA 7802-312
Raw sludge preparation for biological treatment - 63668A/36
WIGG 02.08.76 WIGGINS TEAPE LTD A88 D18 =US 4149-550
Multicomponent cigarette filter tip - 86638Y/49
• WILL- 31.03.78 J A & A M WILLIAMS D14 *ZA 7801-864
Stone fruit cutter - B/18
• WILL/ 18.05.77 WILLEMSEN W H D11 *ZA 7702-996
Appts. for prepn. of foodstuffs - B/18
WINT- 15.09.77 WINTERHALTER K KG D14 =DK 7704-635
Washing machine to clean vegetables with circulated water - 40419A/23
WINT- 15 09.77 WINTERHALTER K KG D14 =NO 7703-516
Washing machine to clean vegetables with circulated water - 40419A/23
• WISS- 20.10 77 WTZ TECHN MIKROBIO D16 *DT 2843-614
Microorganism cultivation plant - 33606B/18
WORL- 23.06.77 WORLD POTATO CORP D13 =GB 2005-983
Cooked fruit and vegetables with firm texture - 01878B/02
• WURT- 20.10.77 WURTTEMBERG PARFUM D21 E24 *DT 2747-092
Dentifrice powder or paste contg. dye and surfactant - 33519B/18

• YORK 05.10.76 YORKSHIRE CHEMICALS D15 E16 J01 *GB 1545-268
Removing mercury from aq. soln. - 33843B/18
YOUD/ 20.02.75 YOUDELIS W V D21 M26 =OE 7600-532
Amalgamable dental powder - 52114X/28

ZAID 26.03.71 ZH BISEIBUTSU KAGAKU KEN B04 D16 =J7 9007-876
Pepstatins as anti ulcer agents - 64041T/40
ZAID 25.08.77 AH BISEIBUTSU A97 B04 D16 =J5 4037-890
Purification of macromomycin antitumour antibiotic - 18537B/10
ZAID 25.08.77 ZH BISEIBUTSU KAGAKU KEN A97 B04 D16 =J5 4037-890
Purification of macromomycin antitumour antibiotic - 18537B/10
• ZELL- 25.10.77 MASCH ZELL KRUCKELS D15 *DT 2747-807
Recycled activated sludge thickener - 33574B/18

31-F BD
6714-739 Q00
-486-884 R20
0021-628 R30
-877-277 S32
1617-416 T38
-142-991 V38
1551-107 Q01
1157-947 Q01
-611-597 B18

45-R ADE
-737-027 R05+
1966-450 X40+
1939-136 R06
6911-879 R07
2015-107 R39
3574-823 S16
6905-437 S16
1284-544 T32
1284-545 T32
1284-546 T32
1966-450 T38
-915-581 T50
1966-449 U26
-539-678 U44
-539-433 U44
-539-432 U44
-937-169 U49
-937-870 U52
-943-068 V11
1939-136 Y11+
8007-505 A15+
RE29-634 A27+
1966-449 B18+

98-R D
1916-721 R44
1916-721 B18

20-R D
2020-303 R45
2040-283 S14
3661-505 T22
1286-722 T34
3702-350 T47
2020-303 B18

77-R D
-750-310 R45
7006-809 R46
2023-138 R47
2022-498 R50
-922-572 U13
1312-473 U14
3809-767 V20
2023-138 W48
9007-858 B18

19-R D
-751-390 R48
6908-779 R49
2027-019 R50
7003-487 S09
2045-815 S19
1309-282 U10
-531-885 U12
-926-777 U23
3038-863 U47
-150-332 X38
2027-019 Y15
4150-113 B18

3-R D
1217-395 R51
-876-857 S31
-155-176 A05
1767-049 B18

3-S DE
1237-923 S26+
-889-328 T02
-514-528 T03
-521-296 T26
-523-212 T34
2043-526 T46
2043-526 T46
3019-613 U25
3872-172 W13
3935-275 X06
-149-478 X24+
3962-283 X25+
3965-198 X27+
3974-226 X34+
3939-206 X09+
3984-446 X42+
793-854 B18+

56931-S D
BE -763-311 S35+
NL 7103-150 S39
DT 2110-030 S39
J4 6002-331 S42
FR 2082-249 T08
ZA 7100-933 T41
FR 2112-766 T41
US 3755-206 U37
GB 1339-069 U48
CH -551-485 V36+
CA -955-143 V41+
GB 1339-069 X52+
J7 9007-804 B18+

63098-S DE
BE -764-899 S39
NL 7104-128 S41
DT 2015-068 S43
J4 6003-821 S45
J4 6003-812 S45
FR 2087-873 T12
GB 1282-078 T29
CH -560-721 W21
DS 2015-068 X31
US 4020-101 Y18
J7 9007-775 B18

81270-S D
BE -768-547 S51
DT 2128-463 T01
NL 7108-231 T01
J4 7001-323 T05
FR 2096-308 T19
GB 1296-420 T46
ZA 7103-806 U06
CH -532-900 U19
CA -944-607 V18
DS 2128-463 B18

29530-T D
DT 2149-986 T19
ZA 7107-027 T32
US 3729-321 U19
GB 1322-610 U28
GB 1322-609 U28
CA -949-907 V28
DS 2149-986 Y08
SU -519-140 Y11
J4 7009-744 B18
J7 9007-880 B18

31080-T D
DT 2053-257 T20
BE -774-495 T20
NL 7018-872 T20
CA -905-984 T32
FR 2110-145 T39
US 3733-343 U22
SU -353-410 U29
GB 1326-049 U32
J7 6002-483 X08
DS 2053-257 B18

43245-T D
NL 7117-540 T27
BE -776-972 T27
DT 2162-651 T29
J4 7014-353 T34
FR 2119-489 T48
GB 1335-596 U44
CH -560-013 W17
OE 7110-966 X03
US 4001-441 Y03
CA 1006-040 Y11
J7 9007-865 B18

64041-T BD
BE -781-253 T40
NL 7204-068 T42
DT 2213-674 T45
J4 7029-582 T52
ZA 7201-668 U05
FR 2130-730 U06
DL --95-086 U11
US 3869-347 W11
GB 1394-231 W20
CA -976-899 W46
CH -577-557 X34
US 3975-366 X35
CS 7201-889 X43
DS 2213-674 Y36
RU --62-299 A27
SU -588-927 A51
J7 9007-876 B18

76318-T BCDE
NL 7205-866 T48
DT 2216-108 T49
BE -783-251 U01
FR 2139-421 U12
J4 8048-465 U37
DL -101-094 V01
CH -552-338 V39
GB 1390-443 W15
OE 7308-694 W19
US 4150-026 B18

05747-U D
NL 7209-532 U05
BE -785-810 U06
DT 2232-645 U07
ZA 7204-554 U17
FR 2145-486 U18
US 3821-086 V28
GB 1368-650 V40
CH -554-941 V46
IL --39-809 W33
CA -978-118 W49
US 3989-597 X46
US 3989-596 X46
US RE29-130 Y06
US RE29-136 Y08
CA 1030-087 A19
J5 3044-682 A22
DS 2232-645 A30
NL -158-846 B02
J4 8018-487 B18
J7 9007-873 B18

09092-U D
US 3713-837 U07+
CA -921-756 U11
J4 8023-967 U26
CA -974-815 W41
J7 9007-867 B18

61989-U D
DT 2214-730 U42
GB 1420-938 X03
OE 7209-008 A35
OE 7605-623 B09
OE 7605-624 B18

07796-V D
FR 2182-105 V05
US 3818-846 V27
J4 9047-261 V28
GB 1434-789 X19
CH -579-236 X39
CA 1002-734 Y04
J7 9007-274 B18

09482-V D
DT 2234-099 V06
DS 2234-099 B18

12253-V D
J4 8088-225 V07
J7 9007-860 B18

27500-V D
DT 2349-029 V15
US 3817-857 V26
FR 2201-259 V27
ZA 7307-425 V40
US 3869-380 W11
GB 1418-584 W52
CA -998-481 X44
CH -594-569 A09
US RE29-969 B18+

41975-V D
DT 2354-136 V23
NL 7315-653 V23
FR 2206-913 V38
US 3858-855 W03
CA -987-626 X19
GB 1449-037 X37
CA 1000-229 X50
US RE29-967 B18+

70545-V DEH
NL 7403-589 V40+
DT 2413-170 V41+
FR 2222-341 W03+
J4 9117-413 W08
J5 0100-003 W46
J5 0100-004 W46
US 3923-918 W51
US 3981-930 X40+
GB 1450-753 X40+
DS 2413-170 Y24+
CA 1026-383 A09+

CA 1037-502 A37+
CH -605-502 A41+
CH -605-483 A41+
J5 3111-002 A44
J7 9007-765 B18

71173-V BD
BE -812-858 V41+
NL 7403-978 V42+
DT 2316-637 V43+
DK 7401-723 V48+
SW 7404-115 V48+
DT 2315-501 V43
SF 7400-941 W01+
FR 2223-696 W04+
DL -110-356 W11+
J5 0027-593 W20
ZA 7401-993 W22
US 3925-164 W52+
GB 1429-526 X13+
IL --44-480 Y07+
CH -594-887 A09+
NL -157-111 A26+
IT 1024-524 A39
DS 2315-501 B18

71174-V ADE
BE -812-860 V41
NL 7404-353 V42
DT 2415-310 V42
DK 7401-737 V49
FR 2223-351 W04
J4 9126-887 W06
DL -111-067 W15
ZA 7402-031 W18
GB 1426-137 X09
DS 2415-310 X16
CS 7402-285 Y40
J7 9007-875 B18

85057-V DEG
J4 9057-008 V49
J7 9007-805 B18

03814-W DJ
BE -817-098 W03
NL 7408-790 W03
SW 7408-598 W08
DK 7403-380 W11
DT 2333-068 W13
FR 2235-083 W15
J5 0070-289 W32
GB 1476-957 Y24
DS 2333-068 Y36
CH -592-578 Y48
OE 7405-379 A13
OE 7707-543 B18

15382-W DE
NL 7408-382 W09+
DT 2437-828 W10+
J5 0042-074 W24+
FR 2244-412 W26+
GB 1441-492 X27+
CH -598-209 A19+
CH -598-775 A24+
CA 1040-002 A43
CA 1040-648 A44
SU -612-625 B18+

24652-W AD
DT 2445-880 W15
BE -820-393 W15
FR 2245-765 W27
SF 7402-836 W28
GB 1454-850 X45
US 3990-943 X47
DS 2445-880 Y48
J5 0058-283 B18
J7 9007-874 B18

26235-W BD
DT 2447-050 W16
NL 7413-127 W17
FR 2246-567 W28
DK 7405-221 W28
J5 0063-186 W30
DL -118-654 X22
CA 1034-495 A30
SU -611-595 B18

41028-W CD
BE -825-092 W25
NL 7413-804 X14
DT 2449-605 X14
J5 1039-279 X20
FR 2285-083 X27
GB 1458-638 X51

OE 7410-057 Y01
DS 2449-605 Y03
US 4011-346 Y11
CH -596-778 A15
NL -159-266 B10
J7 9007-706 B18

43439-W DE
J4 9133-527 W26
J7 9007-856 B18

49706-W D
DT 2500-597 W30
NL 7500-283 W31
SW 7500-274 W36
BE -828-972 W41
FR 2257-683 W44
J5 0100-287 X04
DL -116-853 X10
DL -120-468 X32
US 3992-261 X48
GB 1466-009 Y09
J5 0100-286 A12
J7 8005-749 A12+
J7 8006-232 A13
HU T015-484 A41
IT 1026-306 A49
SU -611-596 B18

50975-W AD
BE -826-614 W31+
DT 2510-840 W39+
NL 7502-989 W40+
DK 7500-981 W50+
FR 2263-707 X01+
DL -117-804 X18+
PT --63-473 X25+
J5 1051-537 X25
US 3997-674 X52+
ZA 7602-330 Y19+
GB 1500-534 A06+
CS 7501-667 A10+
OE 7501-949 A22
J7 9007-862 B18

51156-W D
DT 2402-947 W31
FR 2260-959 W49+
DS 2402-947 B18

52741-W BCD
DT 2501-788 W32+
BE -824-781 W32+
NL 7500-845 W33+
SW 7500-793 W38+
DK 7500-227 W42+
ZA 7500-039 X13
PT --63-272 X19+
DL -119-790 X28+
J5 1125-069 X51
DL -125-212 Y25
DL -125-213 Y25
DL -125-211 Y25
FR 2333-801 Y37+
GB 1499-582 A05+
J5 1125-069 X51+
OE 7500-426 B18+

65913-W DH
DT 2511-436 W40
J5 0132-172 W51
FR 2264-870 X02
DS 2511-436 Y43
GB 1494-742 Y50
SU -611-594 B18

72840-W BCD
DT 2517-316 W44+
BE -827-926 W44+
NL 7504-621 W45+
NO 7501-407 W51+
J5 0142-591 X02+
FR 2267-778 X06+
DK 7501-672 X07+
SF 7501-133 X07+
J5 0142-789 X02+
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75591-W D
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US RE29-970 B18+

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J7 9007-696 B18

21409-X D
J5 1013-663 X12
J7 9007-697 B18

22747-X ADL
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28465-X DJM
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44721-X DJ
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J7 9007-512 B18

50869-X CD
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DK 7703-601 B13+
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=421 49755A D16

OE 7802
=302 73034A D18

PT --68
=127 80247A B04D16
=129 87857A D25E33
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#178 46196A A11D22F04P3+Q7
=207 86149A D13
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#230 78711A D13
=236 33354B D25E34
=245 06080B D15J01

SF 7802
=380 33689B A97D12

SU -611
=594 65913W D16H04
=595 26235W B04D16
=596 49706W D17
=597 31931F B04D16
•599 34628B D13P1R2
•600 34629B D12
•601 34630B C03D13
•603 34631B D13
•604 34632B D14
•611 34633B A96B05D22P3
•641 34653B D15J01
•889 34755B D18
•891 34757B D15
•892 34758B D15
•924 34783B D23
•925 34784B D16
•926 34785B D16
•927 34786B D16
•928 34787B D16
•929 34788B A91D16
•930 34789B D16
•933 34791B D16

SU -612
•134 34840B D17J08Q7
•139 34845B D14Q7
•165 34860B D15E16G02J04R1
•173 34866B D12R1
=625 15382W D13E17
=628 30206X B02C02D13
•672 34879B D11
•673 34880B D11
•674 34881B D12
•675 34882B D13
•676 34883B D13
•677 34884B D13
•689 34888B D14
•694 34890B D14P4
•864 34961B D12Q3

US RE29
=967 41975V D13P1
=969 27500V D15
=970 75591W D15

US 4149
•296 34970B D12
•414 34984B D12R1
•455 34988B D13
=533 30527A B06D21P3
=546 52242Y D18P1
•548 34992B D18E13P1Q7
•549 34993B D18P1
=550 86638Y A88D18P1Q6+P7
=551 70786A D21E19P2
=675 08275A D22P3+Q3
•815 35027B A96D21P2
=848 06301B D21E13
•869 35044B A97C03D16
=893 38480Y D22L02P3
=894 88587Y D21L02+P3
•901 35057B D17J01
=936 24332B D16
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•938 35076B D16J04
•953 35085B D15J03
•968 35097B A35D15J04L02
=969 83280A D15E13M14
=972 60866A A88D15
=979 02324B D18E19F06
•983 35102B D22E13H07M21
•986 35104B A97D25E19
•988 35105B D22E13
•994 35107B D15E36J01
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US 4150
=000 88086A D23E17
•001 35109B D25E33
=012 55451A A96D21
•016 35114B D11E19
=024 57076A D25E13P3
=026 76318T B03C01D22E12+P3
=037 76212X D23E13
•038 35124B B02D13E13
=039 72549Y B03C02D23E13+P3
=045 85970A D23E36J01
•069 35139B D25E11
•100 35159B D25E33
•106 35161B A96D21R1
=107 74341W B04D16+R1
•112 35162B B05D21E12
=113 90119R D21
=115 34501Y A96D21
•116 35163B B04D21
•151 35177B A96D21
•152 35178B B04C03D16
=155 23603A B05C01D22

US 4150
•156 35181B B02C02D22E13
=161 67030A D13
•162 35182B C03D13
•163 35183B D13
=216 08578A A96D21
=220 58751A B03D22E13G02

ZA 7702
•996 B D11

ZA 7704
=617 72135Y A96D22P3
=628 10241A B04C03D13
=650 68422Y D22P3
=694 88304Y B06D21P3+Q3
=778 18113A B04D16
=781 68423Y D22P3
=782 02136A A96D22P2
=818 90111Y D25E33

ZA 7705
=038 14040A C03D13E19+P1
=042 14001A D25E17

ZA 7706
•795 B D14P2

ZA 7801
=396 67216A D18E31
=472 51675A D17
=505 55129A B04C03D16
=523 65374A A97C03D13
=579 71158A C01D22E12F06
•596 B D12
=607 78595A B04D13
=703 70810A A82C03D22F09P6
=708 71128A D22E12F06+P3
=732 68934A D25E19F06
=733 70780A A96D21+P2
=813 73150A A97D12+Q3
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=902 58774A B06D13E34
=951 61958A D15J04+Q7
=980 76250A D13

ZA 7802
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=038 88071A D22P3
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=107 63484A D16
#164 76297A B02D16E17
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#312 63668A D16+P4

CENTRAL PATENTS INDEX

CLASSIFIED ALERTING BULLETIN

WEEK B19
27 JUNE 79
35239B - 37137B

Food Science & Technology Information Service
29 FEB
C.F.T.R.I., MYSORE

ABSTRACTS

INDEXES

- II - PATENTEE
- V - BASIC NUMBER
- VII - PATENT NUMBER

Section D:

FOOD
DETERGENTS

COUNTRY	PUB DATE(S)	NUMBER RANGE
BELGIUM		
-Delayed	1 MAY - 7 MAY 79	871,725 - 871,828
-Non Delayed	2 MAY 79	873,263 - 873,369
BRAZIL	24 APR 79	7,705,132 - 7,808,579
DENMARK	17 APR 79	7,704,106 - 7,804,172
E. GERMANY	7 FEB 79 + 14 FEB 79 +	35,468 - 130,915
	21 FEB 79 + 28 FEB 79	134,033 - 134,472
W. GERMANY		
-DAS	3 MAY 79	1,442,443 - 2,847,616
-OLS	3 MAY 79	2,726,855 - 2,847,805
FRANCE*	2 MAR 79	2,399,195 - 2,399,786
	(BOPI 6 APR 79)	
UNITED KINGDOM	10 MAY 79	1,545,291 - 1,545,710
		2,006,591 - 2,007,070
JAPAN		
-Unexamined	—	46,006,848 - 53,091,592
	30 MAR - 5 APR 79	54,040,501 - 54,043,185
-Examined	12 APR - 18 APR 79	79,008,001 - 79,008,800
NETHERLANDS	23 APR - 29 APR 79	7,704,189 - 7,810,662
NORWAY	17 APR 79	7,703,087 - 7,900,730
SOVIET UNION	—	130,171 - 613,881
SWEDEN**	23 APR 79	7,709,271 - 7,900,386
UNITED STATES		
-Reissues	24 APR 79	Re29,972 - Re29,976
-Patents	24 APR 79	4,150,442 - 4,151,611
PCT	3 MAY 79	7,900,216 - 7,900,245

*Printed patents actually published mid April 1979

**Includes numbered Basics from Week B06

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Arrangement of Abstracts

See Appendix I for definition of 'Major' and 'Minor' Countries.

'MAJOR' COUNTRIES – An alerting abstract of every basic and examined equivalent document is provided except for equivalents from Canada, East Germany and Switzerland. The abstracts are arranged in CPI class order and within any one of the 135 classes are in country and patent number order.

'MINOR' COUNTRIES – Basic headings are included in sequence with the entries from the 'Major' countries.

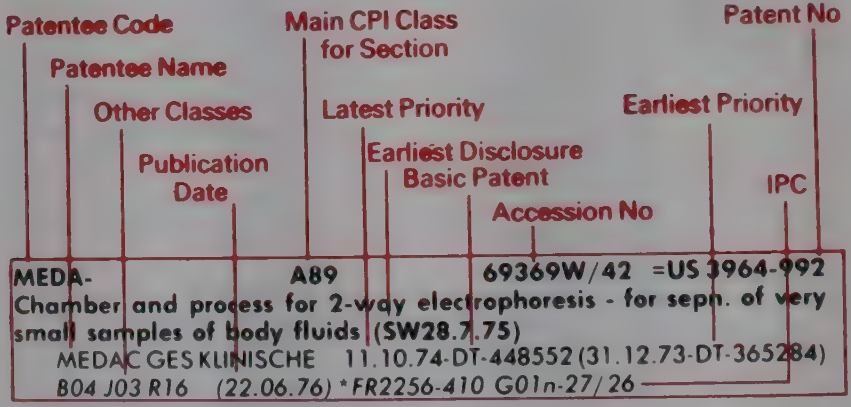
CPI Section Headings

See inside cover for further details.

A	Polymer Chemistry
A+	Polymer Applns.
AE	Polymer & General Chemistry
B	Pharmaceuticals
C	Agricultural Chemistry
D	Food, Disinfectants, Detergents
E	General Chemistry
E+	General Chemistry Applns.
F	Textiles, Paper, Cellulose
G	Printing, Coating, Photographic Chemistry
H	Petroleum
J	Chemical Engineering
K	Nucleonics, Explosives, Protection
L	Refractories, Ceramics
M	Metallurgy

Typical Abstract Heading

See CPI/WPI Instruction Manual No. 1A for explanation of the various flagged descriptors.


Patentee Code
Patentee Name
Other Classes
Publication Date
Main CPI Class for Section
Latest Priority
Earliest Disclosure
Basic Patent
Accession No
Patent No
Earliest Priority
IPC

MEDA- **A89** **69369W/42 =US 3964-992**
Chamber and process for 2-way electrophoresis - for sepn. of very small samples of body fluids (SW28.7.75)
MEDAC GES KLINISCHE 11.10.74-DT-448552 (31.12.73-DT-365284)
*B04 J03 R16 (22.06.76) *FR2256-410 G01n-27/26*

Copies of Specifications may be ordered from our PATENTS SUPPLY DIVISION.

D1: FOOD; FERMENTATION

D11 : BAKING

BOSC D11 48010A/27 =DS 2658-686
Baking oven with hot-air fan - has switch connecting grill in series with fan heater
BOSCH-SIEMENS HAUSG 23.12.76-DT-658686
*Q74 R59 (03.05.79) *DT2658-686 A21b-01/26 F24c-15 H05b-01/02*

Domestic oven with hot air circulation for use in unfreezing, roasting, grilling and baking includes in the circuit for the air heater and the grill heating element a temp. controller upstream of the main switch. The branch circuit for the grill heating element has a safety temp. limiter which can be connected in series with the temp. controller. The latter can be shunted by a switch for a pure grilling operation.

Simple method is provided for operating the oven for its different purposes. The safety temp. limiter prevents overheating of the muffle. A third element can be added to provide bottom heat for baking. 23.12.76 as 658686. (4pp39)

ABER/ D11 04335B/03 =DS 2731-025
Healing herb extract-contg. bread prepn. - prepd. using herb extn. in medium contg. fermentation acid, or salt, e.g. natural leaven
ABERHAM H 08.07.77-DT-731025
*(03.05.79) *DT2731-025 A21d-02/36*

A plant bread is made contg. e.g., mistletoe, hawthorn, parsley or horseradish. The plant is allowed to swell in a 0.1-1.5 molar soln. of lactic, citric, acetic or tartaric acid or their alkali(ne earth) salts.

The resulting soln. is added to bread dough, which is then baked in the normal way. The bread has health-giving properties. 8.7.77 as 731025. (3pp068)

WERN ★ D11 35447B/19 ★DS 2829-937
Air circulation baking oven - with two ventilators revolving in same direction and flow reversal by flap valves
WERNER & PFLEIDERER 07.07.78-DT-829937
(03.05.79) A21b-01/26

A baking oven is equipped with two circulation ventilators which rotate continuously in the same direction. Distributor ducts on both sides of the baking space are equipped with flap valves by which the hot air flow through the baking space can be reversed. A cross channel joins the two delivery ends of the ventilators.

This saves power losses caused by a reversal of the ventilators and prevents overheating of the heat exchanger during reversal. The design results in a smaller overall height and in good thermal and circulating efficiency. 7.7.78 as 829937. (4pp39)

WINK ★ D11 35578B/19 ★DT 2748-959
Dough dividing machine - includes rotating drum having dough portioning chamber from which dough is ejected onto conveyor
FR WINKLER KG 02.11.77-DT-748959
(03.05.79) A21c-05/04

A dough dividing machine has a revolving drum with a dough portion chamber having a cam-controlled piston in it. The discharge belt conveyor is arranged above this drum and contacts the drum tangentially with its feed end. The discharge position of the portion chamber is tilted upwards relative to the filling position.

This provides the optimum discharge height for the dough portions for further processing and ensures good access to the dough funnel. The dough is not kept pressurised during the whole time of its retention in the drum so that its raising properties are not affected. 2.11.77 as 748959 (19pp39)

WINK ★ D11 35588B/19 ★DT 2748-988
Dough dividing machine ejecting several portions simultaneously - works without complicated and expensive cam operated ejecting levers
FR WINKLER KG 02.11.77-DT-748988
(03.05.79) A21c-05/04

The dispensing chamber cylinder of a dough dividing machine pivots between a filling and an ejecting position, and has one or more dispensing chambers in each of which there is a radially displaceable piston.

In the filling position, a piston presses the dough into the corresponding chamber. The dispensing chamber piston is free to move in the chamber, and inside the hollow of the dispensing chamber cylinder, there is an adjustable measuring stop which limits the inwards motion of the dispensing chamber piston at the predetermined full point. A fixed ejector stop is also provided which, in the zone of the ejecting position, makes contact with the dispensing chamber piston along a curved end face determining the ejection stroke.

Arrangement is partic. useful when a number of dispensing chambers are arranged along a mantle line of the dispensing cylinder, for the simultaneous ejection of dough portions for rolls, etc. The cam controlled levers of conventional machines are very expensive to install and maintain. The present design is much simpler and completely efficient. 2.11.77 as 748988 (16pp1045)

ALTO- ★ D11 35619B/19 ★DT 2842-011
Piercing machine for English muffins forming sawtooth tear - is easily and quickly rendered inactive and energised again
ALTO CORP 01.11.77-US-847662
(03.05.79) A21c-15/04

In a machine frame through which English muffins are transported on a conveyor from the inlet to the outlet, two endless chains run alongside the conveyor, in the same direction and at the same speed. The chains support carriages each of which holds a set of sharp lances and as the carriages move forward, the lances are made to project at right angles to the conveyor. Alongside the conveyor also there is a first curved camplate. This is positioned between the conveyor and the path followed normally by the lance carriages. This plate is fixed solidly to the frame whilst a second curved camplate, outside the first, can be displaced between a retracted position away from the normal path of the lance carriages, and an advanced position close to the first camplate and in the normal path of the carriages.

The yielding guide surfaces of the camplates opposed to each other act on the carriages so that in the advanced position of the second plate, its guide surface engages with a cam follower on the carriages as they are moved by the chains, and the lances penetrate the muffins on the conveyor. The cam followers are then engaged with the guide surface of the first camplate, and the lances are withdrawn. On the frame aligned at right angles to the curved camplates and the conveyor, an adjusting mechanism is provided, so that the second camplate on each side of the conveyor may be moved to its advanced or to its retracted position, and the machine delivers as required, pierced or plain muffins. 27.9.78 as 842011 (27pp1045)

PENN D11 38025X/20 #GB 1545-320
Dough improver compsn contg oxidising agent - and pref azodicarbonamide with edible salt hydrate to reduce fire hazard
PENNWALT CORP 17.05.74-US-470767 (06.04.76-GB-013953)
*E16 (E33 E34) (10.05.79) *US3954-999 A21d-02/02*

A powdered additive for improving flour and dough comprises in admixture a strong flour oxidising agent, an org-

anic flour or dough improving agent, and an edibly accept-
able, hydrated salt which is inert with respect to oxidising
and improving agents.

The proportion of hydrated salt is sufficient to provide
in additive 15-50 pts. wt. of water, per 100 pts. wt. of
oxidising agent, and to yield a mixt. having Tranzl numb-
er <40. Pref. oxidising agent is alkali(ne earth)metal
bromate, iodate, chlorite, periodate or peroxide.

Handling properties of flour and dough are improved, as is the quality of bread and other bakery prods. prepd. from them. 6.4.76 as 013953 (5pp931).

BREA- D11 83776A/46 =GB 1545-552

Oven heated by circulating air - with air flow pattern altered by pivoting flaps depending on size of item baked

BREADCO SERVICES L 08.06.76-GB-023613

*Q74 (10.05.79) *US4124-016 +A21b-01/26*

Oven for baking bread prods. has a chamber supplied with heated air through horizontal slits in opposite side walls of the chamber. The oven may be converted for making prods. of different size by pivoting swivel brackets mounted in the oven adjacent selected horizontal slits between positions in which the adjacent horizontal slits are closed and positions in which the slits are open. Additional trays may be supported in the oven chamber adjacent the selected horizontal slits. 8.6.76 as 023613 (10pp1363).

ORIY ★ D11 36013B/19 ★J5 4041-343

High quality bread mfr. - using dough contg. wheat flour, L-ascorbic acid and sucrose fatty acid ester as a substitute for potassium bromide

ORIENTAL YEAST KK 05.09.77-JA-105899

(02.04.79) A21d-02/22

The dough contains an agent (I), composed of 100 pts. wt. wheat flour, 5-100 ppm. L-ascorbic acid and 0.005-1 pt. wt. sucrose fatty acid ester of HLB >10, pref. 11-15.

(I) pref. contains calcium stearate, enzyme of Koji and/or lecithine. (I) is mixed with the usual raw materials of dough, such as sugar, salt shortening, etc. 5.9.77 as 105899 (8pp42)

KOMI/ ★ D11 36018B/19 ★J5 4041-362

Glutinous rice cracker prodn. - by freezing starch material, thawing it and mixing it with rice

KOMIYA Y 01.09.77-JA-105696

(02.04.79) A23g-03

The method comprises (1) freezing the starch-material paste, such as sweet potato starch or sake lees, for 1 night, (2) thawing it and (3) mixing it with rice.

A cracker having good texture can be p
large amts. of starch material. By freezing and thawing
the starch material, amylopectin and amylose are sepd.
and the texture of the cracker can be improved. 1.9.77
as 105696 (3pp42)

VENZ/ ★ D11 36910B/19 ★US 4150-935

Appts. for automatically cutting and rolling cannoli - from rolls of laminated dough, carried on conveyor and spirally wound on cylindrical former

VENZO D 26.07.76-US-708879

(24.04.79) A21c-09/08 A21c-11/10

Appts. comprises a conveyor belt which receives strips of dough diagonally inclined to the axis of the belt. The belt includes a first section spaced from a lower second station by a vertical step defined by rolls. At this step is located the cannoli forming station where the dough strip is guided onto a cylindrical metal former which rotates to wind the strip spirally onto it.

A set of three rollers presses the dough onto the forme during rotation and in addition a further roller presses the downstream end of the dough into the remainder to provide adhesion.

Different shapes of cannoli canbe formed by altering the diagonal angle of the dough on the conveyor, by substituting conical formers for cylindrical or by reciprocating the former during the winding. 26.7.76 as 708879 (8pp295).

GENM ★ D11 37090B/19 ★US 4151-307

Doughs contg. starch prods. and tempeh - for preparing high protein, low fat fried snack foods

GENERAL MILLS INC 02.12.74-US-528601

*(24.04.79) A23l-01/**

The known process of prepg. a fried snack prod. in which a dough is prepd. from a starch-contg. material (I) (cereal flour, cereal starch, potato flour, potato starch, or mixts.; a portion as pregelatinised starch), the dough is shaped and then the shaped pieces are deep fat fried is improved by using a dough contg. 5-60% by wt. of tempeh (II).

Incorporation of (II) (a fermented soybean prepn.) into the above dough affords crisp, fried prods. which possess increased protein content and reduced fat content. 2.12.74 as 528601 (3pp478).

See Also

D16 DS 2629952 D16 SU 612954

D12: MEAT; FISH PROCESSING

MARI- ★ D12 B/19 ★BR 7706-466

Crab meat extraction process - using suction nozzles connected to vacuum source after cooking and dismembering

MARISCOMAR IND COM 28.09.77-BR-006466

(24.04.79) A22c-29

SIMA/ ★ D12 B/19 ★BR 7706-513

Fish-scaling machine - with horizontal conveyor transporting fish past descaling rollers packing one side

SIMARD A 29.09.77-BR-006513

(24.04.79) A22c-25/02

FRAN/ ★ D12 35307B/19 ★DL -134-041

Fish filleting machine guide element - with springy rods of different length and adjustment strap for free length

FRANK H 07.12.77-DL-202446

(07.02.79) A22c-25/08

The guide element is arranged on both sides of the flank cutters to which the fish are fed by endless conveyors, acting on the sides, as they slide on ventral cavity slideways. The guide element is composed of an array of rods of different length which can deflect independent of each other. These rods are clamped between two parallel straps at one end and can be adjusted as regards their gradient. An adjustment clip across them can be used to make the freely deflecting ends of the rods smaller when smaller fish have to be filleted.

These rods exert a differential pressure against the fish on the slideways and keep the fishbones parallel to the cutter plane. 7.12.77 as 202446(6pp39)

NMHB ★ D12 35308B/19 ★DL -134-0

Fish skinning machine - has retractable catch face above cuttir blade ZA 30.1.79)

NORDISCH MASCH R BAADER 20.03.78-ZA-001596 (22.02.7 DL-203800)

(07.02.79) A22c-25

A skinning machine for fish (fillets) has on the rear face of the skinning blade near its cutting edge a slider with a catch face of 2-6mm wide. Springs enable the slider to move in the direction of movement of the fish.

A steady run-in of the skin is ensured so that the blad can sever the tendons and ligaments between skin and meat. 22.2.78 as 203800(13pp39)

NODH D12 15004U/11 =DS 2222-205
Shaped frozen food - extruded in a variety of shapes for eg fish fingers and steaklets
NORDSEE DEUTSCHE HO GMBH (UNIL) 05.05.72-DT-222205
*P71 +Q75 (03.05.79) *NL7211-775 A23b-04/06*

Deep frozen fish or meat are extruded, in the case of fish to fish fingers, through a nozzle in a pressure-tight channel at below -6°C and at > 100 atmos. The deep frozen material is pressed into this channel which has a cross-section with a convergence of 1.1-3:1 (pref. 1.3-2:1), followed by a constant cross-section.

The structure of the fish or meat is preserved and distortion of the emerging strand is prevented. Portions, cut off to the same length, always have the same weight. 5.5.72 as 222205. (5pp39)

NMHB ★ D12 35445B/19 ★DS 2804-232
Fish processing conveyor - with gripping valves on twin V/belts
NORDISCH MASCH R BAADER 01.02.78-DT-804232
(03.05.79) A22c-25/08

An endless conveyor for a fish processing machine consists of two V-belts, running side-by-side, each with a ine of gripping halves. Above the processing section of he machine, these halves are supported on the outsides by guide rails which urge the gripping halves against a eading bar between them.

This facilitates the adjustment of the conveyor to fishes of different size and gives a greater freedom for additional tools and guides. 1.2.78 as 804232. (4pp39)

GASP/ ★ D12 35532B/19 ★DT 2748-445
ieve plate in filling line of sausage machine - can be cleaned without necessity of dismantling the machine components
GASPAR T A 27.10.77-DT-748445
(03.05.79) A22c-11/02

ieve arrangement fitted between the meat store and the lling socket of a sausage filling or making ma chine, is ormed by a tube penetrating the filling pipe at right angles. nside the tube, a sieve plate, also aligned transversely to e axis of the filling pipe extends the full length of the ross tube. At each end, the sieve plate is provided with etachable fastening covers.

The sieve holds back hard fragments of bone, cartilage, inew, etc., preventing harm to the consumer and allowing greater quantity of edible matter to be derived from the aterial available. It is of simple design. The device ay also be used for cleaning mince, etc. for hamburgers, eat balls and so on. 27.10.77 as 748445 (12pp1045)

EYS- ★ D12 35699B/19 ★DT 2847-286
ensified frozen, meat-fibre slices with surface grooves - simulate arcoal-grilled steaks with light and dark bands
KEYSTONE FOODS CORP 01.11.77-US-847674
(03.05.79) A23l-01/31

slice or plate of densified, frozen, meat particles has, ≥1 of its surfaces, equally spaced grooves. The grooes are sepd. by lands which define the surface of the ate. The grooves are straight and parallel. They run ross the length of the plate from one edge to the other. e pitch of the grooves is equal to the pitch of the rods of charcoal gridiron.

Used to help satisfy the demand for charcoal-grilled eaks, for which only a small amt. of the meat from ch beast is suitable and which are relatively expensive. e prod. has the definite characteristics which are assiated with charcoal-grilled steaks without the unchewab- cartilage, sinew, etc., and is able to reach the mass arket with a quickly prepd. dish. 31.10.78 as 847286 8pp)

PP ★ D12 36015B/19 ★J5 4041-355
aintaining freshness of raw meat - by packing with oxygen-moving agent in oxygen impermeable film and refrigerating
TOPPAN PRINTING KK 07.09.77-JA-107521
(02.04.79) A23b-04/06

w meat is maintained fresh by packing with O_2-removing ent composed of chloride of Mn or Fe Gp. metal, basic d., sulphite and suitable additives, in O_2-impermeable m tightly, and refrigerating.

The red colour of the meat such as beef, pork and horse meat, and red fish meat, such as fluefin and bonito, arises from oxymyoglobin which is produced by oxidn. of myoglobin. Process converts instable oxymyoglobin to stable myoglobin by packing in the absence of O_2. 7.9.77 as 107521 (3pp42)

KONG- ★ D12 36016B/19 ★J5 4041-356
Synthetically coloured meat - prepd. by curing raw meat with a nitrite and a salt-resistant lactic acid bacteria
KONGO KK 08.09.77-JA-108107
(02.04.79) A23l-01/31

The meat (I) is prepd. by curing raw meat (II) with nitrite (III) and salt-resistant lactic acid bacteria (IV).

As (IV), Lactobacillus acidophilus, L.plantorum, L. bulgaricus, L.delbrueckii, Streptococcus lactie, St. cremoris and St. faecalis are used. (IV) is identified by the following test: (a) the pH of the milk- culture medium should be <5.0, after incubation of 1 g. of (IV) at 38-40°C. for 48 hrs.; (b) when 1 g. of (IV) is incubated in 500 ml. of 1%-lactose bouillon-medium at 38-40°C. for 48 hrs., 5 ml. of the medium is diluted to 10 ml. and it is titrated with 0.02 N-NaOH, >5 ml. of the NaOH soln. should be consumed.

(III) had been used for colouring (I) and the use of (III) was prohibited as (III) is a carcinogenic substance. The amt. of (III) in (I) can be reduced when (III) is used with (IV). 8.9.77 as 108107 (4pp42)

KYOW D12 18799Y/11 =J7 9008-735
Dried Euphausia pacific prodn. - by steeping in aq. soln. of e.g. fatty acid glycerine ester, pressing and drying
KYOWA HAKKO KOGYOK 22.07.75-JA-088819
*(18.04.79) *J52012-948 +A23b-04/04*

Euphausia pacific is steeped in an aq. soln. contg. 0.04-0.3% of glycerine ester of a lower fatty acid (e.g. monoglycerine ester of caproic ester), 5-20% of sorbitol, 0.5-10% of propylene glycol and/or 2-10% of glycine and opt. sodium glutamate and common salt. The obtd. Euphausia pacific is pressed and dried to moisture content of 15-30%.

The steeping time is 15-60 min. when Euphausia pacific is employed as it is. The steeping time is 5-30 min. when mashed Euphausia pacific is empolyed. 22.7.75 as 088819A23b-4/04 (18.4.79) KYOWA HAKKO KOGYO K (NISU-) (9pp) (J52012948)

AZOV= ★ D12 36490B/19 ★SU -496-028
Fish filleting machine - has centering grippers and conveyor, abdominal cavity opening knife and cleaning brushes
AZOV BLACK SEA FISH 12.07.71-SU-676227
(05.06.78) A22c-25/14

Fish filleting machine comprises a conveyor having supporting magazines and centering grippers, a disc knife to remove the head from the abdomen side, support strip to limit the depth of cut and fixing the fish in position, and an abdominal cavity opener and cleaner, comprising curved knife and brushes. The opening-up quality is improved and tearing of the body in the region of the shoulder bones is prevented, by placing a spring-loaded oscillating profiled bottom plate inside the centering grippers of each magazine. A disc knife is fastened to the ripping and cleaning shaft at the point of the curved knife. This disc knife rotates about its own axis, so that the abdomen is cut from the anal opening and from behind the head simultaneously.
Zhilin, N.I., Borisov, L.A., Patrakov, Yu.I. Bul. 47/25.12.75. 12.7.71. as 676227 (6pp29)

GIME= ★ D12 36516B/19 ★SU -518-202
Animal hides cleaning installation - has belt and chain conveyors and blades shafts past which hides travel while being sprayed with water
GIMELFARB N M 21.05.74-SU-027194
(10.11.78) A22b-05/08 C14b-01/04

Installation for hygienic processing of hides, e.g. in the meat industry, has mechanisms to supply and move the hides, shaft with blades to clean the hides, mechanism to press the hides to the bladed shaft, douching device, and withdrawal conveyor. Hide quality is increased by making the main feeding mechanism as two belt convey-

ors with a gap between them, and a pair of chain convey-
ors. One of the latter is in the gap between the belt con-
veyors and the other is above it. The links of the upper
chain have rubber shock-absorbers, and the links of the
lower are catch-shaped plates. The bladed shafts are on
both sides of the chain conveyors and at an angle to their
longitudinal axis.
Gimelfarb, N.M., Lugovnev, F.T., Misyura, N.E. Bul.
41/5.11.78. 21.5.74. as 027194 (6pp29)

FARE= ★ D12 36760B/19 ★SU -613-748
Single-operation fish-filleting machine adjustment device - has two-armed brackets to measure fish length and signal to circuit controlling cutting attachments
FAR-E KUIBYSHEV POL 13.11.74-SU-075891
(01.06.78) A22c-25/14

The proposed system is used to adjust the working unit in
a single-operation fish-filleting machine, depending on
the length of the fish, as they are arranged on the convey-
or at right angles to the motion. An attachment to meas-
ure the fish length consists of rotating two-armed brack-
ets fixed parallel to one another above the conveyor, for
probing the lower ends of the fish. This is accompanied
by a measuring arm, executive mechanism, and control
system made up of a memory unit, stepping motor, photo-
sensors, disjunctor, commutators and amplifier connec-
ted to the stepping motor. A pulse generator and distri-
butor are connected together.

Productivity is increased, by providing an additional control system for the executive mechanism, the construction of which is similarly based. The input of this extra system is connected to the photoelectric sensors, and the output of each system is controlled by a disjunctor connected to the input of the commutator.

Sobchenko, V.V., Tokmakov, V.M., Tokmakova, L.I. et al. Bul. 25/5.7.78. 13.11.74. as 075891 (6pp29)

SCAN- ★ D12 B/19 ★SW 7710-511
Sausage stuffer with stuffing tubes mounted on rotary holder - twists ends of sausages using rotation of holder combined with rotation of tubes around their axes
SCAN VAST EK FOR 20.09.77-SW-010511
(23.04.79) A22c-11/02

A number of injection tubes are mounted on the rotary holder of an injection head at the outlet of a sausage mixt. injector. The tubes converge towards the axis of the rotary holder.

A drive mechanism periodically rotates the tubes around their axes and rotates the holder, to twist the ends of the individual sausages. A gripper holds the newly formed sausages during twisting, and feeds them forward while the subsequent sausages are being filled. 20.9.77 as 010511 (-pp1407)

SICL/ ★ D12 36852B/19 ★US 4150-459
Domestic meatball maker - with handle gears rotating scoop halves within outer scoop
SICLARI A 19.05.77-US-798631
(24.04.79) A22c-07

A base has a handle attached to one end and an outer scoop to the other, with a pair of inner scoops pivoted to the outer scoop. A pin is attached to each inner scoop and passes through the outer, with a gear on each pin end engaging a central vertical circular gear
se.

A connecting rod is attached offset to the central gear
and its other end is connected to a tooth gear rotatable on
the base and engaging a toothed rack slidable in the base.
There is pref. a spring returning the rack to the scoop
open position. 19.5.77 as 798631 (4pp1358).

CLAR/ ★ D12 36853B/19 ★US 4150-46
Fish or small game holder used during processing - having manuall operable gripping jaws
CLARK V D 07.04.78-US-894443
(24.04.79) A22c-25/06

The holder comprises an inner stationary support shaft surrounded by a coaxial outer, rotatable tube slidable on the shact. Coacting upper and lower jaws are located at the outer end of the tube, the upper jaw being reciprocably movable between closed and open positions with respect to the lower jaw.

Spaced operating handles are secured to the outside of the tube, the first handle effecting the reciprocating action of the upper jaw, and the second handle effecting a predetermined rotation of the tube about the shaft.

The use of the holder obviates all handling of the carcass except its attachment to and removal from the holde
7.4.78 as 894443 (5pp295).

REIL/ ★ D12 36858B/19 ★US 4150-5
Appts. for packaging meat joints in sleeve of elasticated nettin
has piston driven in cylinder by compressed air
REILLY J 12.01.78-US-868838
Q31 (24.04.79) A22c-11/06 B65b-39/06

A packaging apparatus comprises a cylinder in which is
freely movable piston. The cylinder is open at one end a
at the other end is connected to a rigid tube of smaller
cross-sectional area than the cylinder. The other end o
tube is connected to a source of compressed air for actu
ion of the piston.

The end of the tube remote from the cylinder is rel
ably secured to a support. The tube can be released for
loading with an external sleeve of elasticated netting in
unexpanded state.

The apparatus is used for packing rolls or pieces of meat in a sleeve of elasticated netting.

A long length of netting e.g. up to 50 metres can eas
be mounted on the tube. 12.1.78 as 868838 (7pp295).

TEEP ★ D12 36883B/19 ★US 4150-
Improving cellulosic sausage casing adhesion to filling - pretreatment with surface activating energy, pref. UV radiatio
corona discharge
TEE PAK INC 17.03.78-US-887407
A97 Q67 (A11 A35) (24.04.79) B29f-05 F16l-11

In the mfr. of cellulosic casings for sausages, the
surfaces which contact the filling are exposed to a sour
of surface activating energy to change the surface of th
casing so that it shrinks with the sausage filling during
processing.

Sepn. of the casing from the filling when it shrinks,
with attendant problems, is avoided, but the casing ca
easily be peeled from the meat. 17.3.78 as 887407 (4

See Also

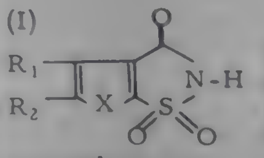
D13 GB 1545457

D13: OTHER FOODSTUFFS

THOM ★ D13 35252B/19 ★BE -871-772
Furo and thieno (3,2-d)-isothiazole-3-one-1,1 di:oxide(s) - artificial sweetening agents with high activity and low toxicity and side effects
THOMAE K GMBH 09.09.78-DT-839266 (05.11.77-DT-749640)
B02 E13 (03.05.79) A23l C07d

Condensed isothiazol-3-(2H)-one-1,1-dioxides of formula (I) and their salts with organic or mineral bases are new.

(I)



In (I) X is O or S; R_1 is H or (m)
and R_2 is (m)ethyl, (I) are sweeteni
agents which is physiologically inof
sive, has similar sweetening power
known sweet eners, has no unpleasa
secondary taste and no toxic side-effects. 3.11.78 a
871772 (31pp395)

MILE- ★ D13 35303B/19 ★BE -873-360
reserving herbs to avoid loss of volatiles - by cutting up in food oil nd packaging
MILERB AG 09.01.78-CH-000252
(02.05.79) A23b

Process comprises dividing or totally fragmenting freshly ut herbs in an oil bath to retain the volatile natural ssences in a coating of fat, then packing the prepd. herbs

The division of the herbs in the oil pref. takes place in he total or partial absence of air or under pressure. Up to 2 wt. % salt is pref. added based on the wt. of herbs and bsorbed oil.

Loss of flavour is avoided. The prepd. herbs when used re immediately effective unlike dried or lyophilised erbs which require prolonged maceration and the use of larger amt. owing to loss of volatiles. 9.1.79 as 873360 5pp597)

RM D13 54472S/34 #DS 1695-505
ynthetic flavour - modifying agents for coffee and other beverages nd foods
FIRMENICH SA 29.04.66-CA-959164 (30.04.65-US-452342)
*E13 (05.04.79) *CA-878-421 +A23l-01/22*

aphthalene cpds. (I) are used to alter the taste of food and rinks or as components in flavouring agents. (I) are α-methyl-, β-methyl-, α-ethyl- and β-ethyl-naphthalene, ,2-, 1,3-, 1,4-, 1,5-, 1,6-, 2,3-, 1-7-, 2,7- and 2,6-imethyl-naphthalene and 1,3,7-, 2,3,5- and 2,3,6-tri-ethyl-naphthalene. 29.4.66 as 695505. (4pp068)

UGO- D13 64910V/37 =DS 2404-848
oft cheese mould cells - with distance pieces and twin block oupling pins
SOC ET HUGONNET 27.02.73-FR-007638
*P13 (03.05.79) *DT2404-848 A01j-25/12*

he parent patent described a plastic injection moulding or the mfr. of soft cheese, consisting of square moulds ith rounded corners and held together by short webs at he centre of the walls.

In this addn. the moulds are stacked above each other nd are secured by four pairs of pins at the corners of an ntersection of four mould sections. These pins protrude rom the side walls and enter the gap of the next mould; a ib between the pins of each pair improves their stability.

This secures an aligned stacking and ensures a smooth oint of the sets of moulds. 1.2.74 as 404848. Add. to 115102. (3pp39)

OQF D13 48101W/29 =DS 2500-200
luids recovering potato protein from amniotic liqs. - by flocculating ith nascent sulphur dioxide
ROQUETTE FRERES SA 04.01.74-FR-000310
*C03 F09 (D15) (03.05.79) *DT2500-200 A23j-01/16*

otato proteins (I) are obtd. from potato red-water by he eating it at 80-140°C in the presence of SO_2 and at a pH f 4.6-5.2 and sepg. the flocculate obtd. The presence f SO_2 in the potato red-water is obtd. by adding a sulphite o the potatoes before rasping. The pH is adjusted with norganic- or organic-acids.

(I) may be used as feedstuff components esp. in the repn. of synthetic milk for young animals and for com-osite feed for domestic animals; or in human foodstuffs sp. in the prepn. of spun proteins; as reconstituted pota-o slurry for swollen prods. of the nibble-type. The resi-ual water can be used to isolate other components pres-nt. (I) are pure prods. useful for consumption. 3.1.75 s 500200. (9pp279)

AERE D13 25399Y/15 =DS 2543-543
ompsn. for determining degree of oxidn. of fats - contains lcoholic base and redox indicator
MERCK PATENT GMBH 30.09.75-DT-543543
*E14 R16 (03.05.79) *DT2543-543 G01n-31/22 G01n-33/02*

olorimetric determn. of the degree of oxidn. of a fat or food contg. fat is effected. The determining agent is an lcoholic base and as redox indicator bromophenol blue, hymol blue, xylenol orange, bromocresol purple, methyl-ne violet, methylene green or patent blue.

Testing molten fat, the agent gives a blue colour if the at is good. If the fat contains $>$ 0.7% oxidised fat acids the colour changes to yellow-to-brown. 30.9.75 as 543543. (4pp068)

WESS D13 90107Y/51 =DS 2636-882
Continuous mfr. of cream cheese from skimmed milk - with extra heat treatment and more rennet to raise yield
WESTFALIA SEPARATOR AG 17.08.76-DT-636882
*P13 (03.05.79) *BE-857-862 A23c-19/02*

Cottage cheese is continuously obtd. from skimmed milk in a centrifuge. The skimmed milk is held at 90-95°C for 2-3 mins. Then three times the usual amt. of rennet is added and an acid culture. The coagulated milk is then subjected to 55-60°C for 1-2 mins. 17.8.76 as 636882. (4pp068)

KUNZ/ D13 19796A/11 =DS 2639-117
Pumpkin peeling machine - with steam peeling station and water sprays for skin and pip removal in wash station
KUNZ P 31.08.76-DT-639117
*(03.05.79) *DT2639-117 A23n-07*

Gourds and similar fruits are peeled by cutting them in halves and laying the halves, with the cut side down, on the pallets of a roller table, which takes them to a stream peeler tunnel where they are exposed to wet steam. In the next station, jets of water remove the peel and the soft flesh with the pips.

Manual labour is reduced and the wastage is reduced to 20%. 31.8.76 as 639117. (4pp39)

SCHA/ D13 12320A/07 =DS 2643-093
Feed or feed additives for cattle from agricultural waste - both structured and non-structured, esp. straw and whey
SCHANZE R 24.09.76-DT-643093
*C03 (03.05.79) *BE-859-010 A23k-01/20*

Feedstuffs or feedstuff-additives (I) are prepd. by comminuting cereal straw, leguminose straw, maize spindles or mixts. adding whey, protein-enriched residues of milk prepn., molasses-residues, other residues, pure feed quality of α-cellulose starch, beer yeast, spent malt, brewery-, distillery- and fermentation-residues, sediment- and kieselguhr-residues, chitin or their mixts. and opt. water, before-, during- or after-comminution. The mixt. obtd. is opt. further mixed and dried and worked up to form compressed feedstuff or additives contg. 25-80wt.% significant straw and 75-20wt.% of signified other ingredients.

(I) are suitable for all types of animals but esp. for ruminants. They may also be used in feeding horses, pigs, etc. in zoos and for feeding wild animals esp. in winter. 24.9.76 as 643093. (8pp279)

BOSS/ D13 65570A/37 =DS 2709-750
Rinsing agents for cleaning foodstuffs - contg. surface active agents, sequestering agents, redox agents, buffers and preservatives
BOSSERT E 05.03.77-DT-709750 (00.00.75-DT-539928)
*C03 (03.05.79) *DT2709-750 C11d-01*

Agents (I) added to rinsing water to remove dirt and harmful substances from the surface of food and feedstuffs consists of $\geqslant$1 component of each of (a) 1-10wt.% anionic tenside chosen from sulphates, ether sulphates, sulphonates, sulphoacetates, sulphosuccinates, sarcosinates and protein condensation prods.; (b) 0.1-4wt.% non-ionogenic surfactant chosen from polyoxyethylene-adducts; (c) 1-25-wt.% sequestering agent; (d) 1-4wt.% agents which regulate the redox condition; (e) 5-30wt.% buffers; (f) 0.1-0.5-wt.% preserving agents; (g) residual to 100%; stabilisers, working-up aids, diluents, etc.

(I) may be used for the manual or machine cleaning of food and feedstuffs. Foodstuffs comprise vegetables, fruits, pulse, salad components etc. as well as meat, meat-prods. and fish of any kind. (I) are completely non-toxic, can be used in factories, the home, during camping etc., and remove all dirt and harmful substances such as bacteria, insecticides, fungicides etc. Vegetables washed with (I) taste better and do not discolour. 5.3.77 as 709750, Add. to 2539928. (6pp279)

FARH ★ D13 35568B/19 ★DT 2748-885

Lipoid and water-soluble cpd. extn. from crushed oil seeds - by treatment with ammonia and alcohol, glycol or ether before washing

HOECHST AG 02.11.77-DT-748885 (00.00.76-DT-633666)

C03 (D23) (03.05.79) A23c A23k-01/14 A23l-01/20

Crushed or ground oil seeds are treated with an extn. mixt. of NH_3 or NH_4OH and an organic solvent having formula $R^1-(C_nH_{2n})-OR^2$ (I) (where (a) R^1 and R^2 are H and n is 1, 2 or 3; or (b) R^1 is OH; R^2 is H, Me or Et; and n is 2 or 3). After sepg. the extn. mixt., the seed residue is washed with water.

Prods. contain 0.3-0.8 wt.% lipoids and 0.4-0.9 wt.% nucleic acids, and are used as feedstuffs and nutritional additives. NH_3 acts as solvent and also changes flour structure, whereby extn. time is reduced and activity is improved. Process reduces prod. content of lipoid cpds., unstd. fatty acid oxidn. prods., peptides causing a bitter taste, toxic glucosides, nucleic acids causing gout or urinary calculus. Smell, taste and nutritional value are improved. Protein proportion is increased. 2.11.77 as 748885 Add to 2633666 (11pp200)

CORP ★ D13 35611B/19 ★DT 2816-326

Vital wheat gluten and starch mixt. hydrolysis - with bacterial alpha-amylase, to solubilise starch without denaturing gluten

CPC INTERNATIONAL INC 28.10.77-GB-045061

(D16) (03.05.79) A23j-01/12

In the parent patent, a mixt. of vital wheat fluten and wheat starch, contg. ≥25% protein, is subjected to bacterial α-amylase activity in an aq. medium, at ≥45°C, pH 5-7 and in ≤ 6 hrs., so that a large starch quantity is solubilised without gelatinisation. The vital gluten is then separated from the solubilised starch. Improvement is that solubilisation takes place at 60-80°C in ≤30 (≤ 15) min.

The solubilised starch contains only a min. quantity of solubilised protein, and can be conc. and/or dried, and used directly or after saccharification. 14.4.78 as 816326 Add to 2748750 (8pp200)

GENO ★ D13 35665B/19 ★DT 2846-515

Free-flowing coffee agglomerate leaving no sediment - contains soluble particles and cryogenically finely ground roasted coffee particles

GENERAL FOODS CORP 01.11.77-GB-045478

(03.05.79) A23f-01/12

Coffee prod. consists of free-flowing agglomerates contg. soluble coffee particles and finely ground, roasted coffee. Finely ground, roasted coffee proprtion is 2-20 (8-12) wt.% w.r.t. the 2 coffee components, and has a particle size such that 90 wt.% of the ground coffee can pass through a 75 (25)µ screen.

Granular, soluble coffee obtd. yields min. sediment on preparing beverages. 25.10.78 as 846515 (10pp200)

BERT- ★ D13 35679B/19 ★DT 2846-800

Sterile, oxygen-free, sugar syrup continuous prodn. - for effervescent drinks, without large, difficultly cleaned storage vessels

BERTUZZ SA 02.11.77-IT-029245

(03.05.79) A23l-01/09

Sugar syrup for the mfr. of drinks contg. carbonic acid, which is sterile and free from oxygen, is produced by (a) dissolving sugar in measured amts. of water; (b) injecting carbon dioxide into the soln. to drive out the whole of the air taken up during the dissolving process, and extracting the oxygen also from the air trapped in the liq.; (c) sterilising the carbon dioxide-enriched soln. by UV radiation; (d) adding an aromatic substance; (e) adding carbon dioxide according to step (b) and extracting oxygen.

The air is eliminated without vacuum and the occlusion of oxygen and the subsequent breakdown of the prod. are prevented. The considerable expense of cleaning and maintaining conventional equipment is also saved. 27.10.78 as 846800 (13pp1045)

See page 36 *FR 2399-213/217/218

NEST D13 12609A/07 =GB 1545-333

Fresh cheese having high storage stability - prepd. by pasteurising, heat conditioning in sealed container with added fermentation agent and incubating (NL 6.2.78)

SOC PRODS NESTLE 03.02.77-IT-047896 (02.08.76-IT-050724)

*(10.05.79) *DT2734-825 A23c-19/02*

Cheese is produced by preparing a starting material contg. cheese and subjecting it to a thermal pasteurisation or sterilisation treatment, packaging treated material under heat in a hermetic container(s) or an impermeable coating at same time or after addn. of a fermentation agent.

Treated, packaged material is incubated until fermentation is complete. Pref. starting material is a mixt. of casein, caseinates, milk and whey powders, milk, concentrated milk, ultrafiltered milk, and whey and/or fats.

"Living" cheeses are produced which keep for long periods. 26.7.77 as 031277 (7pp931).

BATT D13 57182A/32 =GB 1545-457

Protein food having meat-like structure - prepd. from amorphou protein compsn. by cooling and mechanical deformation causin fibril orientation (BE 31.7.78)

BATTELLE MEMOR INST 31.01.77-CH-001122

*(D12) (10.05.79) *DT2804-055 +C07g-07/02*

A foodstuff with fibrous texture analogous to that of meat is mfd. by cooling a wet protein mass or dough <0°C, until part of the water solidifies, then subjecting the hardened plastic mass to the action of force and pressure to produce a texture resembling muscular fibres.

Pref. pressure is applied in a manner such as to cause part of the ice of the areas subjected to pressure to melt. Protein material is formed into cold layers and parallel grooves are impressed by mechanical means.

An efficient process is used which is well adapted to the treatment of protein doughs contg. much water, whic have a liq. consistency at room temp, esp. for ground meat offals. 30.1.77 as 003689 (5pp931).

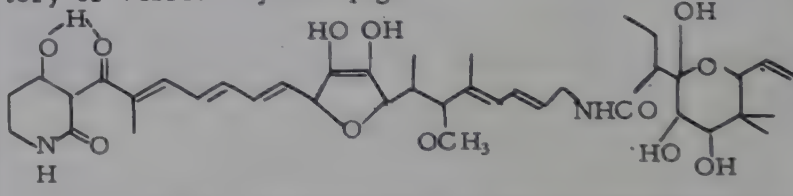
KONN D13 90985X/49 =GB 1545-47

Antibiotic dihydromocimycin and its salts - for control of treponem dysentery in pigs and intermediate by oxidn., for mocymyci (BE161176)

GIST-BROCADES NV 22.07.75-GB-030646 (16.05.75-GB-020926)

*B03 C02 (10.05.79) *DT2621-615 A61k-31/71 C07h-07/06*

Dihydromocimycin of formula (I) and its non-toxic salts are new. (I) is an antibiotic used against Treponema dyse tery or Vibrio Doyle in pigs.



(I

(I) is prepd. by aerobically culturing Streptomyces Camocissimus (CBS 190.69) or one of its mutants, in an aq. medium contg. sources of carbon, nitrogen and inorganic substances. 11.5.76 (17pp997).

PROC ★ D13 35780B/19 ★GB 2006-5

Fabricated potato crisp mfr. - using a dough made from dried pot prepd. using non-peeled potatoes

PROCTER & GAMBLE CO 21.09.77-US-835399

(10.05.79) A23l-01/21

In the prepn. of fabricated potato crisps by forming shee of a dough of water and dehydrated potato and frying the sheets, the improvement comprises using dehydrated po ato prepd. from cooked unpeeled potatoes.

The prod. has an improved potato flavour. 20.9.78 a 037488 (-pp955).

CADB ★ D13 35781B/19 ★GB 2006-

Canned, shaped, textured vegetable protein - by canning parti hydrated articles with water to complete hydration

CADBURY TYPHOO LTD 10.11.78-GB-044083 (13.07.77- 029493)

(10.05.79) A23j-03

A shaped body of comminuted, partially hydrated textur vegetable protein having a particle size to simulate con minuted meat is packaged in a container together with a uantity of water which will be totally absorbed. The conainer is sealed and heated to sterilise the contents.

The process is esp. useful in the prodn. of canned imulated "burgers". Full hydration is achieved without mpairing the shape of the prod. 11.10.78 as 040083 5pp955).

OHM ★ D13 35797B/19 ★GB 2006-729

oarse synthetic hydrous calcium silicate - useful in oil filtering nedia esp. for cooking oil

JOHNS MANVILLE CORP 01.09.78-US-939740 (14.09.77-US-833215)

E33 (D23) (10.05.79) C01b-33/24

ynthetic hydrous calcium silicate compsns. (I) are claimd, having a mole ratio of calcium oxide to silica of 1:1.5 o 1:2.5, particle size distribution with a min. of 8% +325 nesh, a dry bulk density of 6-10 lb. per cu. ft., a permebility of 0.35-0.70 darcies, and an oil soluble Ca conent ≯ 60ppm.

(I) are used in filter media for oils, esp. cooking oils, o remove free fatty acids and colourants, increasing the ervice life of the oil. (I) allow increased rate of flow and ontain low amts. of oil soluble Ca.

(I) are prepd. by hydrothermal reaction of lime and iliceous material, esp. silica. The mole ratio of CaO to iO_2 is esp. 1:1.7 to 1:1.9. Up to 10% of other metal oxids may be present as impurities. 13.9.78 as 036727 pp955).

RPE ★ D13 35807B/19 ★GB 2006-823

rotein sepn. from microbial cells - by single pass through high hear zone to rupture cells, the prod. being useful in feedstuffs

BRITISH PETROLEUM LTD 16.11.78-GB-044823 (21.09.77-GB-039248)

C03 (D16) (10.05.79) A23j-01/18 C12d-13/06

roteinaceous material is prepd. from a fermentation roth or broth fraction contg. whole microbial cells by a ngle passage through a zone in which the cells in a liq. hase are subjected to a shear force sufficient to rupture e walls of ≯90% of the cells, at pH 6.5-9.5, and a temp. hich will not harm the solubility properties of the proin, thereby releasing the protein into the liq. phase.

The process is an improvement on earlier methods hich required enzymes or alkali. The prod. is useful as feedstuff component or can be treated to separate the otein from the cell wall debris. 16.11.78 as 044823 pp955).

AC- ★ D13 35982B/19 ★J5 4041-289

eoxygenating agent - comprising iron powder contg. iron carbide, . salt soln. and hydrogen adsorbent sealed in bag

DIA CHEMIFA KK 07.09.77-JA-107531

E36 G04 (02.04.79) A23l-03/34 B01d-53/16

eoxygenating prod. is mfd. by sealing deoxygenating agent mprising as effective ingredients Fe powder contg. Fe rbide and aq. salt soln. in an air-permeable bag, togeth with H_2 adsorbent. The air-permeable bag is in turn aled in an air tight bag.

In an example, 1 g. of cast Fe contg. C as a ~3% 0.15 g td. NaCl soln. and 0.85 g. diatomaceous earth were apped in air-permeable bags, which were packed in heretic bags in combination with the adsorbent coated with lecular sieve. The prod. was suitable for treating food ods. 7.9.77 as 107531 (2pp43)

SO ★ D13 36011B/19 ★J5 4041-340

odstuffs additive for controlling pH - comprises sodium malate d malic acid added during processing, giving improved storage operty

FUSO KAGAKU KOGYO K 06.09.77-JA-107432

(02.04.79) A23l-01

dium malate and malic acid are added to foodstuffs dur g processing stage to adjust pH value. pH value of foodtuffs such as noodles, pickles, etc., is adjusted without maging the properties of the foodstuffs. The ratio of dium malate and malic acid is adjusted, and generally alic acid is used in an amt. of 0.03-1.40 wt. part relave to 1 pt. of sodium malate.

In an example, when 50 kg. of flour, 1.6 kg. of table lt and 15.1 kg. of water are blended to give noodle and noodle is boiled in 600 l. of water, 1034 g. of sodium malate and 166 g. of malic acid are added to this 600 l. of water to adjust pH 5. Thus prepd. boiled noodle can be stored, after heat-sterilisation treatment, for 32 hrs., and after H_2O_2-sterilisation treatment, for 44 hrs. 6.9.77 as 107432 (4pp22)

FUSO ★ D13 36012B/19 ★J5 4041-341

Controlling properties of foodstuffs etc. - using sodium malate, malic acid and a phosphate

FUSO KAGAKU KOGYO K 06.09.77-JA-107433

(02.04.79) A23l-01

Sodium malate, malic acid and phosphate are added to foodstuffs during processing to adjust its pH without damaging the properties of the foodstuff, such as noodles, pickles, etc. Generally, the amt. of sodium malate is 30-95%, malic acid is 65-5%, and phosphate is 20-5%.

In an example, when 50 kg. flour, 1.6 kg. table salt, and 15.1 g. water are blended to noodles, which are boiled in 600 l. of water, 750 g. sodium malate, 158 g. malic acid and 200 g. sodium metaphosphate are added to the water to adjust the pH to 5.2. The prepd. boiled noodle can be stored, after heat-sterilisation, for 36 hrs., while boiled noodle contg. no additives can be stored for only 24 hrs. 6.9.77 as 107433 (5pp22)

ZENK- ★ D13 36014B/19 ★J5 4041-348

Prodn. of pickle - by mixing seasoning and grated Japanese radish, and pickling

ZENKOKU TSUKEMONO K 02.09.77-JA-105625

(02.04.79) A23b-07 A23l-01/21

The pickle (I) is produced by pickling Japanese radish (II) in a mixture, which is prepd. by mixing seasonings and grated (II).

The amts. of sweeteners, seasonings and other reagent consumed can be reduced by 40%. Amino carbonyl reaction and change in quality by increase of sundry germs hardly occur. Bleaching of (I) is not necessary, and (I) has good appearance. 2.9.77 as 105625 (3pp42)

NIHA- ★ D13 36017B/19 ★J5 4041-360

Strengthening agent for coating egg-shells - prepd. by mixing inorganic powdered cpd. e.g. calcium sulphate, wax, paste e.g. of gum arabic and solvent

NIPPON HAIGO SHIRYO 09.09.77-JA-107970

(02.04.79) A23b-05/06 A23l-03

Agent (I) for coating on eggshell, prepd. by homogeneously mixing inorganic powdery cpd. (II), wax (III) and paste (IV) in a solvent (V). (I) is used for strengthening and preventing change of quality of egg. By coating (I) on eggshell breakage can be reduced and weight-decrease, decrease of content of egg-yellow and/or protein in egg and generation of mould are prevented.

Typically, (II) is Ca sulphate, Ba sulphate, Mg sulphate, talc etc. (III) is rice bran wax, carnauba wax, candelilla wax, vinyl acetate, cotton oil etc. (IV) is gum arabic, guar gum, Na polyphosphate etc. (V) is ethyl alcohol, propylene glycol, hexan, acetone, etc. 9.9.77 as 107970 (3pp42)

WARN ★ D13 36019B/19 ★J5 4041-364

Chewing gum compsn. with no sucrose and/or glucose - comprises gum base, sorbitol, mannitol, stevioside, gum arabic and flavouring

NIPPON WARNER LAMBE 09.09.77-JA-108620

A97 (02.04.79) A23g-03/30

Compsn. (I) for chewing gum, comprises 20-40 wt.% gum base, 2-60 wt.% sorbit, 2-60 wt.% mannit, 0.95-5 wt.% stevioside, 1-20 wt.% gum arabic and 1-5 wt.% flavouring cpds.

Gum arabic is pref. used as either a powder or soln., and when used as a powder, the particle dia. is smaller than 100 mesh. Pref. as gum base, carnauba wax and synthetic gum, e.g., vinyl acetate, polyisoprene, are used. An extending agent e.g. calcium carbonate, an emulsifier, e.g. glycerol and a softening agent, e.g. dibutyl phthalate may be added to (I).

(I) is for a chewing gum contg. no sucrose and/or glucose, and so the gum does not cause dental problems. 9.9.77 as 108620 (2pp42)

AJIN ★ D13 36020B/19 ★J5 4041-365
Prune drink contg. threonine - to improve the taste when the drink is prepd. from dried prune
AJINOMOTO KK 02.09.77-JA-105677
(02.04.79) A23l-02/38

A prune-drink (I) contains L-threonine (II). The amt. of (II) added should be 0.05-5 wt.% on the amt. of raw prune juice.

(I) prodocued from dried prune has bitter taste. The inventors found that the bitter taste of (I) produced from dried prune can be masked by the addition of (II). 2.9.77 as 105677 (2pp42)

NNSH ★ D13 36021B/19 ★J5 4041-368
Flavoured seasoning mfr. - by mixing animal fat, animal meat, hydrolysed protein prod., nucleic acid, organic acid, sugar, salt and water, heating and emulsifying
NIPPON SHINYAKU KK 07.09.77-JA-108087
(02.04.79) A23l-01/23

Flavoured seasoning (I) is prepd. by (1) mixing animal fat, animal meat, hydrolysed protein prod., nucleic acid, organic acid, sugar, salt and water, (2) heating the mixt. at 50-150°C. for generation of flavour and (3) emulsifying the mixt. at <30°C., to obtain a w/o emulsion.

(I) is rich in flavouring properties.

In an example, 5 kg. of tallow, 1 kg. of beef, 2 kg. hydrolysed-protein prod., 50 g. sodium-5'-ribonucleotide, 50 g. disodium succinic acid, 100 g. sucrose, 300 g. salt and 1.5 kg. water were mixed and heated at 90°C. for 10 min., and cooled to <30°C. The mixt. was homogenised to obtain (I). 7.9.77 as 108087 (2pp42)

EBIO- ★ D13 36033B/19 ★J5 4041-395
Seasoning suitable for Japanese cooking - produced from koji of soybean sauce, salt, water and autolysed prod. of yeast, by fermenting and ageing
EBIOS YAKUHIN KOGYO (HIGA-) 06.09.77-JA-106981
(D16) (02.04.79) A23l-01/23 C12c-11/08 C12k-01

Seasoning (I) is produced by (1) mixing koji (II) of soy bean source, salt and water with yeast-autolysed product (III), so that the content of nitrogen originated from (III) is 55-200% on the content of nitrogen in the soy bean source; and (2) fermenting and then ageing the mixture after inoculation of yeast (IV) used for production of soy bean sauce, as occasion demands.

The weight ratio of (III)/(II) should be 0.35-1.3. The raw material-mixture can be liquefied by the action of enzyme in (II), after ageing 3-10 days. When (IV) is inoculated, the concn.of (IV) should be controlled to 10^{5-7}/ml. 6.9.77 as 106981 (4pp42)

TAKS ★ D13 36095B/19 ★J5 4041-862
Per:acetyl steviol bioside tri:butyl:tin prepn. - by reacting per:acetyl steviol bioside with bis tri:butyl:tin oxide
TAKASAGO PERFUMERY KK (TAMA-) 02.09.77-JA-105496
B03 E12 (03.04.79) C07f-07/22

Peracetylsteviol bioside tributyltin (I) is prepd. by reacting peracetylsteviol bioside (II) with bis(tributyltin) oxide (III).

(II) is prepd. by treating stevioside with alkali hydroxide to give steviol bioside (IV) and reacting (IV) with acetic anhydride in the presence of pyridine. Reaction of (II) with (III) is carried out quantitatively in a solvent such as benzene or toluene with refluxing. (I) can be converted into stevioside analogs by reacting (I) with various acetylsugar bromides in solvent (e.g. toluene) in the presence of tetrabutylammonium bromide and deacetylating the resulting acetylstevioside analogs.

(I) is useful in the prepn. of stevioside analogs which are prepd. by replacing D-glucose of natural sweetening agent stevioside by other sugars. 2.9.77 as 105496 (3pp104)

TAKS ★ D13 36096B/19 ★J5 4041-863
Stevioside analogue prepn. - by reacting per:acetyl steviol bioside tri:butyl:tin with acetyl-sugar bromide and de:acetylating
TAKASAGO PERFUMERY KK 02.09.77-JA-105497
B03 E13 (03.04.79) A23l-01/23 C07h-15/24

Stevioside analogs (I) are prepd.by reacting peracetylsteviol bioside tributyltin (II) with acetylsugar bromide (III) in the presence of tetrabutylammonium bromide to give per-

Pref. reaction is carried out in with refluxing. (III) is e.g. acetobromogalactose and aceto bromoglucose.Deacetylation is pref. carried out using 0.1 N methanolic or ethanolic alkali hydroxide.

(I) are sweetening agents and can be obtd. in very high yields. Poor reactivity of (II) is overcome. 2.9.77 as 105497 (4pp104)

MITU ★ D13 36109B/19 ★J5 4041-89
Purifying stevioside - by contacting soln. with synthetic adsorbin resin, eluting with solvent and contacting obtd. soln. with strong basic anion exchange r
MITSUBISHI CHEM IND KK 06.09.77-JA-106896
B03 E13 (03.04.79) A23l-01/22

Stevioside (I) is purified by (a) contacting a stevioside contg. soln. with synthetic adsorbing resin having a grea reticular structure (sic) to selectively adsorb (I); (b) elut ing the synthetic adsorbing resin with a solvent to releas (I); and (c) contacting the resulting (I) contg. soln. with a strongly basic anion exchange resin.

(I) being a natural sweetening material contained in leaves of Stevia rebaudiana can be purified by using the combination of specific ion exchange resins. Prior disadvantages such as low yields or insufficient decolourati are overcome. 6.9.77 as 106896 (5pp104)

MITU ★ D13 36110B/19 ★J5 4041-8
Stevioside purificn. from soln. - using an adsorbing resin, eluti the stevioside and contacting with amphoteric ion-exchange resin
MITSUBISHI CHEM IND KK 06.09.77-JA-106897
A91 B03 E13 (03.04.79) A23l-01/22

Stevioside (I) is purified by contacting a stevioside-contg soln. with synthetic adsorbing resin having great reticul structure to selectively adsorb (I) thereon, eluting the synthetic adsorbing resin containing (I) with a solvent to release (I) and contacting the resulting (I) containing sol with an amphoteric ion exchange resin.

(I), a natural sweetening material contained in leaves Stevia rebaudiana can be purified by using a combination of great reticular structure type synthetic resin and amphoteric ion exchange resin (e.g.phenol-formaldehyde-amine copolymer). Thus some disadvantages of known methods such as low yields or insufficient decolouration are overcome. 6.9.77 as 106897 (5pp104)

MITU ★ D13 36111B/19 ★J5 4041-
Purificn. of aq. soln. of stevioside contg. calcium hydroxide - introducing carbon di:oxide, filtering off ppte. and contacting soln. with crosslinked synthetic resin adsorbent
MITSUBISHI CHEM IND KK 06.09.77-JA-106898
B03 E13 (03.04.79) A23l-01/22

Stevioside (I) is purified by introducing CO_2 into aq. sol contg. ppte., contacting the aq. (I) contg. filtrate with highly crosslinked synthetic resin to selectively adsor (I) and releasing (I) from the adsorbed resin with solve

(I) can thus be obtd. in high yield with high purity.

In an example, leaves of Stevia rebaudiana (50 g.) extracted with water (500 ml.) overnight and filtered t give an aq. extract, which was mixed with calcium hydroxide (4.5 g.) and allowed to stand for 30 min. The tract was adjusted to pH 8 with CO_2. Ppte. was remov by centrifugal sepn. and the supernatant (300 ml.) was charged on a column of activated highly crosslinked st rene-divinylbenzene resin (50 ml.), which was eluted with water (400 ml.), 600 ml. each of 20% methanol, methanol, 60% methanol and 80% methanol. Fractions from 40% methanol to 80% methanol were collected an evapd. to dryness.Residue was extracted with dioxane (16 ml.) with refluxing and filtered. Addn. of methano (4 ml.) to the filtrate afforded (I) (1.9 g.) as light gre crystals. 6.9.77 as 106898 (4pp)

KANF ★ D13 36246B/19 ★J5 404
Protein fibre or film mfr. - by extracting protein from microorg cell, treating with surfactant, spinning and drawing
KANEGAFUCHI CHEM KK 09.09.77-JA-109020
F01 (04.04.79) A23j-01/18 A23l-03 D01f-04

Cell wall of microorganism is damaged, protein extra the resulting protein-contg. prod. is treated with a su tant and then spun and drawn to produce a protein fib arily treated with a surfactant. The amt. of surfactant to treat the protein-contg. soln. is 0.01-3.0 wt.% (per wt. of protein-contg. prod.). The amt. of surfactant to preliminarily treat body of microorganism is 0.01-3.0 wt.% (per wt. of microorganism-suspending soln.). The surfactant is selected from Na dodecyl benzene sulphonate, and Na lauryl benzene sulphonate.

In an example, 0.05% of Na lauryl benzene sulphonate are added to a suspension of molasses yeast and NaOH is added to the suspension to make 0.25% of alkali concn. The suspension is treated by high pressure jet impacting device under pressure of 600 kg./cm.^{2} The supernatant liq. is regulated to pH 4.5 with HCl to form ppte. of protein. 0.1% Na lauryl benzene sulphonate is added to the ppte. which is treated with 2 mol. of Na citrate and 0.02 mol. NaCl soln. Soluble prod. is removed by centrifugal separator. The residual protein is dissolved in 60% NaOH soln. to form a dope and the dope extruded through a slit and coagulated in 5% HCl to form a protein film having 50 kg./cm.^{2} tensile strength. 9.9.77 as 109020 (3pp84)

HOUS- ★ D13 36372B/19 ★J7 9007-861

Antioxidation treatment of foodstuff contg. oil and fat - by adding Coriandrum sativum L or its extract

HOUSE SHOKUHIN KOGY 08.02.75-JA-015890

(10.04.79) A21d-13/08 A23c-19/10 A23l-03/34

In the prepn. of foodstuffs contg. fat and oil, which is required to be subjected to antioxidation process Coriandrum sativum L or its extract is added to the foodstuff.

Effective antioxidation can be attained, without damage to the flavour of the foodstuff. 8.2.75 as 015890 A231-3/34, A21d-13/08, A23c-19/10 (10.4.79) HOUSE SHOKUHIN KOGYO KK (4pp22) (J51125768)

KANE ★ D13 36373B/19 ★J7 9007-868

Chewing gun with improved flavour, prodn. - by keeping a blend of gum base, candy concentrate, sugar and flavourings under an atmos. of high relative humidity

KANEBO KK 12.01.74-JA-006891

(10.04.79) A23g-03/30

To chewing gum base is added candy concentrate, followed by blending, and to the mixt. are added 100-150% of crystalline sugar, and a flavouring agents, followed by blending, and the whole mixt. is kept under an atmos. of relative humidity 60-90% to give chewing gum having good flavour. 12.1.74 as 006891 A23g-3/30 (10.4.79) KANEBO KK (10pp22) (J50100261)

TAKS ★ D13 36374B/19 ★J7 9007-869

Beverage prepd. from Aloe leaves - by contacting with amylase, mixing with sugar, etc., and cultivating yeast or lactobacilli on the liq.

TAKASAGO PERFUMERY KK 21.04.73-JA-044665

(D16) (10.04.79) C12g-03/04

Leaves of Aloe (e.g. Aloe perryi Baker, Aloe barbadensis Miller) are allowed to contact with amilase, the resulting liq. is mixed with sugar and other additives, yeast or lactobacilli is cultivated in the cell bodies and other insolubles are removed, and the soln. is mixed with seasoning, flavouring etc. 21.4.73 as 044665 C12g-3/04 (10.4.79) TAKASAGO PERFUMERY KK (5pp22) (J49132267)

QPPP ★ D13 36375B/19 ★J7 9007-870

Prepn. of emulsified foodstuffs stable at low temp. - using fat or oil having specified content of trans fatty acids

Q.P. CORP 19.09.73-JA-104948

(10.04.79) A23l-01/24

In prepn. of emulsified foodstuffs such as mayonnaise, salad dressing, french dressing etc., fat or oil having a trans index (percentage of trans-type fatty acid content in the fat or oil of 1.5-8.5 is added as oily material. The resultant prod. is very stable at low temp. 19.9.73 as 104948 A231-1/24 (10.4.79) Q.P CORP (3pp22) (J50053572)

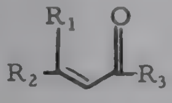
HOFF D13 60808W/37 = J7 9008-649

Acetylene-carbinols isomerised to alpha-beta unsatd. oxo-cpds. - using substd. phenyl-siloxy-vanadium oxide catalyst

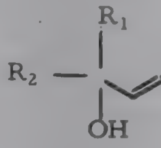
HOFFMANN-LA ROCHE AG 01.03.74-CH-002932

*A97 B05 E19 (17.04.79) *DT2508-778 B01j-31/02 C07c-45 C07c-47/20 C07c-49/20 C07d-317/14*

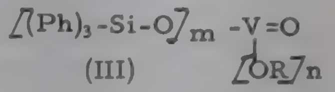
Catalyst (III) isomerises (II) to (I) In (I) and (II), R_1 is H or lower alkyl, R_2 is alkyl or alkenyl linked to (A) cycloal



(I)



(II)



$$[(Ph)_3\text{-Si-O}]_m\text{-}\underset{[OR]_n}{\underset{|}{V}}\text{=O}$$

(III)

-kyl, cycloalkenyl or phenyl, or phenyl, or is (A) R_1 and R_2 together can form cycloalkyl or cycloalkenyl, and R_3 is H or R_2. (III) are stated to be new but are not specifically claimed. In (III), Ph is phenyl with electron-attracting substits., and R is R' which is lower alkyl, cycloalkyl, phenyl or phenyl-lower alkyl, or ish $Si(Ph')_3$ (Ph' similar to Ph), or is $Si(R')_3$. Above radicals opt. substd. by lower alkyl. m+n=3, m≠0. Process isomerises thermolabile cpds. at temps. and within times that avoid decomposition. 27.2.75 as 023490 (clg. 1.3.74-CH-002932) C07c-45/00 B01j-31/02 C07c-317/14, 45/16, 47/20, 49/20. (17.4.79) HOFFMANN-LA ROCHE AG (11pp) (J50117709)

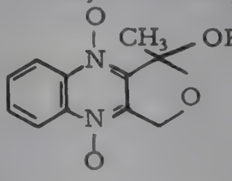
PFIZ D13 88659X/47 = J7 9008-679

Antimicrobial 1,3-dihydro furo-(3,4-b) quinoxaline 4,9-dioxides - prepd. e.g. by hydrolysis of 2-acetyl 3 bromomethyl quinoxaline 1,4-dioxide

PFIZER INC 06.08.75-US-602514

*B02 C02 (17.04.79) *US3991-053 A61k-31/49 C07d-241 C07d-307 C07d-491/04*

Furoquinoxaline dioxides of the formula. (wherein R^1 is H, 1-6C alkyl or benzyl) are new. (I) are antimicrobial agents and growth-promoting agents for animals.



Activity against, for example, Streptococcus pyogens, Escherichia coli, Salmonella choleraesuis, Pasteurella multocodia and Treponema hydodysenteriae is demonstrated, minimum inhibitory concns ranging from 0.09 to 12.5 mcg/ml (I) may be used as industrial antimicrobials e.g in water treatment, slime control and wood and paint preservation, and to control bacterial infections in animals by oral or parenteral administration as dosages of about 1-100 mg/kg. 28.5.76 as 062202 (+6.8.75-US-602514) C07d-491/04, 241/00, 307/00, A61k-31/495 (17.4.79) PFIZER INC (12pp) (J52019698)

KIKK ★ D13 36448B/19 ★J7 9008-731

Acidic peptide soln. prodn. for use as a beverage - by treating soybean with protease, filtering, and treating filtrate with granular polyamide, polypeptide or PVP to remove throat irritants

KIKKOMAN SHOYU KK 27.12.72-JA-129845

A97 (18.04.79) A23j-03 A23l-01/20 A23l-02

Method comprises treating soybean with protease to such a degree that the ratio of formol nitrogen to total nitrogen does not exceed 20%, filtering the mixt. and treating the clear acidic soln. with granular polyamide, polypeptide or polyvinylpyrrolidone to remove throat-irritating substances. Prod is useful as a beverage. 27.12.72 as 129854 A23j-3/00, A231-1/20, A231-2/00 (18.4.79) KIKKOMAN SHOYU KK (5pp83) (J49086562)

SNOW ★ D13 36449B/19 ★J7 9008-732

Readily cooked cheese hamburger - made by filling a hollow in the hamburger with cheese and freezing

SNOW BRAND MILK PRODUCTS 06.09.76-JA-106500

(18.04.79) A23l-01/31

Method comprises making hollow on an uncooked hamburger, filling the hollow with molten cheese and freezing. The method renders itself to mass production. The frozen hamburger is readily cookable by heating from one side. 6.9.76 as 106500 A231-1/31 (18.4.79) SNOW BRAND MILK PRODUCTS; (2pp) (J53032149)

YOKI- D13 74861U/49 = J7 9008-737
Yogurt prepn - with formic acid pyruvic acid derivs
YOKIJIRUSHI NYOGYO (YUK -) 13.12.71-JA-100215
*(18.04.79) *J48062-971 + A23c-09/12*

Yogurt is prepd. by fermenting milk powders with formic acid, its salt or deriv. plus ≥1 of pyruvis fumaric or acetic acid, and their salts or derivs. in the presence of Lactobacllus bulgaricus. The addn. of these cpds. shortens the fermentation time and inhibits the increase of the acidity of the prods during storage.

In an example defatted milk powder (10. 5) sugar (13. 5) and gelatin (0. 2 kg) were mixed with water to make the total wt. 99kg, and the mixt. was sterilised by heating at 90°C for 15 min. It was then combined with Na formate and Na pyruvate (10 g each) and incubated at 43°C in the presence of 2 kg L. bulgaricus. The yogurt was obtd. after 3. 5 hr of fermentation as the acidity reached 0. 8%. 13. 12. 71 as 100215 A23c-9/12 (18. 4. 79) YOKIJIRUSHI NYOGYO CO. LTD. (4pp) (J48062971)

MOMI D13 11758Y/07 = J7 9008-738
✓ **Confectionery prods. contg. (beta)-lactose - replacing all or part of usual sugar to regulate sweetness**
MORINAGA & CO LTD 19.06.75-JA-073647
*(18.04.79) *J51151-373 A23g-01*

An improved process for producing e. g. chocolate and tablet-like candy involves substituting part or all of the usual sugar material with β-lactose.

The degree of substitution is decided freely according to the required sweetness of the prod.

The method of this invention is suitable for the prodn. of candles without the addn. of water. 19. 6. 75 as 073647 A23g-1/00 (18.4. 79) MORINAGA CONFECTION KK (5pp) (J51151373)

QPPP D13 21083Y/12 = J7 9008-739
Acid emulsified food, e.g. mayonnaise, prodn. - giving prod. which can be stored withouth decrease in viscosity or loss of smooth texture
Q.P. CORP (QPCO-) 30.07.75-JA-092079
*(18.04.79) *J52018-865 A23l-01/24*

Whole egg is maintained at 37°C for one week. This produces water-like albumen which is mixed with aq. acid and edible oil and emulsified.

In an example 6 kg of vinegar (acid value 6%) 1. 5 kg. of water, 1. 5 kg of salt, 4 kg of sugar, 13 kg of whole egg contg. water like albumen and 75 kg of salad oil were mixed and the mixt. emulsified uniformly by a mixer and then a coloid mill. Mayonnaise was thus obtd. 30. 7. 75 as 092079 A231-1/24 (18. 4. 79) QP CORP (3pp) (J52018865)

✓ KYOW D13 58217T/37 = J7 9008-752
Flavonoid polyglucosides - sweeteners having improved solubility
KYOWA HAKKO KOGYO K 19.02.71-JA-007356
*B03 E13 (18.04.79) *DT2204-716 A23l-01/23 + C12d-13*

Soluble flavonoid glycosides contg. ≮ 2 (pref. 2-5) glucose substituents per molecule are produced by reacting an amylase enzyme with a mixture of a flavonoid monoglycoside (opt. in the form of dihydrochalcone, monoglycoside) and startch (pref. at least partially degraded to glucose units).

The product flavonoid polyglucosides yield dihydrochalcone glucosides having a pleasant sweet taste making them suitable for use as synthetic sweetening agents. They have the advantage of better (ca 10 times higher) solubility than the corresponding monoglucosides while having about the same sweetening power. 19. 2. 71 as 007356 C12d-13/00 A231-1/236 (18. 4. 79) KYOWA HAKKO KOGYO KK (3pp) (J47019088)

LITO= ★ D13 36496B/19 ★SU -501-742
Soured cream having gel consistency prodn. - by two/stage souring of pasteurised cream with lactic flora with subsequent two/stage thermal treatment
LITOVSK BUTTER CHEE 17.04.70-SU-423758
(12.04.76) A23c-13/12

The soured cream is produced by pasteurising fresh cream, homogenising, cooling to the souring temp. introducing a lactic flora bacterial culture, souring to an acidity of 25-30°T, and additionally souring to 65-80°T at a temp. below 10°C (e.g. 8-9°C).

The quality of the product is improved by [illegible] after the additional souring, in two stages (below and above 15°C respectively) with an interval (at least 10 mins) during which the soured cream is poured into containers (the aim of the first stage heating is to temporarily diminish the viscosity of the product).
Ramakauskas, R.I., Urbene, S.K. Bul. 5/5. 2. 76 17.4. 70 as 423758 (2pp70)

GORY/ ★ D13 36513B/19 ★SU -517-293
Storage stable protein-fat concentrate powder prodn. - by mixing animal fat aq. emulsion with animal blood and spray drying for use as feed additive for animals and poultry
GORYAEV M I 08.05.73-SU-915986
C03 (09.06.76) A23k-01/10

Production of emulsified fat concentrates, for use as feed additives for animals and poultry, is improved by mixing a fat emulsion with animal blood and drying the mixt.

By this method a protective proteinaceous coating is formed on the fat particles so that the product has improved storage stability. It does not cake. The aroma and colour are preserved. The product can be easily handled and mixed with animal feed.
Goryaev, M.I., Ulyanova, A.D., Maier, R.G. et al, Bul. 22/15.6.76. 8.5.73. as 915986 (1pp70)

BUTT= ★ D13 36539B/19 ★SU -534-225
Dietetic cheese with increased protein content - produced by adding to milk whole eggs in form of emulsion or suspension before addn of microflora and rennin
BUTTER CHEESE IND 07.01.74-SU-985507 (07.01.74-SU-119956)
(08.12.78) A23c-19/02

Dietectic cheese ('Vesennii', RTM) is produced by enriching milk with a proteinaceous additive, pasteurising, cooling to the coagulation temp. introducing a souring bacterial preparation and rennin pressing the curd for 2h salting, and maturing for 30 days (with paraffination after 10-12 days). The nutrition value of the cheese is improved by using as a proteinaceous additive whole eggs, introduced into the milk in the form of an emulsion or suspension, in such a quantity that the protein content of the cheese is 33.8-34.2% and the milk fat content to 33.2-34.1% w.r.t. the dry weight. The eggs are pasteurised first in a drying chamber at 80-100°C and then in mixt. with the milk.
Krasheninin, P.F., Zharenov, D.A. and Dolgikh, T.V. Bul. 41/5.11.76. 7.1.74. as 985507 (2pp70)

JENP ★ D13 36588B/19 ★SU -590-9
Strains of Micrococcus glutamicus producing L-lysine - selected wi respect to high and constant biomass growth rate for use in dru food and animal feed mfr.
JENAPHARM VEB (INMI=) 23.01.76-SU-340015
C03 (D16) (15.09.78) C12d-13/06 C12k-01/02

Micrococcus glutamicus strains producing L-lysine, whi is used as additive for human and animal food, and also for medical purposes, are selected with respect to the biomass growth at a constant high rate in nutritive media contg. isoleucine and valine in ratios between 1:1 to 16:1 (i.e. their activity is not adversely affected by relatively large concn. of isoleucine, as in the known cultures).

The nutritive media should contain sources of carbon and nitrogen, mineral salts and organic additives; the concn. of threonine should be limited (e.g. 30 mg/l); oxygen must be present in excess; the isoleucine: valine ratio in the nutrient medium is pref. 4:1; the dilution is 0.1 h^{-1}.
Bormann, E.J., Bergter, F., Kristner, A. et al. Bul. 39/25.10.78. 23.1.76. as 340015 (3pp70)

PRES= ★ D13 36590B/19 ★SU -595-8
Dehydration of potatoes or vegetables - by cleaning, cuttin scalding, cooling, freezing, and subsequent centrifuging w simultaneous ir irradiation and drying
PRESERV VEG DRYING 20.07.76-SU-388268
Q76 (11.09.78) A23b-07/04 F26b-05/06

Dehydration of potatoes or vegetables is carried out, according to the Parent Patent No. 566096 including by cleaning, cutting, scalding, cooling, freezing in two steps, and drying

The method is improved by subjecting the products, before the drying, to centrifuging and, simultaneously, to infrared heating. The process is intensified and accelerated.

Voskoboinikov, V.A., Manuiko, A.I. and Komyakov, O. G. Bul. 39/25.10.78. 20.7.76. as 388268 Add to 566096 2pp70)

AUTE= ★ D13 36724B/19 ★SU-613-173

ruit with skin convection drying - by two/stage blowing of various umidity heat carrier through fruit

AS UKR TECH THERMO 26.05.76-SU-365160

Q76 (14.06.78) F26b-03/06

he convection drying can be used for fruit with skin, e.g. lum, pears and grapes, and involves two-stage blowing f the heat carrier through the fruit.

To increase efficiency and product quality, the first tage blowing is carried out for 1-2 hrs. at heat carrier emp. of 100-120°C and humidity of 100-300 g/Kg. of dry ir. The second stage drying is carried out with heat arrier humidity of 30-50 g/kg. of dry air.

remnev, O.A., Borovskii, V.R., Korostash, M.D. et l. Bul. 24/30.6.78. 26.5.76. as 365160 (2pp110)

IOMD ★ D13 36761B/19 ★SU-613-750

eezing liquid food products - by counterflow contact of droplets ith high pressure pulsed liquid carbon di:oxide stream

MOSCOW MEAT DAIRY INST 22.03.76-SU-335981

(14.06.78) A23l-03/36

n order to intensify heat exchange when freezing food roducts, e.g. milk, cream or blood, by contact with a iquid coolant, liquified CO_2 is used as the coolant, and is also has a preservative effect on the product.

Carbon dioxide is fed as a pulsed flow under a pressure f $98.07-118 \times 10^4$ Pa and at -53°C to a sealed chamber in hich the pressure is held at $76.5-83.3 \times 10^4$ Pa during eezing so that the CO_2 remains liquid and the droplets eet a coaxial counterflow of product fed through capillries to produce small particles.

The product is frozen instantaneously on contact and e CO_2 vaporised is used to cool the capillaries. The ozen granules and liquid CO_2 run down an inclined rface to complete freezing and are then separated.

akovskaya, I.A., Kaukhcheshvili, E.I., Kholodnov, S.N ul. 25/5.7.78. 22.3.76. as 335981 (2pp1358)

CO- ★ D13 36896B/19 ★US 4150-795

nversion of waste food to animal feed - by pulverising and drying heated contra rotating rollers

RECOVERY SYST INC 03.08.77-US-821353

C03 P41 (24.04.79) B02c-11/08

waste food processor pulverises the waste to reduce s size to 0.005 - 0.030 inch. The pulverised waste is ored in a buffer store which makes it available as output demand. The output of the buffer store is dried.

The drying process is carried out using a pair of rotatg drums mounted parallel to each other and contrarotat- to form a nip of 0.006 - 0.030 inches. The ends of the ace between the drums is closed by dam walls to form a servoir which includes two level sensors. Material is lectively pumped from the buffer store to the reservoir maintain the level in the reservoir between the two level nsors.

The drums are heated to 300 - 400°F so that material ssing through the nip coats the drums. Blades spaced 180 - 230° from the nip line remove dried material m the drums. 3.8.77 as 821353 (7pp295).

NP ★ D13 37029B/19 ★US 4151-161

pn. of gelatin with low chromium content - from chromed waste ck, with high bloom strength and high viscosity

CANADA PACKERS LTD 14.06.76-US-695639

G03 (D18) (24.04.79) A23j-01/10 C09h-03

latin (I) with low Cr content is prepd. from a Cr^{3+} - tg. chrome leather stock (II) as follows: (a) (II) is rd. with a soln. of a cpd. (III) which forms coordinat- complexes with Cr^{3+} so that most Cr is removed; extrd. (II) is conditioned with an alkaline soln. contg. SO_4 to partially depolymerise the collagen network (II); (c) most of the residual Cr^{3+} in conditioned (II) is oxidised to Cr^{6+} by treatment with H_2O_2 at room temp./ pH 10-12.5; (d) oxidised (II) is washed to remove Cr^{6+}; and (e) (I) is extrd. with a soln. contg. MgO or $MgSO_4$.

Process affords edible (I) of low Cr content, high bloom strengths and viscosities from chromed scrap or waste stock. 14.6.76 as 695639 (9pp478).

UNIV ★ D13 37034B/19 ★US 4151-178

Fatty acid ester(s) of ascorbic acid prodn. in high yield - using ascorbic acid isomer, excess fatty acid and 95-100 per cent sulphuric acid, useful as antioxidants and surfactants in foods

UNIV OF KANSAS 27.01.78-US-872994 (05.10.76-US-729646)

E13 (24.04.79) C07d-307/62

Fatty acid esters of ascrobic acid are prepd. by reacting an ascorbic acid isomer (I), 95-100% H_2SO_4 (II) and a molar excess, relative to (I), of a 12-18C satd. fatty acid (III), the molar ratio of the sum of (III) and (I) to (II) being about 0.1-0.3. Reaction is pref. effected at 20-50°C for 2-48 hrs..

The esters have known utility as antioxidants in high fat foods, and salts of certain of the esters have use as surfactants in food systems. They are produced in the yields which are superior (up to about 70% greater) than those in known processes. 27.1.78 as 872994 (7pp).

WRIL D13 65304A/37 =US 4151-270

Chewing gum for stimulating saliva flow, esp. for athletes - comprises gum base, sweetener, flavourant, fructose, and adipic ascorbic, citric, fumaric, lactic, malic or tartaric acid

WRIGLEY W JR CO 26.09.77-US-836383

*E17 (24.04.79) *BE-864-665 +A61k-09/68*

A chewing gum compsn. is prepd. contg. gum base, a sweetener, flavouring additives, a palatable and safe amt. of adipic, ascorbic, citrus, fumaric, lactic, malic or tartaric acid.

Organic acid used is capable of stimulating salivation beyond that attributable to the act of chewing food, being $\geqslant 3$ wt.% final fum compsn. Compsn. contains $\geqslant 10$ wt.% fructose. Pref. sweetener is dextrose. Compsn. contains $\leqslant 4$ wt.% potassium salts and $\leqslant 4$ wt.% sodium salts. Fructose content is 10-70 wt.%.

Compsn. is esp. useful to athletes to stimulate salivation while exercising to eliminate the 'cottonmouth' condition. 26.9.77 as 836383 (3pp931).

WILL/ ★ D13 37089B/19 ★US 4151-306

Hydrolysis of keratin-contg. materials - by mechanical dewatering, then high shear extrusion, giving edible protein prod.

WILLIAMS M A 25.11.77-US-854779 (08.11.76-US-739527)

(24.04.79) A23j-01/10

Raw keratinous materials (I) are treated as follows: (a) raw (I) are mechanically dewatered; (b) dewatered (I) are high shear extruded to hydrolyse the protein while H_2O is retained in the materials during extrusion by exerting a mechanical pressure $> H_2O$ vapour phase.

Efficient, economical process converts raw (I) into digestible proteinaceous material at higher rates than conventional methods.

(I) is e.g. feathers or hog hair. Step (a) is pref. effected with a continuous screw press (e.g. US 3,222,797) to reduce H_2O content to ca 30-40%. Step (b) is at 200-1500 pref. 500-700 psi/250-400°F with contact time 20-30 sec. to establish H_2O content 20-45% by wt. Material is then dried (steam heated dryer, etc.) to H_2O content ca 8%. 25.11.77 as 854779 (5pp478).

BEAF ★ D13 37091B/19 ★US 4151-308

Fast mixed and milled candy - prepd. rapidly, suitable for use with conventional or fast conching processes

BEATRICE FOODS CO 12.05.78-US-905530

(24.04.79) A23g-01

Prodn. of a conched candy by initially milling and mixing sugar and fat and opt. other ingredients on roller mills to form a paste which is then conched to a smooth candy with developed flavour is improved by using high speed shearing and mixing (shearing forces having average shea component $\geqslant 75°$). The process generates mixing temp. $\leqslant 120°$, and affords a paste within 5 min. of average particle size $< 120\ \mu$.

Using inexpensive equipment the method rapidly mixes

candy ingredients, and allows either conventional or fast
conching processes tobe used. Prepd. candy has good
flavour, and no gritty mouth feel. 12.5.78 as 905530 (7pp).

INFL D13 21476A/11 =US 4151-309
Alpha-substd.-3,3-di:methyl-2-norbornane-methanol cpds. - used for enhancing drug and food flavours etc.
INT FLAVORS & FRAGR INC 04.02.77-US-765847
*B05 E15 +P15 (B07) (24.04.79) *US4076-853 A23l-01/22*

The flavour of aroma of a foodstuff is enhanced by the addn
of 0.5-500 ppm of (1) mixt. of cis and trans butenoyl)-3,3-
dimethylnorbornane, (2) 2-(3'-benenoyl)-3, 3-dimethyl-nor-
bornane, (3) mixt. of cis and trans endo-2(2'-butenoyl)-3, 3
-dimethyl-5-norbornene, (4) 3, 3-dimethyl-2-(4'-pentenoyl)
-norbornane, (5) mixt. of 2(4'-methyl-4'-pentenoyl)-nor-
bornane and 3, 3-dimethyl-2-acetyl-2(2'-methyl-2'-prop-
enyl)-norbornane, (6) mixt. of 3, 3-dimethyl-2-(4'-methyl)
-2'-pentenoyl)-norbornane, 3, 3-dimethyl-2-(4'-methyl-
3'-pentenoyl)-norbornane, and 3, 3-dimethyl-2-(4'-methyl-
3-methoxy-pentenoyl)-norbornane or (7) the corresp. 5-
norbornene derivs. of (6).

The cpds. are also added to tobacco, toothpaste, per-
fume compsns., medicinal materials etc.. 13.12.77 as
860132 Div.ex. 4076853 (78pp945).

ANDE- ★ D13
Soybean protein extracts - contg. protein and oil, having extended shelf life
THE ANDERSONS 07.06.77-US-804356
(24.04.79) A23j-01/14

Soybean protein extract contg. ≮ 55% soybean protein (I)
(dry solids basis); 2-32% natural soybean oil (II) ((I) and
(II) obtained together but readily separable by solvent
extrn.); carbohydrates, minerals; and edible proteinate
salts of (I) is prepd. as follows: (a) soybeans are dry
ground to finer than 70 mesh (US Sieve), then slurried wi
aq. alkali (pH ≮ 8) to solubilise (I) and afford aq., oil,
and insol. solid phases; (b) aq. and oil phases are sepd.
from the insol. solids; and (c) aq. phase is sepd. from th
oil phase by centrifugation and the aq. is then adjusted to
pH 4-5 to ppt. the title extract. (alternatively pH may be
adjusted before centrifugation.).

Prepd. protein extract has extended shelf life even
though it contains ≮ 2% oil. This is because the extrn.
system used preferentially removes 'free oil', leaving
only 'bound oil' (not readily oxidised) with (I). 7.6.77
as 804356 (4pp478).

See Also

D15 J7 9008551
D16 DT 2845552
D22 DT 2749528
D15 SU 613171
D16 J7 9008760
D15 US 4151419
D17 GB 1545404

D14: FOODSTUFF MACHINERY

FIND- D14 62327S/39 =DS 1959-851
Apparatus for stripping vegetables fromstalks
PROD FINDUS SA 29.11.68-CH-017884
*P12 (03.05.79) *GB1248-645 A01d-45/26*

Machine for gathering vegetables such as brussel sprouts is equipped with a first tractor-mounted endless link chain with flights to grip and move the plants torn from the ground. An auxiliary chain above the first chain keeps the plants straight. Another endless link chain below the first chain holds the bottom end of the stalks, while the flights of the first link chain, designed as stripper elements, fit around the stalk below the fruit receptacles.

The machine combines the extn. of the plants with the sepn. of fruits and stalks. 28.11.69 as 959851. (5pp39)

BRAU- D14 85173W/52 =DS 2211-644
Pressure cooker safety device - has pinion operated rack pins in lid handle for releasing bayonet catch unseating seal ring
BRAUN & KEMMLER 10.03.72-DT-211644
*+P28 (03.05.79) *GB1419-008 A47j-27/09*

Pressure cooker has a lid with a bayonet coupling to the pot rim. A lever in the plastic handle near its attachment to the lid has a vertical spindle with a pinion. The pinion engages on one side the toothed rack of a pin which is moved forward and pushes the lid seal inward, thus relieving the pressure inside the cooker. At the same time, the other side of the pinion engages a pin which normally prevents the lid from turning. It is extracted as the pressure is being relieved to enable the lid to be opened.

The safety device is not affected by remnants of grease or food and does not rely on springs for its efficient action. 10.3.72 as 211644. (5pp39)

HAAS- ★ D14 35500B/19 ★DT 2748-190
Roasting and baking oven with indirectly heated muffles - adapted to ecological requirements of developing countries
HAAS W E & SOHN 27.10.77-DT-748190
Q74 (03.05.79) A21b-01/36 F24c-15

Roasting and baking muffles of an oven are welded into a fluid-tight housing, spaced some distance from each other and from the side walls, top and bottom of the housing. In its lower zone the housing has a central heating arrangement.

Pref. the housing has a filling of a heat conveying medium such as a heat resisting oil, which is brought into con
tact with a heat source such as a burner, combustion chamber, hot gas ducts, etc. beneath the lowest suffle. T
oven is intended for use in develo ping countries, where
over very large areas there is no electric power availa
and efforts are being made to restrict the enormous con
umption of wood. 27.10.77 as 748190 (9pp1045)

COUD- ★ D14 35684B/19 ★DT 2846-
**Sterilising plant for foodstuffs in unsealed packagings - evacu
air as batch on reversible conveyor enters pressure vessel**
COUDERT J SA 28.10.77-FR-032608
Q31 (03.05.79) A23l-03/08 B65b-55/19

Before their packagings are sealed, foodstuffs are ster
ised in an installation including a vacuum chamber, to
ich a steam sterilising vessel and an arrangement for h
meti cally sealing the packagings are joined.

The equipment comprises (a) a pressure vessel con
-ed to a steam line, a pressurised water line and a vac
m pump; (b) storage elements for the filled packagings
the pressure vessel; (c) a channel connected to the pre
ure vessel by a gate valve, the dimensions of which su
those of the packagings; (d) connections joining the cha
el to the steam supply; (e) conveyors for transferring
packagings to be sterilised from the channel to the sto
equipment in the pressure vessel, and returning the st
ilised packagings into the channel; (f) a device for her
tically closing the sterilised packagings in a chamber
nected to the inlet of the channel; and (g) a conveyor d
vering the sterilised and sealed packagings from the c
mber.

The process can be carried out in an economic man
and requires the minimum of time, since it is carried
in open packagings. The prod. can thus be exposed to
vacuum, to extract the air, and heat can be applied un
rmly and quickly in the inside of the container. 27.10
as 846895 (18pp1045)

See page 36 *FR 2399-

FREU- ★ D14 36358B/19 ★J7 900
**Coating pan appts. - with perforated tubes for introducing ai
pan**
FREUND SANGYO KK 07.01.71-JA-000103
J04 P33 (10.04.79) A23g-03/20 A61j-03/06 B01j-02

A coating pan contg. granular particles to be coated i
rotated on a horizontally-extending axis, and a numbe
circumferentially spaced perforated tubes are detach
secured to the inteior surface of thepan for introduci

A61j-3/06 (10. 4. 79) FREUND SANGYO KK (2pp47) (J47013642)

NOSC ★ D14 36856B/19 ★US 4150-496
Plastic trays for use in fruit dryer - has apertured floors and nterconnecting pin and socket structures on end walls
NOSCO PLASTICS INC 17.02.77-US-769572
A88 Q76 (24.04.79) F26b-25/10

A fruit dryer comprises a tunnel with a gas heater for air entering one end of the tunnel. Trucks are loaded with stacks of fruit holding trays, the trucks being butted end to end within the tunnel. Each tray has longitudinal end frames at opposite ends of the tray and cross frames of less height than the end frames extending between the end frames. A fruit holding floor forms the bottom of each tray.

The cross frames of each tray cooperate with the cross frames of adjoining trays to form slots closed at opposite ends by the end frames. Air passes through these slots, the slots of trays of one truck being lined up with the slots of an adjacent truck. The frames and floor are formed of a thermoplastic having negligible water absorption.

The appts. is particularly used for drying raisins but may be used for other fruit such as prunes. Drying time is reduced by about a third compared with the time taken using wooden trays. 17.2.77 as 769572 (5pp295).

GENE ★ D14 36866B/19 ★US 4150-607
Coffee brewing apparatus with hot water generator - mounted on channel crossing access opening to plastic housing
GENERAL ELECTRIC CO 17.05.78-US-906861
(24.04.79) A23f-01

An electric brewer for coffee comprises a heated base supporting a receptacle and a hot water generator. The heated water is directed from the generator to the receptacle. The generator is mounted in a single moulded plastic housing with an access opening only at one end.

Spaced ribs are formed on the inside of one of the side walls and terminate within the access opening. A securing device is formed on the opposite wall. A U-shaped channel member crosses the access opening with its legs directed nto the opening. The member is fixed against the ribs at one edge and is connected to the securing device at the other edge. The generator is secured to the channel to ix it against all lateral movement and movement into the opening. 17.5.78 as 906861 (4pp295).

ZILL- D14 21908A/12 =US 4150-611
Machine to continuously stone and halve fruits esp. peaches - has automatic loader and positioner to replace two operators
ZILLI & BELLINI 10.01.77-IT-046801 (04.06.76-IT-046865)
*(24.04.79) *FR2353-237 +A23n-03/08*

A continuous halving and destoning machine, e.g. for peaches or apples, has an endless conveyor rotating around two ring gears on vertical axes, the conveyor supporting a row of half cups for fruit. An idler roller is mounted on each half cup opposite the hinge attaching the cup to the conveyor and runs on a horizontal rail parallel to the conveyor.

The machine also has a fruit processing station, and a discharge station where the rail has a downward portion to allow the cups to pivot to discharge the fruit. Fruit falling into a cup is processed by tools carried by mandrels slidable on cylindrical crowns. The appts. operates continuously and is simple in construction. 24.5.77 as 799979 (+10.1.77 - IT - 046801) (15pp1379).

THER- ★ D14 36986B/19 ★US 4151-094
Moving belt filter employing rotating brush - to remove solids from belt and project them onto catchment plate
THERMO KINETICS 15.08.77-US-837305 (29.12.72-US-319748)
J01 (24.04.79) B01d-33/14

Filtration appts. of the type including a moving filter belt has a rotating brush having radially-extending bristles which remove the deposited solids therefrom whilst the belt is supported on a backing roll. The removed solids are projected as a stream onto a splash plate from which the solids descend to a collection zone. The position of the brush w.r.t. the belt is adjustable e.g. by pivoted mounting. The tension of the belt is adjusted by mounting the support roll, the brush and splash plate on a movable support e.g. pivoted at and moved by fluid operated cylinders.

The solid removal system avoids smearing of the solid particles into the filter belt. Used esp. in the reclaimation of protein for pet food mfr., 15.8.77 as 837305 (+30.6.75 - US - 591756) (5pp1050).

D15: WATER TREATMENT

STER ★ D15 35262B/19 ★BE-871-813
Treating waste water by biological oxidn. and carbon adsorption - with recycling of biomass and carbon after oxidn. treatment
STERLING DRUG INC 10.11.77-US-850262
(07.05.79) C02c

The process comprises contacting the water with a mass of diversified acclimatised aerobic microorganisms and powdered active carbon in the presence of dissolved oxygen maintained at above 1ppm. to substantially reduce the COD and BOD by absorption and biological oxidn. The carbon/biomass is sepd. and a part is recycled to the first stage The remainder is submitted to a partial oxidn. by humid means at 200-160°C for 30-60 mins. limiting the inlet of oxygen contg. gas such that the exit gas contains < 7 vol. % of oxygen. The suspension is recycled to the first tstage with addn. to fresh carbon to make up loss in processing. The whole cycle is then repeated resulting in an effluent with a substantially reduced COD, BOD, and ammoniacal nitrogen content.

The process enables fast nitrification compared to processes in which regenerated active carbon is used. 7.11.78 as 871813 (12pp597)

TOYM ★ D15 35300B/19 ★BE-873-354
Semipermeable membrane fluid separator of hollow fibres - incorporates flattened bundles of fibres in ribbon form arranged as crossing multiple layers maximising efficiency
TOYO BOSEKI KK 10.01.78-JA-001775
J01 (02.05.79) B01d

An appts. for sepg. fluids by means of a semipermeable membrane comprises layers of hollow fibres having a selective permeability placed around a central element. The layers are formed by bundles of hollow fibres placed parallel to one another and flattened to form ribbons. The bundles are arranged as multiple layers crossing one another at points between the ends of the appts.

Membrane sepn. is applied in gas filtration, liq. filtration dialysis, ultrafiltration, reverse osmosis, in processes such as conversion of sea water to fresh water, puricn. of waste waters, concn. of fruit juices, sepn. of oil from water, the artificial kidney and the artificial lung. The arrangement leads to uniform distribution with a high density over all the layers without the formation of free spaces, efficient use of the membrane surfaces giving incr-eased efficiency. 9.1.79 as 873354 (18pp1192)

SANT/ ★ D15 B/19 ★BR 7806-547
Treatment of chemical and domestic effluents - with adsorbent which is regenerated biochemically
SANTANCHE L M 26.09.78-BR-006547
(24.04.79) C02c-05/02

LAUE/ ★ D15 35337B/19 ★DL-134-192
Breaking oil-water or fat-water emulsions - by stirring with a fibrous material and allowing to separate into aq. and organic layers
LAUERMANN G 01.12.77-DL-202330
A97 J01 (D23) (14.02.79) B01d-17/04 C07c-31/22

Process is claimed for breaking glyceridic fat-water and /or glyceridic oil-water- and/or fat deriv. -water emulsions. Up to 1, (pref. ⩽ 0.5)% of a fibrous material is added to the emulsion or to the material to be treated with water, and the mixt. is stirred for ≥ 30 mins at ≥ 60 °C (esp. 80-95) °C to break the emulsion. The aq. lower layer is then sepd. from the upper organic layer contg. the fibrous material, and the fibrous material is removed by any suitable means, e.g. by passing the organic layer through a sieve.

Process allows stable oil and fat emulsions to be broken efficiently without addn. of electrolytes or materials which would contaminate the aq. or organic layers. 1.12.77 as 202330(10pp513)

DEAK ★ D15 35426B/19 ★DL-134-447
Asymmetrical polyacrylonitrile membrane - produced by pptn. from soln. contg. additional polymer, for water treatment etc.
AKAD WISSENSCHAFT DDR 24.10.77-DL-201662
A88 J01 (A14) (28.02.79) C08j-05/22

Acrylonitrile polymer membranes with increased water permeability are prepd. by addn. of 1 or more polymers to the soln. of polyacrylonitrile in the usual solvents, pref. DMF before the soln. is shaped. The additives are sol. in the polyacrylonitrile solvent and insol. in the pptn. agents for the polyacrylonitrile. The components of the polymer mixt. are incompatible, i.e. the viscosity of the soln. of the mixt. is lower than would be calculated according to the additivity rule. The soln. is cast to a film and solidified by pptn. of the polymer mixt.

The selectivity of the membrane is not affected. The asymmetric membranes are used for sepn. of dissolved or emulsified substances from water. 24.10.77 as 201662(10pp510)

DEAK ★ D15 35427B/19 ★DL-134-448
Asymmetrical polyacrylonitrile membrane prepn. - by two/stage pptn. in baths of differing pptn. rate, used for water treatment
AKAD WISSENSCHAFT DDR 27.10.77-DL-201656
A88 J01 (A14) (28.02.79) C08j-05/22

Membranes are prepd. from solns. of acrylonitrile polymers in DMF by pptn. of the polymer from the shaped soln. in two consecutive pptn. baths. The first bath has a lower precipitating power than the second bath. The polymer pref. contains ⩾70 wt. % acrylonitrile.

The selectivity of the membrane is improved, without affecting the water permeability. The asymmetric membranes are used for sepn. of dissolved or emulsified substances from water. The membrane may have the form of a hollow fibre. 27.10.77 as 201656(12pp510)

IONI D15 19285R/12 #DS 2014-498
Determination of carbon in polluted aqueous solutions
IONICS INC (UNIC) 02.10.68-US-466664 (25.03.70-DT-014498)
*J04 R16 (03.05.79) *GB1185-290 +G01n-31/10 G01n-33/18*

The carbon content of aq. solns. is determined. The sample in a carrier gas free from oxygen, e.g. N_2, He or Ar, is passed to a reaction chamber where the carbon present is oxidised with a catalyst to CO_2. The oxygen needed is obtd. from the water in the sample by means of a catalytically active element, pref. a coil of Pd wire. The prods. leaving the reaction chamber are collected as a liq. condensate and a gaseous fraction and both prod. fractions are analysed for their CO_2 content.

The process is conducted at a lower temp. than when a gas contg. oxygen is used and with a lower risk of explosion. 25.3.70 as 014498. (7pp068)

MGEI D15
Sewage sand trap - with tangential inlet central solids removal and separate solids grading
MASCH H GEIGER (GEI -) 14.07.70-DT-034796
*(03.05.79) *DT2034-796 B01d-21/06 +C02c-01/20*

Device to separate granular solids from liq., e.g. a sand trap, consists of a circular tank with a flat bottom and revolving raker arms which scrape the sand to the centre. The crude water enters tangentially and leaves, free from sand, radially after a turn of > 270°. The standis raised by an injector pump from the central pit to a classifier, parallel to the inlet channel. Clear water returns through an overflow sill into the inlet channel.

Appts. does not require deep excavations and creates favourable flow conditions. 14.7.70 as 034796. (4pp39)

DIDI D15 46273X/25 =DS 2457-51
Industrial wastes treatment - convertible from continuous to bath operation by tilting mixer with air jets for efficiency neutralizing agent
DIDIER-WERKE AG 05.12.74-DT-457514
*(03.05.79) *DT2457-514 C02c-05*

Appts. for the treatment of industrial wastes which have been contaminated by chemicals, e.g. from electroplating hardening and pickling establishments, includes a mixing tube with an inlet funnel at one end for the wastes and the neutralisation agent. Compressed air mixing jets along the tube provide the propulsion. At the outlet end, the effluent must pass a probe which controls the admission of the neutralisation agent before the liq. is discharged through an overflow.

When used to treat batches of higher concn., the inlet end of the mixing tube can be lowered and the discharge end delivers the outflow to a launder. 5.12.74 as 457514 (4pp39)

HYDR- D15 27301W/16 =DS 2501-54
Rotary screen dewatering appts. - with screen cleaned by the sepa water and a scraper
HYDROCYCLONICS CORP 21.01.74-US-435163
*J01 +P43 (03.05.79) *US3876-548 B07b-01/22*

Cylindrical screen for the sepn. of liq. from solid components, e.g. industrial wastes from the food and meat industry, consists of a horizontal drum with parallel bars The influx is directed into a container on one side of the drum, with access to the screen bars above the plane through the centre line. The bars have a cross-section o an inverted cone with a rounded apex, with the flat base forming the smooth periphery of the drum. The cone angle of the bars is such that the facing sides of adjacent bars include an angle of 14-90° (pref. 26°).

The high free fall of the water helps to clean the scree bars, resulting in efficient dewatering. 16.1.75 as 501547. (7pp39)

TOYJ D15 83238Y/47 =DS 2718-3
Fluorinated cation exchange resins - with reduced permeability hydroxyl ions and increased current efficiency
TOYO SODA KK 27.04.76-JA-047233
*A85 J03 (A91) (03.05.79) *DT2718-307 C08j-07/02 +C0 27/12*

Process for improving the properties of cation exchange membranes, produced from ⩾1 fluorinated polymer or copolymer having cation exchange side gps., comprises soaking with a water-miscible organic solvent, followed by removal of solvent by evapn. Pref. solvents are alco hols, ketones, esters, ethers and $CHCl_3$, esp. 1-4C line alkanols, alkyl acetates and THF. Pref. polymers have SO_3H or COOH side gps., or the corresp. salts.

The prods. allow higher current densities when used electrodialysis equipment. 25.4.77 as 718307. (14pp04

FARH ★ D15 35443B/19 ★DS 2756-1
Overloaded clarifying plant relief - by passing all or part throu suspended filter cloth elements
HOECHST AG 16.12.77-DT-756171
(03.05.79) C02c-01

Overloaded clarifying plant can be relieved by passing a or a side stream of the sewage flow before and/or after the overloaded stage through a filter plant with suspende filter cloth elements. A built-up layer of suspended pa

cles filters out of the solids, colloidal and dissolved sub-
tances by gravity filtration. The filtrate is then return-
d to the cycle.

Obsolescent plant or plant which cannot meet stricter
egulations can thus be brought up to date without requir-
ng large additional floor space and costly extensions.
6.12.77 as 756171. (4pp39)

VIBA ★ D15 35449B/19 ★DS 2839-410

cavenger for floating matter in sewage settling tank - rides up
amp and is held high whilst returning

WIBAU GMBH 11.09.78-DT-839410

(03.05.79) C02c-01/36

t the one end wall of a rectangular settling tank on a
ewage farm, a ramp is inclined upwards to the overflow
nto a drain channel for floating matter, and the scavenger
lade drawn by the mobile bridge across the tank, rides
p the ramp to the overflow and is locked in position above
ne water level. On returning to starting point the blade
s lowered again into the water and the skimming process
s repeated.

The scavenger blade is designed to float in the water,
nd is automatically locked when it reaches the height of
ne drain channel wall, by a latch on the bridge. At the
tarting point the latch is pushed away into the unlocked
osition and a braking arrangement between the bridge
nd the blade supporting mechanism slows down the lower-
ng into the water.

System dispenses with unnecessary additional lifting
echanisms for the scavenger blade. 11.9.78 as 839410.
pp1045)

PP ★ D15 35460B/19 ★DT 2747-215

esalination plant for distilled water and salts recovery - reduces
nsiderably the ratio of energy required to water produced

KRUPP F GMBH 21.10.77-DT-747215

(03.05.79) B01d-01/28 B01d-09/02 C02b-01/02 C02c-05

or the recovery of salts and water from aq. solns., the
ln. for trestment is compressed, preheated with water
pour and freed from salts with a negative solubility gra-
ent by heatingwith steam. The soln. is then detented
th the generation of steam, and from the remaining high-
concentrated brine, one or more salts having positive
lubility gradients are separated out, wholly or partly by
ystallisation and vapourisation.

All conventional methods using detenting-vapourisation
d negative solubility required a large amt. of energy.
is process reduces the energy consumption, whilst usi-
the simplest equipment, by 10-30% per cubic metre of
ter. 21.10.77 as 747215 (13pp1045)

TZ ★ D15 35465B/19 ★DT 2747-469

ration plant for sepg. oil particles from effluents - has plates of
onstituted synthetic foam with broken cell walls (SW 19.12.77)

METZELER AB 26.05.76-SW-006003 (22.10.77-DT-747469)

*A88 J01 +Q42 (03.05.79) B01d-17 B01d-39 C02b-09/02 C02c-
01/38 C09k-03/32 E03f-05/16*

particles are scpd. out of effluents by a filter arrang-
ent comprising a housing with inlet and outlet between
ich a self-supporting body forms the filter element. The
er element consists of small pieces of a soft, foamed,
nthetic material, with open cells. The cell walls are
oken down by subjecting the material to a mechanical,
n-disintegration pressing action. The small pieces of
m are afterwards bonded together by a adhesive under
ssure.

Fully effective means of sepg. oil from effluents is pr-
ded much more efficiently than by scattering absorbent
terial on the surface of the water on floors, etc. which
any case is impractical with, e.g. the swilling water
m ships oil tanks. The filter(s) bind the oil particles
ch expel the water from the filter material so that the
er becomes practically satd. with oil without allowing
to pass through. 22.10.77 as 747469 (16pp1045)

HD ★ D15 35468B/19 ★DT 2747-562

tal recovery from chemical surface treatment waste waters - by
ssing over metal surface after basifying and adding reducing
ent, and redissolving deposit

SCHERING AG 20.10.77-DT-747562

M25 (M14) (03.05.79) C02c-05/02 C22c-03

The process comprises replenishing a chemical treatment bath in a container to maintain its separation quality and the bath liq. is discharged or flows over, as waste waters, to maintain a const. bath vol.

Metal recovery comprises setting waste water pH ≥10 and adding a reducing agent, and then passing over a metal surface on which the metal, present in waste water as a complex salt, is sepd. reductively, without attacking the metal surface.

Metals and other chemicals can be recovered quantitatively and opt. charged for re-use, in a closed cycle. Environmental pollution is prevented. 20.10.77 as 747562 (13pp200)

TEBB/ ★ D15 35485B/19 ★DT 2748-084

Water clarification system for intensive fish farming - centrifuges effluent to which oxygen and hydrated lime are added

TEBBENHOFF E 27.10.77-DT-748084

P14 (03.05.79) A01k-63

Stale water continuously drawn off from a pond on a farm for intensive fish prodn., and replaced by clarified, esp. aerated water, is centrifuged to separate it into a concentrated sludge and clarified water. This with the addn. of a quantity of fresh water is then returned to the pond.

System maintains the water in fish ponds for intensive prodn. in a condition in which the fish thrive and are free from disease, without a clarifying process which is disproportionately high in cost and requiring the input of energy to maintain the temp. of the pond uniform in summer and winter.

Solid matter is removed at a rate which is higher than that at which bacteria and fungus can multiply. The sludge produced can be composted and used as fertiliser. The concentration of salts and dissolved organic matter can also be maintained at a level to keep the fish healthy.

Oxygen in the form of fine bubbles in injected into the stale water as it is drawn from the tank, and before centrifuging also, hydrated lime is added. This precipitates calcium carbonate which envelopes particles of albumen etc. The ratio of clarified to fresh water returned to the tank is only as 8:1. 27.10.77 as 748084 (11pp1045)

DANA ★ D15 35501B/19 ★DT 2748-191

Polarographic measurement of oxygen in liquids - using membrane cell filled with precise quantity of electrolyte, the membrane always being supported and the support contg. the anode

DANFOSS A/S 27.10.77-DT-748191

E36 J04 R16 (03.05.79) G01n-27/54

Measurement of gas concn. of gases in liqs. uses polarographic technique having a holder with an exchangeable cell. This consists of a carrier with a membrane across its face which contains the two electrodes. These are surrounded by an electrolyte.

The quantity of electrolyte is such that the electrolyte space is completely filled but the membrane is not lifted off the support surface. The carrier also contains the anode and a contact is provided on the near side of the carrier to line up with the anode contact on the holder.

Used esp. for measuring O_2 in water. Gives a cell which is cheap to produce and which is largely insensitive to pressure fluctuations. 27.10.77 as 748191 (14pp1053)

BENC ★ D15 35518B/19 ★DT 2748-366

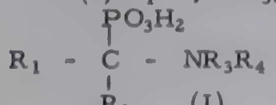
N-Sulpho-hydroxy-alkane amino-alkane phosphonic acids - useful as complexing agents for metal ions, e.g. in water treatment

BENCKISER-KNAPSACK 28.10.77-DT-748366

E11 F06 (F09) (03.05.79) C07f-09/38

Sulpho-contg. phosphonic acids of formula (I) and their alkali salts are new.

In (I) R_1=H, CH_3, C_2H_5, phenyl, CH_2NH_2 or $C_2H_4PO_3H_2$.



$$R_1 - \overset{\overset{\displaystyle PO_3H_2}{|}}{\underset{\underset{\displaystyle R_2}{|}}{C}} - NR_3R_4$$

(I)

R_2=H or PO_3H_2. $R_3=C_nH_{2n-1}(OH)SO_3H$ or $CH_2PO_3H_2$. R_4 = H (cf R_3 = $CH_2PO_3H_2$ or is $C_nH_{2n-1}(OH/SO_3H$. and n = 3-12.

(I) are prepd. by reacting N-H cpds. with alkali metal salts of 3-12C alkanesulphonates having a displacable substit. e.g. halo or epoxy. (I) are complexing agents for di- and poly-valent metal ions. They have high water solubility (e.g. 100g/100 ml) and are stable to hydrolysis at high temp. Applications include treating hard water or textile treatment baths, in papermaking and in tanning, they can also be used to stabilise harness by the 'threshold method'. 28.10.77 as 748366 (13pp1251)

INRE- ★ D15 35614B/19 ★DT 2837-595

Deoxygenation of water using oxygen-free nitrogen - using washing and degassing columns the outlet gas from which passes through catalytic converter after addn. of hydrogen to remove oxygen

IND RES INST 01.11.77-JA-131009
E36 J01 (03.05.79) B01d-19

Dissolved O_2 is removed from a liq. using a sealed purge washer in which O_2-free N_2 is bubbled through the liq. It then overflows into a separator vessel where any bubbles are spearated. By this means dissolved O_2 is replaced with N_2.

The gases displaced have H_2 injected onto them. They are then passed into a catalytic converter where the O_2 is converted into H_2O. The gases can then be recycled. The prod. liq. essentially water free.

Used for removal of O_2 from liq. streams e.g. water for reagent purposes or food preservation. Allows complete removal with heating or chemical treatment. 29.8.78 as 837595 (14pp1053)

UNIX ★ D15 35640B/19 ★DT 2845-797

Anisotropic, synthetic, multilayer, molecular sieve membrane - esp. of polyamide, for dialysis, gas permeation, ultrafiltration and isotope sepn.

UNISEARCH LTD 20.04.78-AU-004134 (21.10.77-AU-002155)
A88 J01 K05 (03.05.79) B01d-13/04 B01d-31 B01d-39/14

An anisotropic synthetic membrane has a multi-laminar structure, in which each layer acts as a molecular sieve for accurate, precise mol.wt. cut-off.

Claimed uses are (electro)dialysis, gas permeation, reverse osmosis, ultrafiltration and isotope sepn. Membranes of different properties can be obtd. by tailoring the size of the cavities. The membranes are cheaper to produce. They have high water content (up to 98 wt.%), giving high water permeability. 20.10.78 as 845797 (27pp510)

KLEW ★ D15 35648B/19 ★DT 2846-169

Pulp clarifying plant - with flotation stage in settling basin before clear water outflow

KLEINEWEFERS 24.10.78-DT-846169
(03.05.79) C02c-01/26

A clarifying plant includes in the settling basin near the clear water outlet a flotation stage. The pulp which has been partly clarified by sedimentation flows via. this floatation stage to the clean water outlet.

This results in a simple and space-saving plant. It can operate with a high functional reliatility and a high throughput even with pulp of greatly different sink or float properties. 24.10.78 as 846169 (13pp39)

See page 36 *FR 2399-386

ICIL ★ D15 35763B/19 ★GB 1545-401

Oil containment on water surface - by application to periphery of oil of surfactant having per-fluorocarbon terminal gp. and also hydrophilic gp.

IMPERIAL CHEM INDS LTD 19.01.77-GB-002098
E16 H03 (10.05.79) C02b-09/02

A layer of oil on a water surface is contained, and the tendency of the oil to spread on the surface is reduced, by applying to the water, so as to form a chemical barrier around the periphery of the oil, a compsn. comprising a fluorocarbon surfactant having a terminal perfluorocarbon gp. which contains >3C and having >1 hydrophilic gp.

Used e.g. to form a chemical barrier around a spillage of petroleum oil so that the oil remains in one place where it can be collected. 1.2.78 (6pp914).

BABW D15 82832Y/46 =GB 1545-512

Continuous oil in water measurement by fluorescence - with periodic batch analysis by infrared absorption

BABCOCK CONTROLS (BAIM) 08.05.75-GB-019359
*H03 J04 R19 +R16 (10.05.79) *US4057-721 +G01n-21/52*

Method of continuously monitoring an oil contaminated water stream includes continuously exciting fluorescent radiation in the stream and producing a continuous monitoring indication dependent upon a measure of the amt. of fluorescent radiation excited.

currently withdrawn from the stream and the degree
contamination is determined by an infra-red absorption
procedure. Continuous monitoring gives an indication of
the respective moving parts of the stream from which the
respective discrete samples were withdrawn. 10.5.76
(6pp1363).

SARS D15 82861Y/46 =GB 1545-5

Cellulose triacetate osmotic membranes prepn. - by casting fro
solvent contg. swelling agent, precipitating in cold water ar
drying

SARTORIUS MEMBRANFI GMBH 14.05.76-DT-621519
*A88 J01 (A11 A32) (10.05.79) *ZA7606-497 B01d-13/04 C0*
05/18

Asymmetrical selectively permeable cellulose triacetate
membranes with a skin layer on >1 side are mfd. by (i)
casting a low molecular cellulose triacetate (I) dissolved
in a solvent mixt. consisting of ≥40(≥50)% acetone, a
solvent for (I), and a swelling agent for (I), to form a me
brane, the swelling agent (when employed as a separate
component from the solvent component) being added to th
soln. as the last component, the concn. of (I) in the soln
being 12-20% and the swelling agent 5-15%, and the ratio
of acetone to the solvent for (I) being ≥1.1:1; (ii) exposin
the cast membrane to evaporation for 2-90 secs.; (iii)
pptg. in cold water of room temp. or below, and opt. (i
drying the formed membrane.

The membrane is useful for reverse osmosis, esp. f
desalination of seawater and bracking water, and will
work even at high temp. e.g. at a feed water temp. of 5
C. 29.10.76 as 045089 (11pp990).

PERU D15 61860A/34 =GB 1545-

Nozzle device for jetting mixt. of gas and liquid into liqui
comprises a shroud having orifice which admits restricted flow
liquid into the shroud

PORTALS WATER TREAT 09.09.76-GB-037459
*P41 (10.05.79) *ZA7705-259 +B01f-03/04*

A liq. clarification appts. comprises a nozzle for intro
ducing a jet of liq. supersaturated with a gas into a raw
liq. through a shroud. The supersaturated liq. passes
rough an orifice provided within the shroud and a restr
ed flow of raw liq. is admitted into the shroud through
vent downstream of the orifice(s) so as to form a film
raw liq. over the inside surface of the shroud downstre
of the vent.

The liq. may be water and the gas may be air, the s
being led to a manifold carrying orifices and submerge
in the solid/liq. suspension to be treated e.g. a floccul
ed aluminium hydroxide. 26.8.77 (4pp1363).

STAU/ D15 09439Y/06 =GB 1545

Ultraviolet irradiation for continuous sterilization of water - pc
for drinking and swimming pools at reasonable cost

STAUSBERG H 29.09.75-DT-543418
*(10.05.79) *BE-846-622 C02b-03/02*

A process for the sterilisation of water by irradiation
UV light comprises conducting the water to be sterilis
through an open container at a velocity of 0.5-50cm/s.

The free surface of the water is maintained practic
wave-free and is irradiated with the UV light. The wat
may be conducted through a filter. 16.9.76 as 038466
(9pp1363).

BERP ★ D15 35799B/19 ★GB 200

Removing oil fat, wax, etc. from a surface - by forming
emulsion using a polyether phosphate surfactant, and bre
emulsion to recover oil wax, etc.

BEROL KEMI AB 28.10.77-SW-012179
E11 (10.05.79) C02b-09/02

A water-insoluble cpd. (I) is removed from a surface
recovered by forming an emulsion of the cpd. in wate
ing a surface active cpd. The emulsion is broken into
organic and an aq. phase and the phases sepd. The su
factant is of formula $R-(A)_n-O-P(=O)(-OH)-OR'$ (II) (w
R is 8-30C hydrocarbyl; each A is a gp. derived from
2-3C alkylene oxide; n is 1-30; R' is H or $R-(A)_n-$).
emulsion is broken by adjusting the pH to 7-10.

Used for removing oil, fat, wax, etc. from surfac
A stable emulsion is readily obtd. and the oil, etc. r

ily recovered. 25.10.78 as 841936 (3pp904).

TOKU ★ D15 35927B/19 ★J5 4041-194

Gas chromatographic determn. of organic substances in water - using a packed column having a condensed water contg. zone

TOKUYAMA SODA KK 08.09.77-JA-107199

J04 R16 (02.04.79) G01n-31/08

The condensed-water-contg. zone in the packed column is formed by, e.g., injecting a certain quantity of pure water into the column maintained at >100°C., followed by cooling the column to a desired temp. <100°C. When a sample is injected into the column, water content in the carrier gas flow is maintained at the satn. level by the water-contg. zone, and only non-aq. substances can effect changes in signals from a detector.

Method is used for continuous monitoring of organic substances in plant waste water, recycled industrial water etc. Effect of water on the base-line of the chromatogram is excluded, and, consequently, a number of samples can be analysed in succession. 8.9.77 as 107199 (7pp173)

MIHA/ ★ D15 35968B/19 ★J5 4041-269

Nitrogen removal from waste water - by intermittent aeration in controlled conditions

MIHASHI K 07.09.77-JA-107373

(02.04.79) C01b-21 C02b-01/23

Process for effectively removing nitrogen in a waste water is claimed, in which organic components in the waste water are decomposed by controlled nitrification and denitrification reactions in the treatment bath by repeating intermittent aeration and intermittent non-aeration alternatively, and adjusting the time and the amount of intermittent aeration against intermittent non-aeration (which is indicated by the ratio of (N as NH_3)/(N as HNO_3) in the water under the treatment).

By adjusting the time and the amt. of intermittent aeration against intermittent non-aeration, both aerobic and anaerobic decomposition of organic substances, nitrification and denitration of inorganic nitrogen compounds can be carried out effectively and sufficiently. The equipments and process are relatively simple, and the amts. of reactants such as acid, alkali, and methanol are reduced. Also reduced is the amt. of activated sludge to be produced. 7.9.77 as 107373 (2pp55)

SUMH ★ D15 35969B/19 ★J5 4041-270

Treating waste water contg. heavy metal ions - includes adding ferrous salt, then caustic soda, and blowing oxidising gas into soln.

SUMITOMO SHIPBUILD KK 07.09.77-JA-107566

(02.04.79) C02c-05/04

A ferrous salt (e.g., ferrous sulphate) is added to waste water contg. (2+) heavy metal ions, caustic soda is added to make it alkaline (pH 10-12), air or oxidising gas is blown into the soln. to carry out a ferrite-prodn. reaction. The same procedure is repeated. An acid (e.g., HCl or H_2SO_4) is added to the soln. to adjust its pH to ca. 1, and the same procedure repeated. A slurry-type prod. is sepd. and removed. The remainder is diluted with water and the same procedure is repeated in order to carry out a second ferrite-prodn. reaction. The ferrite-prodn. reaction is carried out at least twice.

Process is useful for treating waste soln. contg. esp. AZn(++), Cd(++), Mn(++), Cr(++), Fe(++), Sn(++), As(++), Ni(++), Hg(++), Pb(++), and Cu(++). 7.9.77 as 107566 (4pp55)

HITA ★ D15 35970B/19 ★J5 4041-271

Treating domestic waste water - by passing through electrically activated carbon filler layer, to remove particles by hydrogen flotation, and filtering through sand

HITACHI KK 09.09.77-JA-107726

(02.04.79) C02c-05/12

The waste water is passed through a filler-layer (which is spherical or granular active carbon filled between a pair of anode and cathode), and suspending particles in the water are floated by hydrogen bubbles emitted at the cathode side of each active carbon particle, by applying high electric voltage. The treated water is filtered through a sand layer, to be purified further. 9.9.77 as 107726 (4pp55)

NIKN ★ D15 36049B/19 ★J5 4041-550

Steel plant waste treatment - comprises mixing converter and blast furnace effluents to effect neutralisation and pptn. of zinc components

NIPPON KOKAN KK 07.09.77-JA-106793

M24 (02.04.79) C02c-05/02

A blast furnace dust-collecting effluent and a converter dust-collecting effluent produced in an integrated steel plant which have been hitherto treated separately, are effectively treated simultaneously without using any chemicals, e.g. NaOH and H_2SO_4 etc. and without encountering any problems in installation and anti-pollution respects.

Method comprises blending together the blast furnace dust-collecting effluent and the converter dust-collecting effluent in portions or in all amt. prior to the outflow into rivers to increase the pH value of the acidic blast furnace dust-collecting effluent and simultaneously to lower the pH value of the converter dust-collecting effluent, Zn components dissolved in the formed effluent is settled-out as flocs in the neutralisation reaction. The mixing ratio between the former and latter effluents is determined in accordance with the pH values or the amt. of the dissolved metal component. 7.9.77 as 106793 (8pp142)

DOWA ★ D15 36050B/19 ★J5 4041-551

Treating waste liquor having high metal salts concn. - by neutralisation, with residence time controlled to increase crystal size of sludge prod.

DOWA MINING CO LTD 07.09.77-JA-107592

(02.04.79) C02c-05/02

A waste liquor having high metal salts concn., e.g., contg. a Zn salt capable of forming a Zn ppte. or reacting with alkali, e.g. $ZnCl_2$, $ZnSO_4$ and $Sn(NO_3)_2$ etc. is neutralised and concd. without any dilution by introducing simultaneously the waste liquor to be treated and a neutralising agent, e.g. NaOH, Na_2CO_3 and $Ca(OH)_2$ etc. into a reaction vessel equipped with an overflow outlet. The neutralisation reaction is carried-out at temps. >50°C. and under a neutral pH range, and continuous overflowing of the ppte.-contg. liquor to the outside takes place. The retention time in the reaction vessel is pref. about 30 mins., and the unreacted Zn salt soln. is overflowed when the retention time is <30 mins., and the granular size of the ppte. is decreased when the retention time becomes longer than 30 mins. in the case that the process is applied to a soln. having comparatively lower Zn concn., i.e. <500 ppm. But the retention time is such extent that the unreacted Zn soln. is not overflowed when the Zn concn. exceeds 5 g./l. The resulting sludge contains a ppte. having large crystal size and is very easy to filtrate, and it is used as a metal material due to its very high metal content. 7.9.77 as 107592 (4pp34)

EBAI ★ D15 36051B/19 ★J5 4041-552

Sewage sludge concn. - by mixing mineral petroleum oil with sludge and subjecting mixt. to flotation concentration

EBARA INFILCO KK 08.09.77-JA-108175

(02.04.79) C02c-03

Sewage sludge, e.g. mixed raw sludge and surplus activated sludge etc. obtd. in sewage treatment, is conc. rapidly and in very high concn. by adding to it mineral petroleum oil, e.g. with initial b.pt. >150°C. and contg. no volatile components, in an amt. of 10-300 (pref. 30-100) wt.% based on solids in the sludge, and subjecting it to a flotation concn. treatment with a residence time of $\geqslant 1$ hr.

Specifically, a treated water is introduced into a compressed tank while compressing at 3-6 kgf./cm.^{2}-G, after which air is dissolved in it by using a compressor, to give an air-dissolving compressed water which is then introduced into a flotation separator via an ejector while mixing, by suction, with the sewage sludge mixed previously with the mineral oil. Fine air bubbles generated by the reducing pressure stick to the oil-adsorbed solids which then rise to the surface of the water and float. After >1 hr. they are discharged to the outside. 8.9.77 as 108175 (4pp34)

MITR ★ D15 36052B/19 ★J5 4041-553
Oil-absorbing waste water treating material - comprises polymer fibrous prod. coated with acidic phosphoric acid ester and laminated on polymer based composite powder
MITSUBISHI RAYON KK 08.09.77-JA-108223
A97 (A17 A23) (02.04.79) B01d-15 C02c-05/02

A waste water treating material is claimed which exhibits excellent oil absorbability w.r.t. emulsified oil-contg. waste water not only stabilised with cstionic or nonionic surfactant but also stabilised with nonionic surfactant as well as exhibiting excellent water wettability, and large effective contact area with water without any flotation. Material is suitable for use in treatment of cutting oil waste water, rolling oil waste water, machine-washed waste water, paint factory effluent, foodstuff waste water, dyeing waste water, pulp mill effluent and paper industry effluent etc.

Treating material is proxuced by laminating a polymeric fibrous material, e.g. made of polyethylene-terephthalate etc., the surface of which is coated with alkyd or alkylaryl acidic phosphoric ester or its alkali metal salt, on a fine composite material having surface area of >0.01 m.^{2}/g., composed mainly of a polymer, e.g. polyethylene and polypropylene, etc. and oxide (or hydroxide) of Si, Ca or Mg. 8.9.77 as 108223 (6pp34)

HITA ★ D15 36053B/19 ★J5 4041-556
Treating organic effluent contg. large amt. of nitrogen components - in which activated sludge flotation due to nitrogen formation by action of denitrification bacteria is prevented
HITACHI KK 09.09.77-JA-107728
(02.04.79) C02c-01/06

Organic effluent contg. a large amt. of nitrogen components is treated by introducing it into an aeration vessel where the effluent is aerated with O_2 in the presence of activated sludge, and subsequently introducing the aerated effluent into a settling vessel to separate it into activated sludge and treated water.

The improvement comprises introducing the aerated effluent discharged from the aeration vessel into a denitrification vessel maintained under anaerobic conditions, where the aerated effluent is blended with a portion of the organic effluent which has been not subjected to the activated sludge treatment (as hydrogen donor) and NO_3^- resulting in the aeration vessel is reduced to N_2 by the action of denitrification bacteria.

The blended liquor thus treated is then introduced into a vessel where it is aerated to remove N_2 by desorption from the activated sludge and to completely oxidise the remaining portion of unoxidised materials contained in the effluent. The liquor is finally introduced into the settling vessel, so that the activated sludge is completely sepd. from the treated water without any flotation of the sludge due to the formation of N_2 by the action of the denitrification bacteria. 9.9.77 as 107728 (3pp34)

KUBI ★ D15 36208B/19 ★J5 4042-362
Dehydration of sludge - by adding hydrochloric acid and ferric chloride to form flocks, then dehydrating
KUBOTA KK 10.09.77-JA-109274
(04.04.79) B01j-01 C02c-03

The method used in treatment of excrements, sewage, organic industrial waste water, etc. comprises adding HCl and $FeCl_3$ to sludge to form sludge flocks, and then dehydrating it.

As flocks of sludge of a given size and strength can be stably obtd., excellent dehydration efficiency can be achieved, forming a cake of a stable water content.

The amt. of HCl added as coagulating agent is 3.0-13.0%, and that of $FeCl_3$ 7.0%. In an example, 6.5% of HCl (35% concn.) is added to a sludge of solid content 3.8% (pH 7.5) and stirred for 10 min., 7.0% of $FeCl_3$ is then added and stirred for 5 min., and resulting flocks are then filtered. The water content of resulting cake is 83.3%, and filtration velocity is 22.6 Kg.ds./m.^{2}-hr. (cf. when 20% of $Ca(OH)_2$ and 7.0% $FeCl_3$ are added where filtration velocity is 11.9 Kg.-ds./m.^{2}-Hr.). 10.9.77 as 109274 (3pp50)

YABU/ ★ D15
Treatment of sludge contg. heavy metals - e.g. waste liquor from
plating plant
YABUTA K 10.09.77-JA-109287
M11 (04.04.79) B01j-01

An inlet of an outer tank is connected to the drain or fun-
nel of the sludge source. A reactor tank (I) is housed in
the outer tank and contains the sludge with a reacting liq.
A stirrer is vertically disposed in the centre of (I) and
driven by a motor. An air blow pipe is connected to a low-
er section of (I) for aerating the sludge. The product after
reaction is drained through a pipe connected to a receiver
tank, where the reacting liquid is recovered. The process
is low cost and public pollution is avoided. 10.9.77 as
109287 (4pp26)

YAWA/ ★ D15 36211B/19 ★J5 4042-36
Liq. evaporation appts. - comprises vertical columnar member
arranged with capillary spaces and kept in contact with the liq.
YAWATA M 10.09.77-JA-109604
J01 (04.04.79) B01d-01

A device is claimed for evaporating a liquid such as wate
at a high speed using little energy.

The appts. is disposed so as to always keep in contact
with the liquid, and consists of columnar members arran
ed with capillary spaces. They are vertically erected and
each lower end is in contact with the liquid, or hung dow
Each upper end is connected to a liquid drain collector.

Used for evapn. effluent from toilets and for concn. o
chemical solns. 10.9.77 as 109604 (3pp26)

HITA ★ D15 36216B/19 ★J5 4042-3
Operation of reverse osmotic equipment - used for treating was
liquids contg. organic cpds. for cleaning nuclear power plant
HITACHI KK 09.09.77-JA-108505
J01 K06 (04.04.79) B01d-13 G21f-09/04

Reverse osmotic tanks are grouped into two or more
groups. In each group, the tanks are arranged so that th
osmotic membranes reach sequentially the life. When
reaching the life, the membrane is replaced, while the
other group is operating. Intervals between replacement
of members are different by the quotient of the lifetime
the membrane by the group division number.

The treating capacity varies little with time. 9.9.77
as 108505 (6pp26)

NITL ★ D15 36217B/19 ★J5 4042-3
Reverse osmosis sepn. process - partially hydrolysing the se
membrane with aq. alkali metal hydroxide to maintain wa
permeation
NITTO ELECTRIC IND KK 09.09.77-JA-109259
A88 J01 (04.04.79) B01d-13

Method comprises partially hydrolysing the reverse me
brane by using aq. soln. of alkali metal hydroxide durin
sepg. treatment, and thus maintaining the water permea
tion amt. of the membrane at almost constant. The men
brane is made of organic acid ester of cellulose.

It is not necessary to change the amt.of treatment in
other treating processes connected with reverse osmos
separation process according to lowering of the water p
meability of the membrane. Therefore the efficiency an
economy of the whole processes can be improved and th
control of each process becomes very simple.

Specifically for the partial hydrolysis, the membra
of lowered water permeability is contacted with 0.1-5 w
% aq. soln. of e.g. NaOH for 1 min. to several hours a
normal temp. to 50°C. material of the membrane is e.
cellulose acetate, cellulose propionate, etc.9.9.77 as
109259 (2pp50)

TOYE ★ D15 36221B/19 ★J5 4042-
Modified cellulose anion exchange material prepn. - by treatm
in alkaline aq. soln. contg. halo hydroxypropyl-tri:met
ammonium salt, and treating the prod. with crosslinking agent
TOYO PULP KK 09.09.77-JA-107981
A11 J01 (A91) (04.04.79) B01j-01/04 C08b-15/02

Prepn. comprises treating cellulose with 3-halogeno-2-
hydroxypropyltrimethylammonium salt in alkaline aq. s
under such conditions that the alkali concn. of the aq. s
is 10-20 wt.%, the molar ratio of 3-halogeno-2-hydrox
propyltrimethyl ammonium salt to alkali is 0.1-0.8 an

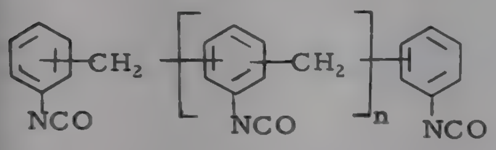
he reaction is carried out at a temp. above the freezing emp. of the reaction system under normal pressure, and reating resulting cellulose anion-exchange matter with rosslinking agent (e.g. formaldehyde, halohydrin cpd. r epoxy resin)

A strong basic modified cellulose anion-exchange mat- rial of little water-swellability can be obtd., which is seful as base material for the sepn. and purification of rotein, enzyme, etc., filler for column chromatography, tc. By depressing the water-swelling property of the nion-exchange matter, the workability of the matter can e markedly improved. 9.9.77 as 107981 (5pp50)

IRA ★ D15 36222B/19 ★J5 4042-386
dsorbent with excellent selectivity for metal ions - obtd. by eacting ethylene glycol-bis:(2 aminoethylether)-N,N,N′,N′- tra:acetic acid with a poly:isocyanate
UNITIKA KK 09.09.77-JA-109084
A91 J01 M25 (A25) (04.04.79) C08g-18/34 C09k-03

he adsorbent is prepd. by reacting ethylene glycol-bis(2- minoethyl ether)-N, N, N', N'-tetraacetic acid (EGTA) with polyisocyanate of formula (I) n is 0, 1, 2 or 3)

I)



in a polar aprotic solvent of dielectric constant >30 (e.g. N, N, N', N', - N", N"-hexamethylphosphoryl amide, DMF, or DMAc).

The adsorbent is used for sepg. a metallic ion from an . soln. of metallic ions; e.g. for selective adsorption of a^{2+} ions from a mixed aq. soln. of Ca^{2+} and Mg^{2+}, selec- ve adsorption of Cd^{2+} ions from a mixed aq. soln. of n^{2+} and Cd^{2+}, and for selective adsorption of Cu^{2+}, Sn^{2+}, i^{2+}, Co^{2+}, Pb^{2+}, etc. The adsorbent is used to produce esh-water or to recover valuable metals from sea water. ref. 0.5-1.0 mol. of EGTA is used per mol. (I). 9.9.77 109084 (5pp50)

KA ★ D15 36223B/19 ★J5 4042-387
omplex magnetic adsorbent for uranium - comprises uranium dsorbent, e.g. titanic acid, magnesium hydroxide or manganese :oxide, on magnetic fine particles
RIKAGAKU RES LABS KK 10.09.77-JA-109011
J01 M25 (04.04.79) B01d-15 C22b-60/02

he adsorbent comprises magnetic fine particles (e.g. agnetite, γ-Fe_2O_3 or various ferromagnetic ferrites, onsisting of Mg, Ni, Mn, Co, Zn, etc., the average rticle size of which is 0.01-5 μ) as nuclei, on which are eposited uranium adsorbent (e.g. titanic acid, magnesium droxide, manganese dioxide, etc.) on the surface of the ne particles to form a complex magnetic U adsorbent.

The resulting magnetic uranium adsorbent can be easily epd. and collected from sea water or soln. contg. urani- n by magnetic means. Recovering treatment of the fine wdery adsorbent after the sepn. of adsorbed uranium n be easily carried out. 10.9.77 as 109011 (3pp50)

ITR ★ D15 36247B/19 ★J5 4042-424
ollow fibres for ultrafiltration membranes - have three layers ntg. voids of different sizes, the largest on the outside
MITSUBISHI RAYON KK 12.09.77-JA-109649
A88 J01 (A14 A32) (04.04.79) D01d-05/24 D01f-06/18

e innermost layer of the hollow fibre membrane which s a thickness of <50 μ (0.1-20 μ), contains no void with iameter of >500 Å. The middle layer is a porous layer ntg. voids of 500 Å to 2 μ in diameter and the outermost yer contains interconnecting voids with a diameter of 00 Å to 5 μ, thus forming a network structure in which ependent giant voids with a length of 5-100 μ, and a eadth of 1-30 μ are radially arranged toward the inside the membrane, with one end of the void opening to the ter layer.

The hollow fibre is spun through a nozzle, using organic lvent soln. of acrylonitrile polymer pref. contg.> 80 mol. of acrylonitrile as 'sheath' component and a coagulating ln. for the polymer soln. as 'core' component and the un fibre is led into coagulating bath. The coagulating ln. and coagulating bath are mixed solns. of solvent for polymer and and solvent which has coagulating action upon the polymer soln., pref. water. The concn. of the latter is <30 wt.% in the coagulating soln. and >70 wt.% in the coagulating bath.

The resulting membrane exhibits excellent permeability and separating power. 12.9.77 as 109649 (5pp172)

NIBU- ★ D15 36276B/19 ★J5 4042-846
Agent for treating pollutants and polluted waste water - comprises calcined vermiculite and opt. perfume deodoriser and fungicide
NIPPON BLG MAINTENA 12.09.77-JA-108749
(05.04.79) C02c-01/40 C02c-03

A cleaner for treating pollutants or polluted waters, e.g., addled substances, animal droppings, etc. on road, floor, etc. was developed which comprises calcined vermicullite and opt., a perfume enclosed with microcapsule, a deodoriser, and fungicide.

The cleaner, which is excellent in polluted water adsorptiveness, pollutant covering property, and offensive odour adsorptiveness, as well as in handleability both before and after its use, exhibits high capacity for treating pollutants or polluted water. The used cleaner can safely be discarded into soil without causing any effect on plants or animals. 12.9.77 as 108749 (3pp117)

KAWI ★ D15 36277B/19 ★J5 4042-848
Treating waste water discharged from leaching of blast furnace slag - by adding sodium hypochlorite to isolate sulphur and regulating ph of resulting water
KAWASAKI STEEL KK 12.09.77-JA-108771
L02 M24 (05.04.79) C02c-05/04

Water discharged from the leaching of blast furnace slag during water cooling or during storage in the open air, is treated by adding Na hypochlorite until the max. potential, or the max. oxidn.-reduction potential of thiosulphuric acid ion present is reached, then the S isolated is removed. Lastly the treated water is regulated to an appropriate pH value by the addn. of an acid in order to release it to the outside.

This method is capable of effectively removing COD components and at the same time of decolourising the water, as well as deodorising it. The treated water, combined with neutralisation with an acid to pH 5 to 7, can be reused as cooling water, etc., or released to the outside. 12.9.77 as 108771 (4pp117)

KUBI ★ D15 36279B/19 ★J5 4042-850
Aerobic digestion of human waste - by diluting with water followed by oxidn., nitrification and denitrification
KUBOTA KK 10.09.77-JA-109277
(05.04.79) C02c-01/02

In the treatment of human waste in which human waste and diluting water (e.g. fresh water or sea water in an amt. 2 to 10 times as much as the human waste) are charged into an aerobic digestion tank for oxidation, nitrification, and denitrification, the effluent from the nitrification tank is partly introduced to the aerobic digestion tank, and then the pptd. sludge in the sedimentation basin following the digesting treatment is partly sent back to the aerobic digestion tank and the supernatant liquor in the sedimentation basin is subjected to nitrification, denitrification and aeration, where the pptd. sludge is also partly sent back to the digestion tank or the denitrification tank.

Method gives treated water or improved quality, provides a high removing rate of BOD, T-N and Kr-N, achieves neutralisation of the nitrification tank with 1/2 caustic soda and forms approx. 33% less sludge. 10.9.77 as 109277 (6pp117)

HITD ★ D15 36309B/19 ★J5 4043-133
Treating metal washing water - with prim. washing water treated in electrodialysis tank and sec. washing water treated in electrodialysis and electrolysis tanks
HITACHI CABLE KK 13.09.77-JA-110206
M14 (05.04.79) C02c-05/12 C23g-01/36 C25d-21/20

Metal is washed in prim. washing water and in sec. washing water after pickling or plating. The prim. washing water is regenerated by electrodialysis, and the sec. washing water is regenerated by electrodialysis and electrolysis.

Prod. having almost neutral pH and good quality is obtd. without draining, using a self contained treating system. Since the regeneration of the sec. washing water is stabilised by the electrolysis tank, the system can be stably run with the electrodialysis tanks for a long time. Since metal ions are conc. by electrodialysis while the waste water is regenerated, valuable metals can be recovered easily and efficiently. 13.9.77 as 110206 (3pp7)

HITD ★ D15 36310B/19 ★J5 4043-134
Treating prim. and sec. metal-washing waters - using electrodialysis for prim. water and electrolysis and anion-exchange for sec. water
HITACHI CABLE KK 13.09.77-JA-110207
M14 (05.04.79) C02c-05/08 C23g-01/36 C25d-21/20

The metal is washed in a primary washing water and in a secondary washing water after being pickled or plated. The primary washing water is regenerated by an electrodialysis tank. The secondary washing water is regenerated by an electrolysis tank and an anion-exchange resin appts.

Washing water having a good quality and being close to neutrality is obtd. without draining to the outside. Operation is relatively stable and easy. Since metal ions are concentrated by electrodialysis while the waste water is regenerated, valuable metals can be recovered easily and efficiently. 13.9.77 as 110207 (3pp7)

OGAS/ ★ D15 36330B/19 ★J5 4043-169
Making industrial waste harmless - by slurrying with aluminosilicate, water etc., and an alpha-diol type poly:hydric alcohol which is subsequently polymerised
OGASAWARA T 12.09.77-JA-108787
A97 E34 L02 P35 (05.04.79) A62d-03 B01j-01 C04b-13

Harmful industrial wastes are made into a slurried suspension by the addition of aluminium silicate or aluminosilicate, Portland cement, and water, and then the slurried suspension is hardened by causing the polymerisation of an alpha-diol type polyhydric alcohol, as curable reactant, and an alkali metal salt of silicic acid and boric acid or borax, as polymerisation regulators, to take place within the slurried suspension. The alpha-diol type polyhydric alcohol used includes glycerol, mannitol, erythritol, etc.

The method is capable of easily controlling the time of polymerisation, the density of matrix of solidified wastes, and strength of the solidified wastes, giving pebble-like hardened solid in which harmful substances are securely confined in such a way that they are not dissolved out even when dipped in water for long period. 12.9.77 as 108787 (4pp117)

MITQ ★ D15 36332B/19 ★J5 4043-171
Sludge freezing and fusing appts. - including dewatering device connected directly to lower opening of sludge fusing tank in turn connected to freezing tank
MITSUBISHI ELECTRIC CORP 12.09.77-JA-110323
J01 Q75 (05.04.79) B01d-43 B01j-01 C02c-03 F25d-31

A dewatering device is connected directly to a lower opening of a sludge fusing tank which is connected to the lower part of a sludge freezing tank. When a shutter is opened to pass fusing sludge onto an endless filter belt, the water in the sludge is passed through the filter belt. When a vacuum tank is evacuated, the water is absorbed through the filter belt and discharged so that a cake is formed on the filter belt. After the filter belt is lowered to the desired position, the cake is discharged. 12.9.77 as 110323 (4pp35)

DAIE ★ D15 36337B/19 ★J5 4043-176
Extracting solvent from soln. - by cooling to below freezing point, grinding, fusing soln. other than solvent and sepg. liq. from solid
DAINICHI NIPPON CABLES 12.09.77-JA-109621
J01 (05.04.79) B01d-09/04 C02c-05

Process comprises (a) cooling soln. to below its solidification temp.; (b) grinding the frozen soln.; (c) maintaining the solvent to be extracted at below its m.pt., fusing the rest of the soln. to obtain a solid-liq. mixt., and (d) sepg. the mixt. into liq. and solid components, at the same temp. as that at which step (c) is effected. Stages (c) and (d) are repeatedly conducted to extract different species of solvent in sequence.

Method is capable of effectively and separately extracting different solvents in high yields, and is thus applicable to the chemical industry

tory effluents. 12.9.77 as 109621 (3pp117)

HITA ★ D15 36341B/19 ★J5 4043-18
Electrodialysis appts. e.g. for water desalination - has many catio and anion exchange membranes and controlled flow rate of wate to effect operation in one pass
HITACHI KK (HIEJ) 12.09.77-JA-108837
J01 (05.04.79) B01d-13/02

In an electrodialysis appts. comprising multilocular dial sis bath with alternately arranged plural cation and anion exchange membranes and plural isolated locules for desa ing water supplied, air bubbles are introduced into the de lination locules of the dialysis bath and also the flow rate of water to be desalted in the dialysis bath is regulated to a fixed rate in such a way that the desalination is attaine by the only one passage of water to be desalted in the dia sis bath.

The method contributes to the enhancement of desalin tion efficiency and the simplification of dialysis apparatu and operation. Thus, this method is effectively applicab to the manufacture of drinking water, industrial water, o for other purposes. 12.9.77 as 108837 (3pp117)

TOKZ ★ D15 36357B/19 ★J7 9007-7
Water purificn. process control - by using vol. change in absorbe polystyrene beads to activate relay to control valve in water fe line
TOKYO ORG CHEM IND KK 05.04.71-JA-020926
A91 (10.04.79) B01d-15 B01d-53/02

In a process for removing organic substances from wate by passing contaminated water through crosslinked poly yrene beads, an improvement comprises actuating a rel by utilising the vol. change of the beads due to absorptic of the organic substances, and so controlling a valve on the water feed line. 5. 4. 71 as 020926 B01d-15/00.53/02 (10. 4. 79) TOKYO ORG CHEM IND KK (9pp83) (J4703387

DNTO ★ D15 36385B/19 ★J7 9008-
Photographic waste liquor treatment - by decomposing pollutants with UV light and adsorbing the decomposed matter w activated charcoal
DAINIPPON TORYO KK 20.12.73-JA-141898
G06 (12.04.79) C02c-05

A photographic waste liquor is easily and effectively tre ted by irradiating thereon ultra-violet ray under aeratic to decompose polluting matters by oxidation treating it with an activated charcoal to remove the decomposed matter by adsorption, subjecting the water thus treated to the ultra-violet irradiating treatment, followed by repeating the procedures continuously. 20. 12. 73 as 141898 C02c-5/00 (12. 4. 79) DAINIPPON TORYO KK (4pp34) (J50093430)

LINM D15 10858U/08 =J7 9008
Effluent purification process - using activated sludge and recyc oxygen
LINDE AG 16.09.71-DT-146403
*(12.04.79) *BE-787-791 C02c-01/06*

Process for purifying organically polluted effluent wate is by introducing pure O_2 or air highly enriched in O_2 into a mixt. of effluent water activated sludge in which the gas mixt leaving the effluentwater/activated sludge and contg O_2 and gaseous products from metabolism of the activated sludge, esp. CO_2 is collected as recyclec gas then the gaseous metabolism products esp. CO_2 are (partially) separated from the recycled gas and the ga mixt. contg. O_2 thus obtd. is reintroduced into the mi of effluent water/activated sludge. 16. 9. 72 as 093158 (clg. 16. 9. 71-DT-146403) C02c-1/06 (12. 4. 79) LINDE (5pp) (J48040259)

NITL ★ D15 36414B/19 ★J7 900
Mfg. chemically resistant porous sheet - by dissolving sapo EVA copolymer in mixt. of water and alcohol, casting sol support, coagulating polymer and drying
NITTO ELECTRIC IND KK 13.09.73-JA-103629
A94 (A18 A35) (14.04.79) B01d-13/04 C02b-01/82

Method comprises dissolving saponified ethylene-viny etate copolymer in a mixt. of water and C_1 to C_4 alco casting the soln. on a releasable support or impregn he soln. into fibrous sheet, coagulating the polymer by mmersion in water, and drying the porous sheet formed.

The sheet has pore size of 0.01 to 50μ, and is highly resistant to acid, alkali and solvent. 13.9.73 as 103629 B01d-13/04, C02b-1/82 (14.4.79) NITTO ELECTRIC IND KK (5pp83) (J50054578)

BROW/ D15 11666S/06 #J7 9008-468
Fluid/solid contact process
BROWN H (BRO /) 31.01.68-US-701906 (25.09.70-JA-083523)
*J01 K06 (16.04.79) *US3549-526 B01j-01/06 B01j-08/20 C22b-60/02*

BROW/ D15 11666S/06 #J7 9008-469
Fluid/solid contact process
BROWN H (BRO /) 31.01.68-US-701906 (25.09.70-JA-083523)
*J01 K06 (16.04.79) *US3549-526 C22b-60/02 +B01j-01/06 B01j-08/20*

JNIC D15 83108V/48 = J7 9008-471
Jltra filtration using porous tubes - having thin coating of finely dispersed metal oxide
UNION CARBIDE CORP 10.05.73-US-358943
*J01 P41 +P13 (16.04.79) *DT2422-777 B01d-31 C02c-05/02*

Liquor is fed down centre of tube and permeates through hem into collection zone, concentrate being drawn off at he other end. Ultrafiltration screen is formed from layers of metal oxide particles of 0.01 to 10 μ dia. collected on he porous surface.

Can be used for effluent treatment or industrial separations and purification when large molecules are being separated from streams with small molecules. Tube length/dia. ratio is 20.1 minimum, voidage in tube 0.08 cm^3/gm. and average pore size 0.1-2.0 μ. 9.5.74 as 050782 (clg. 10.5.73-US-358943) B01d-31/00, C02c-5/02 16.4.79) UNION CARBIDE CORP (16pp) (J50015788)

ODA D15 79254V/46 = J7 9008-473
Water treatment by reverse osmosis - with ultraviolet light terilisation in storage reservoir
FOREMOST MCKESSON I 12.06.73-US-369409 (30.04.73-US-355762)
*+Q42 (14.04.79) *BE-814-332 B01d-13 C02b-01/82*

Appts. for the treatment of potable water comprises a storage reservoir fitted with a u.v. lamp. The reservoir s connected to the water main by a pipe controlled by an electric valve, this valve remains closed while the reservoir is filled to the level of a probe. When water is drawn off from a tap, two electric circuits are activated which llow water to pass through the reverse osmosis device nd be evacuated.

The cleaning cycle can be effected periodically, when he tap at the base of the reservoir is opened, so that any sediment and accumulated solids can be rejected. When he required amt of water has been drawn off the valves re actuated to allow water to pass through the reverse osmosis diaphragm until the level in the reservoir has been restored, the u.v. lamp is illuminated and maintains he water in the sterile condition.

Any blocking of the membrane is avoided by the periodical rinsing cycle, which may be controlled by a programmer. 30.4.74 as 048653 (clg. 30.4.73, 12.6.73-JS-355762, 369409) B01d-13/00 C02b-1/82 (16.4.79) OREMOST MCKESSON INC (8pp) (J50026774)

OKU D15 15461X/09 = J7 9008-474
leavy metal adsorption agent - comprising hydrohalogenic acid alt of amino deriv activated carbon
TOKUYAMA SODA KK 28.06.74-JA-073430
*J01 +P34 (16.04.79) *J51003-386 B01d-15 C02c-05/02 +A61l-09 B01d-53/02*

n agent for adsorbing heavy metal and exhibiting a low break-through value and large adsorption capacity, esp. n agent for adsorbing mercury which exhibits long stable dsorption activity is prepd. The agent comprises a hydrogen halide salt of cpd. (I) having ⩾1 of -NH$_2$, -NH- and >N-, gps. and activated carbon. (I) may be inorganic mino cpds., aliphatic amines, alicyclic amines, heterocyclic amines, aromatic amines, amino acids, amides or ydrazides. 28.6.74 as 073430 B01d-15/00, 53/02, A61l /00, C02c-5/2 (16.4.79) TOKUYAMA SODA KK (5pp) (J51003386)

JAPG D15 61921X/33 = J7 9008-551
Device with hollow semi-permeable fibres bundle - for osmosis, reverse osmosis, dialysis, ultra filtration etc.
NIPPON ZEON 01.02.75-JA-013563
*J01 P34 (D13 D16) (17.04.79) *DT2603-560 A61m-01/03 B01d-13 B01d-31*

Appts. for exchange of material between two fluids comprises a housing enclosing a bundle of hollow fibres with permeable walls and means for passing the first fluid through the housing over the outer surface of the fibres whilst the other fluid through the internal passages in the fibres.

Improvement is that the housing has a number of wall sections next to the bundle of fibres which are so shaped that they form enlargements in the cross-sectional of the housing and cause the first fluid to flow transversely across the bundle of fibres. The appts. is used in artificial kidney and lung machines, for desalination of water, thickening of fruit juices, removal of sediment from beer etc. By forcing the first fluid to flow transversely across the fibres, good mass transfer is achieved by the high velocities and boundary layer distrubance in the centre as well as the outer parts of the bundle. 1.2.75 as 013563 B01d-13/00, 31/00, A61m-1/03 (17.4.79) NIPPON ZEON (17pp) (J51101790)

AGEN D15 97089X/52 = J7 9008-555
Particulate aggregating agent used for waste water contg. heavy metals - comprises a waste clay, an organic caking agent and organic pelleting agent
AGENCY OF IND SCI TECH 06.05.75-JA-054371
*J01 (17.04.79) *J51129-886 B01d-15 C02c-05/02*

A particle aggregating agent for waste water contg. heavy metals, is produced by mixing 100 pts. wt. of a waste clay(A) and 25-40 pts. wt. of an organic caking agent (B) with 8-15 pts. wt. of an organic pelleting agent (C) per 100 pts. wt. of (A) + (B), forming the resulting mixt. into particles, and dry-distilling the particles at 450-900 °C in a dry-distn. furnace. (B) is coal tar pitch or coal and is converted to coke in the dry-distillation process. (C) is waste molasses or waste sulphite pulp liquor.

The particle aggregating agent can be produced at low cost. 6.5.75 as 054371 B01d-15/00, C02c-5/02 (17.4.79) AGENCY OF IND SCI TECH (2pp) (J51129886)

HITB ★ D15 36430B/19 ★J7 9008-623
Concentration of slurries, e.g. contg. phenol - by adding strongly magnetic powder and subjecting to magnetic field
HITACHI CHEMICAL KK 30.12.70-JA-122134
(17.04.79) C02c-03

To a slurry is added strongly magnetic powder, followed by mixing and stirring to give slurry flock, and the resulting slurry flock is subjected to a magnetic field, whereby the slurry is sepd. from the supernatant. By this method a slurry can easily be concentrated continuously. The method can be applied to various kinds of slurry. The strong by magnetic powder is e.g. ferrite, magnetite or Indian red. It is pref. to add coagulating agent such as FeCl$_3$, Ca(OH)$_2$, polymer coagulating agent, etc.

In an example, 500 ppm of ferrite of 200-325 mesh was added to a slurry of phenol in a vessel of 60 mm dia. 500 mm height and 1 liter capacity, followed by agitation. Sedimentation speed was 6.2 m/hr. SS concn. of the supernatant was 8 ppm. Sludge concn. after 1 min was 1.43% When no ferrite was added, sedimetentation speed was 48 pnm. Sludge concn. after 1 min. was 0.53%. 30.12.70 as 122134 C02c-3/00 (17.4.79) HITACHI CHEMICAL KK (3 pp 22)

AGEN D15 53067Y/30 = J7 9008-631
Absorbing agent prodn. for treating waste liquor - by reacting alkali metal aluminate with magnesium salt and opt. reacting the prod. with alkali metal silicate
AGENCY OF IND SCI TECH 12.09.75-JA-110549
*F09 J01 (17.04.79) *J52070-994 B01d-15 C02c-05/02*

The method comprises reacting alkali metal aluminate with a Mg salt at 70-95°C at 9-11 pH to obtain an adsorbing agent of $Al_2O_3 \cdot {}_xMgO \cdot {}_aH_2O$ (x = 2.5-5.0, a = integer) and opt. reacting the resulting reaction prod. with alkali metal silicate to obtain an adsorbing agent of Al_2O. xMgO ySiO$_2$. aH$_2$O (x=2. 5-5. 0, y =0. 1-1. 0, a = integer). The Mg salt is $MgCl_2$ or $MgNO_3$.

The absorbing agent used in treatment of a waste liquor contg. organic impurities, such as, waste pulp liquor, waste coal liquor, or waste dye liquor. 75-85% of lignin and 80-99% of colouring matter can be removed from waste pulp liquor. 12. 9. 75 as 110549 B0ld-15/00, C02c-5/02 (17. 4. 79) AGENCY OF IND SCI TECH (FUJC) (6pp51)(J52070994)

JAPE D15 69446Y/39 = J7 9008-633
Adsorbent for liquid wastes - comprising active polluted mud, formaldehyde and/or dialdehyde
JAPAN EXLAN KK 11.11.75-JA-135953
*A97 J01 (17.04.79) *J52059-088 B01d-15 C02c-05/02*

Adsorbents for treating waste liqs. consist of granular substances contg. active polluted mud. They are obtd. by heating at 60-250°C a mixt. of 100 pts. wt. of the sub- stances contg. active polluted mud. Wet substances are converted into a dry base. Also ≥5 pts. wt. of water solub -le formaldehydes initial condensn. prod. and/or diald- ehyde cpds. are present.

Typically an adsorbent is obtd. by combining carbonat -es with the substances contg. active polluted mud and water soluble formaldehydes initial condens. prod. and/ or dialdehyde cpds. Acid is added after heating and hard- ening. 11. 11. 75 as 135953 B0ld-15/00, C02c-5/02, (17. 4. 79) JAPAN EXLAN KK (6pp) (J52059088)

JAPE D15 47579Y/27 = J7 9008-634
Granular absorbing agent mfr. from activated sludge - by adding acid to sludge slurry, adding aldehyde resin binder and granulating during or after curing
JAPAN EXLAN KK 17.11.75-JA-138312
*A97 J01 (17.04.79) *J52062-189 B01d-15 C02c-05/02*

Method comprises adding acid to an aq. mixt. of 100 wt. pts. (as dry matter) of activated sludge-contg. substance, ≥5 wt. pts. water-soluble formaldehyde primary condensation product and/or aldehyde, to control pH below 5 for hardening the mixt. and subjecting to granulation during or after hardening. Pref. binder is added at 0. 5 wt. pts. per 100 wt. pts. sludge.

The adsorbing agent is inexpensive and industrially useful for treating industrial waste liq. contg. heavy metal ions, dye, surfactant, mineral oil, etc. 17. 11. 75 as 138312 C02c-5/02, B0ld-15/00 (17. 4. 79) JAPAN EXLAN KK (5pp50) (J52062189)

IKED- D15 18750Y/11 = J7 9008-636
Collection of mineral oils floating on water - using oil absorbing porous material supported on fibrous layers
IKEDA BUSSAN KK 18.07.75-JA-088620
*F07 H03 J01 Q42 (17.04.79) *J52012-688 B01d-15 + C02b-09/02*

A collecting compsn. for mineral oils is formed by supporting oil-absorbing porous substances on a layered structure of prescribed thickness made of ≥1 natural fibres and chemical fibres formed by mutually crossing the fibres extending and opt. bonding the crossed parts. Various fibres can be used as the fibrous matter, specifically when coconut palm fibre is used, a suitable layered material of 0. 01-0. 5 bulk density can be obtd.

As the oil-absorbing porous substance to be supported on the fibrous layered matter, there can be used vegetable porous substances such as coconut husks, rind of Indian corn, stem of kaoliang, peanut husks, etc. or mineral porous substances such as perlite, Shirasu balloon, etc. When the porous substances are treated with suitable hydrophobic and oleophilic materials, the activity of absorbing mineral oils present in water can be markedly improved. 18.7.75 as 088620 B0ld-15/00, C02b-9/02 (17. 4. 79) IKEDA BUSSAN KK (4pp) (J52012688)

MITK D15 07465A/04 = J7 9008-637
Vegetable fibrous oil-absorbing material prepn. - by mixing vegetable fibre with polyolefin, dispersing the mixt. in air, filtering, heating and compression moulding
MITSUI TOATSU CHEM INC 04.06.76-JA-064600
*A97 J01 (A17) (17.04.79) *J52148-493 B01d-15 + C02b-09/02*

Method comprises mixing vegetable fibre with polyolefin, dispersing the mixt. in air, filtering moving screen, to make a mat, heating of the mat to melt the polyolefin and to impregnate it among the fibre and compression-moulding of the mixture, before solidificatio of the polyolefin.

The prod. pref. has fibre of length 2-30 mm, or 50 mesh-through powder. The wt. ratio of polyolefin to fibre is pref. <35%. The concn. of the mixt. in air is 30-100 g. /m.^{3} The prod. has an apparent density of 0. 04-0. 1g. / cm^3. and is pref. coated with natural or synthetic rubber latex emulsion.

A stable water-repellent prod. is provided. 4. 6. 76 as 064600 B0ld-15/00 C02b-9/02 (17. 4. 79) MITSUI TOATSU CHEM INC (5pp) (J52148493)

MAGN- ★ D15 36457B/19 ★NL 7711-58
Electrolytic halogen prodn., halogenation or oxidation - using tw compartment cell with diaphragm or anion-permeable membrane
MAGNETO-CHEMIE BV 21.10.77-NL-011588
E36 J03 (24.04.79) C25b-01/24

Prodn. of a halogen or for halogenating or oxidising a liq. is carried out using an electrolysis cell divided into an anode compartment and a cathode compartment by a diap ragm or an anion-permeable membrane. The anode compartment contains the liq. in which the halogen is to be formed or which is to be halogenated or oxidised. The re actant for the anode reaction is transferred from the cat olyte, through the diaphragm or membrane, into the ano -te by applying a d. c. potential between the anode and cathode.

The process is esp. useful for chlorinating drinking water or the water in swimming baths. Since the chlorid required for the anode reaction is derived from the cath -te, the process operates with high current efficiency ir espective of the chloride content of the water to be treat 21. 10. 77 as 011588 (10pp367)

UAGR= ★ D15 36507B/19 ★SU -509-4
Liquid fractions separator and degreaser - has elastic liquid-fille tube as pressing unit and electric impact waves generator
UKR AGRIC MECHN ELE 11.06.74-SU-033546
J01 P71 (30.11.78) B30b-09/22

Device for separating liquid fractions from a variety of suspension, such as domestic sewage and manures, has the filter element inside a body fitted with inlet and outle pipes. The filter is made as a perforated tube with a pressing unit mounted coaxially inside it. The degree o clogging of the holes in the filter is reduced and the liquid fraction is simultaneously degreased, by making the pressing unit as an elastic liquid-filled tube, closed at both ends by covers with parabolic internal surfaces. An electric impact waves generator is placed inside the tube with the focus of the parabolic surface close to the supply pipe cover.
Kutsikovskii, I.G., Shamarin, Yu.E., Polupanov, F.N. Bul. 13/5.4.76. 11.6.74. as 033546 (3pp29)

PHYS= ★ D15 36577B/19 ★SU -582-7
Irradiation of farm and domestic waste water purificn. residu with cobalt-60 or caesium-137 source to give sterile easily filter residue for use as fertilizer
PHYS CHEM INST 23.07.74-SU-052618
C04 K08 (15.12.78) C05f-03

The residue from farm and domestic wastes is pretreated in a layer of thickness 1.5-2 mm. by irradiatio from a Co^{60} or Cs^{137} source.

Efficient sterilisation and coagulation of the residue can be insured, and the process simplified, if the irrad ation is carried out with γ-quanta at a power dose of 0. 1.2 x 10^{-3} m.rad/sec., to a total dose of 1-2 m.rad. The radiation can also be provided by accelerated electrons with an energy of 1-1.5 m.ev. at a power dos of 0.3-0.7 m.rad/sec. giving a total dose of 0.8-2 m. rad.
Tkachenko, Yu.I., Vysotskaya, N.A., Agaltsov, A.M et al. Bul. 45/5.12.78. 23.7.74. as 052618 (2pp815)

DYU= ★ D15 36579B/19 ★SU -585-673
ewage biological purification aerator - with porous ceramic tube ections held by internal perforated metal casing and with butt joint askets
SOYUZVODOKANALPROEK 31.12.75-SU-306574
(03.08.78) C02c-01

n aerator comprises a perforated metal casing which is ounted within porous ceramic or plastics tubes with end osures. The casing has end plugs with orifices and gidly fixed to the closures.

The tubes consist of sections held on the casing and ith the butt joints sealed by gaskets. Casing end plug rifices pass an air flow, and for connection to an air pply the aerator has a flanged end connection fixed by central stud and nut to the adjacent plug.

The number of tube sections can be varied to conform aeration tank size and BOD. The arrangement permits change of tubes without emptying a tank.

mokhin, V.N., Monastyrskii-Vainer, I.B. Kalinskii, V. Bul. 32/30.8.78. 31.12.75. as 306574 (3pp1358)

ASI= ★ D15 36721B/19 ★SU -613-162
action vessel for thermal decontamination of waste water - has il-type condenser for supplying wastes to atomisers and heat es and has screen between condenser and gas path
GAS IND EQUIPT RES 20.09.76-SU-401748
J09 Q73 (15.05.78) F23g-07

e waste water thermal decontamination reactor can be ed in chemical, petroleum and gas industries. The actor is cylindrical and contains drain atomisers, rner system, fire tube and gas duct. To increase the contamination efficiency, the reactor is provided with a il type condenser for drain supply to the atomisers and at pipes and it is also provided with a screen.

nkratov, V.K., Sedelkin, V.M., Gamayunov, G.K. l. 24/30.6.78. 20.9.76. as 401748 (3pp110)

TH= D15 86975Y/49 =SU -613-171
eze crystalliser for brine desalination or concn. of drinks - is ily transportable and economical in energy usage
AS UKR THERMO PHYS 23.02.76-SU-320653
*+Q24 Q75 (D13 D16) (26.06.78) *FR2341-344 +B63j-01 F25c-01/12*

e freezing distiller concentrator can be used to obtain nking water and to concentrate food products such as ne, juices and milk. The unit contains distilling block ich includes coolant evaporator placed on the augers aft, separator with ice scrapers and heat exchanger. e heat exchanger is used for initial soln. cooling. The t also contains a condenser for the coolant and ice lting, the initial soln. supply line circulation pump, ne recirculation and drainage line and cooling compessor.

To increase the concentrator efficiency, the distilling ck is provided with an additional condenser for the lant, atomisers for initial soln. supply and brine reculation onto the evaporator inner surface. The unit o has a knife for ice removal from the evaporator face. The shaft lower end is hollow and is used to ply part of the recirculation brine onto the evaporator er surface. The separator is situated in the evapora- cavity.

irnov, L.F., Parkhitenko, V.M. Bul. 24/30.6.78. 2.76. as 320653 (3pp110)

= ★ D15 36779B/19 ★SU -613-774
h-water collection and discharge appts. - has troughs with ed side walls positioned using rack having slots into which sides inserted
ENGD ECONOM ACAD 02.08.76-SU-392429
(15.06.78) B01d-23/26

ices to collect and discharge wash-water in filtering tallations used to process natural waters and effluents, e troughs with bottoms and side walls. The speed of of the liquid during flushing can be varied, by install- a fixing rack, one end of which has a series of notches side-walls of the troughs are hinged to the bottom. free end of the rack is fastened to the top edge of one he side walls, also by a hinged connection. Water m a pump or tank passes into the filter material and suspends it, completes the washing and conveys it through the restricted zones.

Lazovskii, Ya. B., Novikov, M.G. Bul. 25/5.7.78. 2.8.76. as 392429 (3pp29)

CEPA ★ D15 36813B/19 ★SU -613-820
Effluent water purification by froth flotation - uses purified water chamber consisting of cylindrical and conical sections mounted coaxially in flocculation tank
CELLULOSE PAPER IND RES 10.07.74-SU-043590
P41 (05.06.78) B03d-01/14 C02c-01/26

Improved efficiency of the installation for purifying effluent waters by froth flotation method is ensured by optimal conditions for intensified flocculation with slow rate of ascent of maximum quantity of air bubbles which are of required dimensions.

The flocculation tank contains coaxially mounted purified water chamber which consists of two parts: top cylindrical section and lower conical section whose bottom covers the total bottom area of the flocculation tank.

Kopylov, V.A., Pivovarov, V.G., Solonitsyn, R.A. et al. Bul. 25/5.7.78. 10.7.74. as 043590 (2pp135)

EIDE/ ★ D15 36954B/19 ★US 4151-046
Floating solar still with submerged condenser - giving up heat of condensation to incoming cold water, used to produce potable water from sea or brackish water
EIDELBERG J 27.03.78-US-890785
(24.04.79) C02b-01/06

A floating solar still comprises a floating frame having its top covered by transparent glass, its bottom covered with wooden boards and its sides having water inlets close to the bottom. The water is preheated prior to evapn. by a submerged condenser which is located within the frame between the bottom and a corrugated heat absorbing metal plate.

The corrugated metal plate is positioned so that one part of it is immersed in the distill and while the other part consisting of the ridges of the corrugations, remains above the surface of the distill and leaving free spaces beneath the ridges which are used as ducts. Evaporated vapour flows from these ducts down conduits to the submerged condenser.

The thermal efficiency of the still is improved by using the heat of condensation for preheating the distilland before evaporating it. 27.5.78 as 890785 (3pp295).

OTHM/ ★ D15 36972B/19 ★US 4151-075
Continuous separation of two liquids of differing density - by passing between imperforate plates inclined to horizontal
OTHMER D F 11.06.76-US-694954
(24.04.79) C02c-01/06

A mixt. of two fluids of different density is sepd. by passing between an array of parallel imperforate plates with a spacing of ⩾0.5 inch between each pair of plates. The plates are inclined to the vertical along their major axis at an angle of 15-75° and at an angle of 1-20° along their minor axis.

The fluid mixt. is introduced at the lower end of the major axis and passes upwards between the plates where the two phases become sepd. so that the heavy phase returns to the bottom of the array and the light phase rises The inclination of the minor axis causes the heavy phase to be directed towards one edge of the plates.

The appts. may be used to settle a dense phase from a water-based sludge. The inclination of the plates to the horizontal along their minor axis separates laterally the falling heavy phase and rising light phase so as to prevent interference while moving in opposite directions along the major axis of the plates. The minor axis inclination concentrates the falling heavy phase into a stream which can be collected in a manifold at the lower end of the plates without undue mixing with the feed mixt. 11.6.76 as 694954 (18pp295).

SVRA- D15 79387A/44 =US 4151-076

Liq. extn. process - using surfactant to prevent agglomeration of suspended solids

SVENSKA RAYON AB 15.04.77-SW-004357

*J01 (24.04.79) *NL7803-923 B01d-11/04*

Dissolved materials, pref. metal ions are removed from an aq. feed soln. contg. surfactants by liq. extn. The aq. feed soln. is contacted with an organic soln. to partly extract the materials into the organic soln., the extn. being performed in the presence of surfactants. The organic soln. contg. extracted materials is contacted with an aq. washing soln. to transfer the materials from the organic soln. into the washing soln..

This forms (i) an aq. prod. soln. which is recovered while partially being recycled as the washing soln., and (ii) an organic soln. depleted of the minerals which is recycled to the extn. stag. The surfactants are removed from the part of the prod. soln. which is recycled as the washing soln.. 14.8.78 as 896190 (5pp964).

NOGU/ D15 61260Y/35 =US 4151-077

Treating aq. effluent to remove mercury - by oxidising to divalent state and extracting with an organic soln.

DIAZ NOGUEIRA E 28.04.76-ES-447417

*E36 J03 (24.04.79) *BE-854-061 +B01d-11*

Mercury is eliminated from industrial waste water by means of solvent extn. Industrial water is treated with an oxidising agent to transfrom all mercury to a species with valence Hg^{++}. The excess oxidising agent in the water is reduced by treatment with sulphite, bisulphite, hyposulphite or meta-bisulphite to form a sulphate species which will not degrade an extracting agent.

The water is further treated with an organic soln. contg. an extractant, a modifier and diluent. Extractant is thioalcohol, thiophenol and/or thiophene of mol. wt. >80; modifier is alkyl phosphoric ester, oxide of phosphine and/or fatty alcohol of mol. wt. >100, and diluent is a kerosene-like hydrocarbon mixt..

Extracting agent is regenerated by treatment with aq. soln. of chloride ions torecover mercury in high concn. of mercuric chloride in aq. soln., and to allow recycling of the extracting agent. 26.4.77 as 791004 (4pp931).

DOWC ★ D15 36973B/19 ★US 4151-078

Removal of oil from water - by treatment with hydrophobic silica contg. sorbed hydrogen fluoride

DOW CHEMICAL CO 12.08.77-US-824003 (07.10.76-US-730556)

H03 J01 (24.04.79) C02b-09/02

Oil is sepd. from water by adding finely divided silica which has sorbed HF values, rendering it hydrophobic. The oil is sorbed on the silica to form a bouyant layer, which is removed. The layer is placed in a separate body of water, where after prolonged contact the silica becomes hydrophilic, and enters the water phase, releasing the oil.

The process removes hydrocarbons, vegetable oils, organic polymers etc. from waste streams. The hydrophilic silica produced may be used e.g. as a filler or treated to make it hydrophobic and reused. 12.8.77 as 824003 (3pp955).

NALC ★ D15 36974B/19 ★US 4151-079

Regenerating ion exchange resins used with boiler feed water - using corresponding potassium salts in place of usual sodium salts

NALCO CHEMICAL CO 05.06.78-US-912618

(24.04.79) B01j-01/08 C02b-01/76

In the regeneration of mixed bed ion exchange resins, in which the cation and anion exchange resins are sepd. and then regenerated, the improvement is that the anion exchange resin contg. small amts. of entrained cation exchange resin is regenerated with an aq. soln. of KOH.

Cation exchange resins used to purify boiler feed water are regenerated by backwash of high pressure high temp. condensate, followed by a treatment with KCl brine in place of the NaCl normally used.

Potassium is not as readily displaced as sodium from the resin by ammonia and amine cpds. e.g. morpholine, which may be present in boiler water, so the amt. of alkali metal leached into the water is reduced, though Ca, Mg etc. are still removed. 5.6.78 as 912618 (4pp955).

ENVI- ★ D15

Dewatering slurry e.g. sewage by pumping into press - an operating press while monitoring parameters to calculate cak solids concentration

ENVIRO DEV CO 13.02.78-US-877168

(24.04.79) B01d-25/12 C02b-01/18 C02b-03/06 C02c-01/40

A solids-laden water slurry is dewatered by pumping into a filter press to produce a solid cake, while effluent wate is recovered. Prior to filtration the solids concn. of the feed is measured and during filtration the vol. of expressed water is recorded. From these measurement the solids concn. of the filter cake is computed.

A resource factor signal is determined by the rate of change of the solids concn. and is opt. used to terminate the pressing operation when a preset value is reached. Typically the computed solids concn. of the filter cake i used to adjust the characteristics of an incinerator for the cakes.

The appts. removes solids from municipal sewage and prepares a cake which is subsequently incinerated. The appts. adjusts to different concns. of solid in the sewage feed. The resource factor signal terminates the pressing to maximise the throughput of the appts. even through the filter cake may not have been maximally concn. 13.2.78 as 877168 (9pp295).

SEAC- D15 81644T/52 =US 4151-0

Hydromechanical liquid/liquid skimmer - esp for oil sl decontamination

SEACLEAN SA (SEA -) 04.06.71-CH-008195 (31.05.72-US-25824

*H03 Q42 +Q24 (24.04.79) *DT2226-567 +B01d-21/18*

A contaminant thinly spread on the surface of a liq. wit which it is immiscible, is recovered by immersing a housing having non-communicating compartments into the liq. to partially fill the compartments. The compartments are defined by advanceable partitions which progssively decrease their vol.

The contaminant layer is progressively thickened in compartments, the entrained underlying liq. flowing ou The compartments are pref. defined by a rotatable scr of variable pitch. As the screw rotates, the contamina moves through the device to an end where the vanes ar closely spaced, and where it is easily removed. Contaminants may be thus removed from rivers, oceans etc.. 20.7.76 as 707047 (31.5.72 - US - 258242) (14pp1379).

SILC ★ D15 36976B/19 ★US 4151-

Settling unit for closed cycle circulated coke quenching water - a conduit for the water positioned between a settling basin ar drain surface

STILL C FA 25.11.76-DT-U37032

H09 (24.04.79) B01d-21/18

The unit consists of a settling laser having vertical sid walls with a drain surface sloping downwardly alongsi one of the sidewalls. A conduit for the quenching wate positioned between the drain and the sidewall and in a ition to supply quenching water to the settling basin al the entire width of the sidewall. It can also receive dr ed water from the drain surface.

A trackway is formed above the basin and the drain surface and carries a dredging carriage. The carriag a dredging bucket which can pick up solids from the ba and deposit them on the drain surface.

The appts. allows the silty water uniformly along entire width of the settling basin to obtain a uniform s ling of the sludge. 21.11.77 as 853298 (5pp1345).

WATE- ★ D15 36978B/19 ★US 415

Lamella separator for solids-contg. liq. - has control for regul thickness of feed liq. layer

WATER PURIFICATION 06.10.77-US-839782

J01 (24.04.79) B01d-21/24

Lamella separator for sepg. solids from solid-contg, feed liq. comprises parallel inclined channels in whic the solids settle. In each channel the feed liq. forms layer extending from the region at which it is introdu and flows in one direction while clear liq. free of sol flows in the opposite direction. Each channel has a control which maintains the thickness of the feed laye at less than one half the channel depth.

Maintaining the thickness of the feed liq. layer at less than one half of the channel depth prevents the feed liq. reversing its flow and mixing with the clear liq. which then becomes contaminated with solids. 6.10.77 as 839782 (6pp67).

MALI/ ★ D15 36979B/19 ★US 4151-085
Water purificn. in mechanical and germicidal filters - with automatic regulation of flow rate
MALIK L W 03.04.78-US-892955
(24.04.79) B01d-35/06

A water purifier comprises a series of alternating mechanical and germicidal filters. At the downstream end of the appts. the flow rate of the feed is measured and is used to control an upstream valve to maintain the flow rate at a value which provides optimum filtration.

Pref. the germicidal filters include electrically powered ultraviolet lamps and the mechanical filters contain activated charcoal and glass wool. A rust trap is pref. placed at the upstream end of the appts.. The appts. may be battery powdered and portable. 3.4.78 as 892955 (8pp).

USAS ★ D15 36980B/19 ★US 4151-086
Aq. sample collection and distribution system - provides filtered sources of aq. fluid and a source of unfiltered fluid
NAT AERO & SPACE ADMIN 04.04.78-US-893382
J01 (24.04.79) B01d-23/24

The system comprises sampling valves for supplying aq. fluid samples to a filter which provides a no. of filtered sources of the aq. fluid. A separate sampling valve provides a source of unfiltered aq. fluid. The pressures of the aqs. fluid before and after filtering are sensed and used to generate electrical signals for controlling the sequence of operations in the system. The filter can be periodically backflushed without shutting off the whole system.

Used for collecting aq. samples from various locations in a water treatment system for delivery to chemical and biological analytical sensors which determine the effectiveness of the treatment system. 4.4.78 as 893382 (9pp67).

USSH ★ D15 36982B/19 ★US 4151-089
Flow through counter current chromatography appts. - has gravimetric sepn. device for eluting sepd. phases from rotating helical column
US SEC OF HEALTH 17.05.78-US-906868
J01 K06 (24.04.79) B01d-15/08

The appts. employs a rotating helical column in a gravity field to separate two phases of different density. The two phases are collected in a chamber at the head end of the column and sepd. from one another. A gravimetric sepn. device in the chamber permits one of the two phases to be eluted from the chamber.

Used for laboratory sepn. of chemicals, reprocessing nuclear fuels and sepg. hazardous pollutants from industrial waste water. High sepn. efficiency of solutes is attained according to their partition coeffts. An efficiency of up to 10,000 theoretical plates has been achieved in the sepn. of dinitrophenyl amino acids. 17.5.78 as 906868 (7pp67).

LABS- D15 74165W/45 =US 4151-091
Separation of solid particles from fluids - partic useful for treatment of water from dust removal plants
SOC LAB 07.06.74-FR-020622
*J01 +P41 (24.04.79) *BE-829-936 C02b-01/82*

Fluid polluted with solid particles is treated by agglomerating the particles and centrifugally sepg. them into a first fluid fraction, thereby purifying a second fraction. The first fraction is filtered to remove the solids, and the purified fluid is recycled.

The particles are agglomerated by a centrally-disposed electrode in a cylindrical chamber, into which the fluid is introduced tangentially forming a whirling mass having an empty vortex. The appts. is pref. used for treating water coming from industrial washing or dust removal installations, and produces water clean enough to be recycled to the installation. 7.1.77 as 757534 Div.ex. 4017390 (+ 28.5.75 - US - 581519) (5pp1379).

TDCO ★ D15 36984B/19 ★US 4151-092
Portable water filter with removable cartridge - housed in lower end of cylinder telescopically mating with second cylinder
TELEDYNE INDUSTRIES 11.07.77-US-814485
J01 (24.04.79) B01d-27/02 B01d-33

A portable water filter comprises a first upright cylinder closed at one end and open at the other. A second cylinder is telescopically receivable within the first cylinder through its open end.

A cavity is formed in the bottom of the second cylinder into which a filter cartridge is placed. Water is pumped from the first cylinder, through the filter cartridge and into the second cylinder as the second cylinder is pushed into the first cylinder.

The appts. is small and may be carried by a lone traveller. 11.7.77 as 814485 (10pp295).

DOWC ★ D15 37016B/19 ★US 4151-140
Hydrolysing carboxamide polymer emulsions - using a hydrolysing agent in emulsion form so as not to break the emulsion
DOW CHEMICAL CO 02.11.77-US-847878
A97 F09 H01 (24.04.79) C08l-33/24

Polymer derived from monomers ⩾50 mole% of which have $-CONR_2$ gps. (where eash R is H, alkyl, aminoalkyl, hydroxy-alkyl or $-R'N^+(R'')_3X^-$ in which R' is alkylene, each R'' is alkyl or hydroxy-alkyl and X^- is a neutralising anion), dispersed in the aq. hase of a water-in-oil emulsion, is contacted with a water-in-oil emulsion of a hydrolyzing agent to convert the desired amt. of carboxamide gps. to carboxy gps..

The hydrolysed polymer is useful in, e.g., petroleum recovery, paper mfr. or flocculation of finely divided solids from aq. suspensions. The hydrolysis can be carried out over a wide range of reaction conditions, without destroying the polymer emulsion. A uniform hydrolysis degree is achieved and the obtd. emulsion has low viscosity. 2.11.77 as 847878 (5pp558).

NALC ★ D15 37046B/19 ★US 4151-202
Free radical polymerisation of di:allyl di:methyl ammonium chloride - in aqueous solution contg. alkali metal halide
NALCO CHEMICAL CO 18.08.78-US-934923 (01.03.76-US-662397)
A12 (A91) (24.04.79) C07c-85/04 C08l-39

A soln. polymer of diallyl dimethyl ammonium chloride (I) is prepd. from an aq. monomer soln. contg. suspended in it 9-20 wt.% of a water-soluble alkali metal halide salt and 25-50% (I). The soln. is purged with an inert gas and heated to 120-180°F. A free radical catalyst is added and the soln. is polymerised and the polymer formed is cooled while adding water if necessary to hold the salt in soln..

The polymer is used as a flocculant for water and sewage treatment. (I) can be prepared from allyl chloride and dimethylamine and neutralised with NaOH and then polymerised without removal of the salt formed. 18.8.78 as 934923 (+ 28.1.77, 14.9.77 - US - 763469, 833113) (6pp1302).

SMHL D15 27204Y/16 =US 4151-231
Vertical axis aerating rotor for waste water - can be operated at higher speeds than pevious inverted cone turbine rotors
SIMON HARTLEY LTD 10.01.76-GB-000927
*(24.04.79) *BE-849-315 B01f-03/04*

A rotary aerator for producing a gas-liq. interface comprises a flat plate carrying angularly spaced blades on its underside extending from the centre to the periphery, each blade having its max. depth intermediate its ends and having a plate attached at least at its outer portion. The upper edge of each blade extends beyond the periphery of the plate, which is pref. circular.

The aerator may be used in the aeration of sewage and operates at high speed. 12.12.77 as 859673 (+ 23.11.76 - US - 744439) (5pp1379).

D 15: WATER TREATMENT -p. 26

USAT ★ D15 37117B/19 ★US 4151-419

Appts. for irradiating pathogen-contg. solids - in buckets mounted on foldable endless chain movable close together near radiation source

US DEPT ENERGY 20.10.77-US-844085

C03 K08 R16 (C04 D13 D22) (24.04.79) G01n-21 G01n-23

Solids contg. pathogens are irradiated in an underground structure of concrete which has an inlet above and spaced from an irradiation chamber. A concrete barrier separates the chamber and inlet. A communicating passageway extends through the barrier but is out of alignment with the inlet and chamber .

The solids are carried in open top containers mounted on an endless conveyor. The conveyor includes an endless foldable chain with a device for moving the containers close together in the irradiation chamber and in the upper loading area. A concrete cavity at one side of the appts. contains a water pool housing an irradiation source. This may be transferred through a port to a position in the irradiating chamber.

Used for irradiating sewage sludge contg. 40 - 80% water to produce a fertiliser or additive for a livestock feed. The appts. achieves maximum source efficiency by the close spacing of the conveying buckets in the irradiation area. 20.10.77 as 844085 (12pp295).

BOLI D15 31595B/17 =WP 7900-23

Purificn. of water with magnetic sepn. of pptd. sludge - using aluminium and/or ferrous sulphate-contg. magnetic material a pptn. agent

BOLIDEN AB (SIGV/) 24.10.77-SW-011948

*(03.05.79) *BE-871-458 +B01d-35/06 C02c-05/02*

D/S: N(BR, JA, SU, US) + E(CH, DT, FR, GB, LU, SW).

The process uses a crystalline pptn. agent based on $Al_2(SO_4)_3$ and/or $FeSO_4$ together with a magnetic material. The magnetic material is added to the $Al_2(SO_4)_3$ or $FeSO_4$ when it is in soln. form, or a molten mass, prior to crystallisation.

The pptn. agent prepd. with the Al or Fe cpd. is also novel.

Incorporating the magnetic material in this way enables a uniform distribution of it in the pptn. compsn. based on the $Al_2(SO_4)_3$ and/or $FeSO_4$.

23.10.78 as SW0063 (17pp597).

(E) ISR: SW321649; US4089779; DT2551030; SW318529;
3 Journal References.

See Also

D13 DS 2500200 D16 DT 2845552 D16 SU 612958

D16: FERMENTATION INDUSTRY

DYNN ★ D16 35242B/19 ★BE -871-735

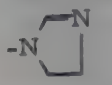
Immobilising enzymes on amorphous silica carrier - pretreated with amino-alkoxy-silane, esp. for selective prodn. of L-amino acid from N-acyl cpds.

DYNAMIT NOBEL AG 19.05.78-DT-821889 (04.11.77-DT-749317)

B04 (03.05.79) C12b C12d

Immobilisation of enzymes involves modifying in a single stage the moulded particles of amorphous silica by treatment with alkoxysilanes (I) contg. prim. or sec. amino gps., then treatment with a soln. of enzyme.

(I) are pref. of formula $(RO)_{3-n}Si(R'')_nA$ (where n is 0-2 R is 1-4C alkyl, opt. interrupted by an O atom. R'' is 1-8C alkyl, mono- or poly-cyclic aryl or A. A is -R'.NYY'. R' is 2-4C alkylene or phenylene. Y is R, $-R'.NR_2$, -R',NRH $(CH_2)_pNH_2$ or H. p is 2-4. Y' is as Y, or NYY' is a 5-6 membered ring with 1 or 2 N atoms, pref.



or $-N(CH_2)_4$ or $_5$).

Used specifically for supporting amino-acylase from Aspergillus oryzae, for use in selective hydrolysis of DL-N-acylamino acids to L-amino acids.

The support requires treatment only once (i.e. no treatment, conversion etc. of gps in the silane is needed) and the prods. have high activity and long active life. 3.11.78 as 871735 (13pp1251)

GENE- ★ D16 35257B/19 ★BE -871-782

Recombining plasmid for transformation of bacteria - to produce heterologous polypeptide e.g. mammalian hormones

GENENTECH INC 08.11.77-US-849692 (08.11.77-US-849591)

B04 (07.05.79) C12k

Recombining plasmid (A), allowing transformation of a bacterial host and its use as a cloning vector, comprises (a) a regulon (R) homologous to the bacterial host in its non-transformed state, and (b) in 'reading phase' with R an inserted DNA which codes for the amino-acid sequence of a heterologous polypeptide (I).

Bacteria transformed with (A) can express this amino-acid sequence in a recoverable form. Also claimed are the plasmids, cloning vectors, transformed bacterial cultures and polydeoxyribonucleotides consisting of the codons for (I).

Used esp. where (I) is a mammalian hormone or intermediate e.g. human pre- pro- or pro-insulin; insulin chains A or B; luteinising hormone; human or bovine growth hormones; ACTH, pancreatic polypeptide or somatostatin. Immunogenic substances contg. polypeptide hap-ens can also be produced. 6.11.78 as 871782 (+8.11.7 -US-849691) (56pp1251)

RAUS/ ★ D16 B/19 ★BR 7805-4

Evaporator integral with alcohol distn. appts. - uses ener transferred to juice in condensers to evaporate wine

RAUSCHENBERG R R 23.08.78-BR-005444

(24.04.79) C13g-01

CHUS D16 28655F/00 =DS 1617-3

Treatment of streptococcus haemolyticus and resultant

CHUGAI SEIYAKU KK (CHUG KYOW) 08.03.66-JA-013784

*B04 (03.05.79) *ZA6701-303 +A61k-35/74*

Prepn. of tumour-static extracts of Streptococcus haem lyticus comprises propagation of this microorganism in suitable culture medium in the absence of additional glucose but pref. with ribonucleic acid or its hydrolysate, (0.5-1wt./vol.%); the pathogenic cells are sepd. and su pended in a penicillin dispersion, (contg. > 25000 units cm³); the mixt. is incubated at 30-38° for 10-30 mins. and then heated at 38-50° for 20-60 mins. 6.3.67 as 617397. (3pp047)

LESA D16 05601Y/04 =DS 2629-

Dried bakers yeast for sugary dough and yeast strains - stable drying, used to produce the yeast

SOC IND LESAFFRE 03.07.75-FR-020943

*(D11) (03.05.79) *BE-843-792 C12c-11/32*

Dried bakers yeast, suitable for fermenting dough with sugar content of > 5% passes the following tests. Test comprises adding a specified amt. of yeast to 20 g. flou contg. 2 g. saccharose, making a dough under defined conditions and measuring the amt. of gas liberated. Th amt. of gas is 45-54 ml. Test A^1_4 uses 20 g. flour cont 5.5 g. saccharose and the amt. of gas liberated is 23-37

The yeast is pref. obtd. from yeast culture R 30, R 3 or R 38 NCYC. 2.7.76 as 629952. (10pp068)

BIOT- D16 42422A/24 =DS 2655-

Automatic determination of intracellular and extracellular mate - by using an automatic disintegration system and an integra centrifugal step

GES BIOTECH FORSCHU 07.12.76-DT-655265

*B04 R16 (03.05.79) *DT2655-265 C12k-01 G01n-01/28 G 33/16*

For the automatic prepn. of samples consisting of cell suspensions, a homogeneous sample is conveyed through a three-way valve within 0.1-10 secs. from a sterile section to an unsterile section, so the sample flow is deflocculated and degassed. The enzymes are inactivated and the contents to be determined are dissolved.

The suspension undergoes a solid/liq. sepn. in a periodically operated zonal-centrifuge, and the liq. phase is extracted for analysis. The solid phases are re-suspended by spraying on a liq. phase at low speed to discharge them.

Continuous treatment of a series of samples is possible. 7.12.76 as 655265. (8pp39)

MEIJ ★ D16 35651B/19 ★DT 2846-320

Antibiotic BN-213 with antibacterial activity - obtd. by culturing Pseudomonas strain and active against Gram-positive bacteria

MEIJI SEIKA KAISHA 31.10.77-JA-129700

B04 (03.05.79) C07g-11 C12d-09/20

BN-213 is characterised as follows: elementary analysis C 73.93%, H 10.28%, O 15.79% (difference); mol.wt. 294 (high-resolution mass spectrometry); empirical formula $C_{13}H_{30}O_3$; specific rotation $[\alpha]_D^{20} = 0°$ (c= 0.4, Me OH); m.pt. 84°C; UV absorption max. at 292 mμ in Me OH; characteristic IR absorption bands at 2920, 2850, 2650, 1660, 1630, 1570, 1440, 1405, 1300, 1260, 1240, 1170, 1130, 1000, 850, 760, 720 cm^{-1}.

BN-213 is active against Gram-positive bacteria, e.g. with MIC values (ug/ml) of 12.5 against S. aureus and B. subtilis and 3.13 against B. anthracis. It is effective at parenteral doses of 10-100 kg/mg.

BN-213 is pref. produced by (a) culturing Pseudomonas sp. BN-213 (ATCC 31421) at 20-35°C in a medium cg. assimilable C and N sources and opt. inorganic salts and antifoam agent, at a pH of ca.2; (b) extracting the culture filtrate with EtOAc; and (c) purifying the extract using a combination of silica gel, alumina and gel filtration materials. 24.10.78 as 846320 (20pp367)

RUTH/ ★ D16 35669B/19 ★DT 2846-604

Continuous mushroom prodn. - on conveyor belts passing through air-conditioned chambers (OE 15.4.79)

RUTHNER O 02.11.77-OE-007808

P13 (03.05.79) A01g-01/04 C05f-03

Prodn. of mushrooms is carried out by (a) placing a mycelium-charged substrate in containers; (b) allowing the mycelium to grow through the substrate; (c) covering the ubstrate with a layer of soil; (d) allowing the mycelium o grow through the soil and develop fruiting bodies; and e) transporting the containers on a conveyor belt in a inuous path through one or more air-conditioned zones ntil the mushrooms are ripe.

The process can be completely automated with precise ontrol of process parameters. 26.10.78 as 846604 (20pp)

See page 37 *FR 2399-250/2399-467

OHN/ ★ D16 35761B/19 ★GB 1545-298

eer home brewing container - has top tap slidable down housing lot as container collapses during sediment free discharge

JOHNSON W E 28.04.76-GB-017358

Q32 (10.05.79) B65d-25/40 C12b-01 C12c-11/04

ontainer or bag has an outlet and tap near the top and is ocated in a rigid housing with a vertical slot from the top o near the bottom. The tap extends from the slot and the utlet and can slide down the slot as liq. is discharged nd the container collapses from the filled state.

In particular, beer is brewed in the container, then fter completing fermentation it is connected to a collapsed similar second container below the first and the beer is ransferred to the second container without entraining ediment. The second container may be connected to the irst at the start of fermentation so that it is inflated by he fermentation gas. 22.3.77 (3pp1358).

RPE D16 83021X/45 =GB 1545-490

icrobiological oxidn of hydrocarbons - using microorganisms mmobilised on a polymer support

BRITISH PETROLEUM LTD 24.04.75-GB-017015

*A97 E17 H04 (10.05.79) *BE-841-057 + C07g-07/02 C12d-01/02 C12k-01/08*

ydrocarbons are oxidised by contacting a mixt. of hydrocarbon and water with viable cells of a hydrocarbon-arbon ... attached to a polymeric support.

Pref. polymeric support is a polyacrylamide gel. Density of cells on the support is >0.1g/g of dry polymer solids. The microorganism is a yeast of the genus Candida or Saccharomycopsis. The hydrocarbon has 14-20C and is combined with water in the form of an emulsion of pH 3-6.

By incorporation of cells into the support, immobilised cells can retain their viability and have enzyme able to catalyse oxidn. of hydrocarbons. 24.4.75 as 017015 (3pp931).

INRG D16 09340Y/06 =GB 1545-545

Enzymatic processes using microorganisms in polymer matrix - continuously esp. to produce ethanol from sugars

INST NAT RECH AGRON 06.08.75-FR-024509

*A97 +R16 (10.05.79) *BE-844-766 A23c-09/12 C02c-01/14 C07c-59/08 C12c-11/14 C12d-01*

In carrying out enzymatic reactions using microorganisms embedded in or enclosed in a polymer matrix, a reactor contg. the embedded or enclosed microorganisms is supplied with the prod(s). to be treated and a growth medium for the microorganisms and the prods. are continuously drawn off, while maintaining the microorganism-contg. polymer matrix in the reactor.

Pref. the prod(s) to be treated contain some or all of the elements of the growth medium. The polymer is esp. polyacrylamide and the microorganism is pref. a bacterium or a yeast. Process can be used for prepn. of ethanol from a soln. contg. sugar(s), prepn. of L-lactic acid from L-maleic acid, alcoholic fermentation of wort (in beer mfr.), alcoholic fermentation of sugar beet, molasses, alcoholic fermentation of grape juice and denitrification reactions. 29.7.76 as 031612 (11pp992).

OMRO ★ D16 35926B/19 ★J5 4041-191

Enzyme electrode assembly for determn. of glucose and oxygen - dissolved e.g. in blood, includes region of immobilised glucose oxidase

OMRON TATEISI ELTRN KK 08.09.77-JA-108110

B04 J04 R16 (02.04.79) G01n-27/30 G01n-33/16

The electrode comprises (1) electrode assembly having, on its flank, two detecting points for glucose- and oxygen-analysis, (2) tubular, gas-permeable sheath covering the electrode assembly including both detecting points, and (3) glucose-permeable film which covers the sheath (2) and which has a spot of immobilised glucose-oxidase covering one of the detecting spots.

The electrode is used for instantaneous determn. of glucose and O_2 dissolved e.g. in blood. 8.9.77 as 108110 (5pp173)

KANF ★ D16 36022B/19 ★J5 4041-381

Aerobic incubation of microorganisms - in which liq. culture medium contg. nutrients and gas are introduced into fermenter with control of flow rate ratio

KANEGAFUCHI CHEM KK 06.09.77-JA-107598

(02.04.79) C12b-01/14 C12c-11/08 C12d-13/06 C12k-03

In the aerobic incubation of microorganisms in a bubbling tower- or air-lift type fermenter, liq. culture medium contg.nutrients (I) and gas (II) such as air or O_2-contg. gas, are introduced into the fermenter, with the ratio of flow rates controlled to a suitable value.

Incubation is effected stably and continuously. Method is applied to incubation with vigorous foaming. 6.9.77 as 107598 (7pp42)

FUJI ★ D16 36023B/19 ★J5 4041-384

Fermentative prodn. of 2-deoxy-D-glucose - by cultivating a suitable strain of Streptomyces

FUJISAWA PHARM IND KK 07.09.77-JA-108086

E13 (02.04.79) C12d-13

Method comprises cultivating a 2-deoxy-D-glucose (I)-producing strain of Streptomyces in a nutrient medium and recovering (I) from the cultured broth. Process is economically more advantageous than the known synthetic prodn. and extn. from plants.

Pref. Streptomyces xanthocidicus No. 4943 (Ferm-P 4135, ATCC 31316) is used. The cultivation is pref. effected at 30°C. for 50 to 100 hrs. under conventional conditions.

In an example, Streptomyces xanthocidicus No. 4943 is cultured in a nutrient medium contg. 4% glycerin, 0.5% pharma media, 0.5% malt, 0.25% molatin, 0.25% corn-steep-liquor, 0.5% potassium dihydrogen phosphate and 0.5% dipotassium hydrogen phosphate at 30°C. for 72 hrs. 7.9.77 as 108086 (5pp16)

TSUJ/ ★ D16 36024B/19 ★J5 4041-385
Terpene alcohol ester synthesis - by reacting opt. satd. fatty acid and a terpene alcohol with lipase
TSUJISAKA Y 06.09.77-JA-106264
E19 (02.04.79) C12d-13/08

Synthesis of terpene alcohol-ester is by reaction of 3-18 C opt. satd. fatty acid (I) and mono-, sesqui- or di-terpene alcohol (II) with lipase (III) produced using Aspergillus niger, Rhizopus delemar, Geotricum candidum and Penicillium cyclopoium microorganisms. (I) is e.g., propionic acid, n- or iso-butyric acid, capronic acid, palmitic acid, or stearic acid. (II) is e.g., geraniol, citroneol, phytol or menthol.

In an example, geraniol (IV) and butyric acid (IV) were reacted with (III) produced from Aspergillus niger, at 30° C., for 24 hrs. under agitation at 200 rpm. The reaction yield increased using a wt. ratio of (IV)/(V) >3.4. The presence of water in amt. 10-20 times the wt. of that of (V) was preferred. The reaction yield increased according to increase in (III)-activity. 6.9.77 as 106264 (5pp42)

KYOW ★ D16 36025B/19 ★J5 4041-386
L-Proline prodn. - by cultivating Corynebacterium variant requiring homo:serine and threonine or methionine and threonine
KYOWA FERMENTATION KK 02.09.77-JA-104737
B03 E13 (02.04.79) C12d-13/06

Prodn. of L-proline comprises culturing an L-proline, producing varient of Cornebacterium which requires homoserine and threonine or methionine and threonine for growth, and recovering the accumulated L-proline from the culture broth. The varient includes Corynebacterium acetophylum KOL-46 (FERM-P 4045) derived from Corynebacterium acetophylum KY7761 (NRRL B-3761) on treatment with N-methyl-N'-nitro-N-nitrosoguanidine.

L-Proline is used as a drug or feed additive. The L-proline producing organism is novel. 2.9.77 as 104737 (3pp)

NIPK ★ D16 36026B/19 ★J5 4041-387
3-S-1'-Phenyl:ethylamino-propylamino-bleomycin deriv. prepn. - by culturing Streptomyces strain on culture medium contg. N-S-1'-phenethyl-1,3-di:aminopropane
NIPPON KAYAKU KK 18.08.77-JA-098997
B03 (02.04.79) A61k-31/71 C07h-07/06 C12d-09/14 C12d-13

Prodn. of 3-[(S)-1'-phenylethylamino]propylaminobleomycins (NK 631) comprises inoculating a bleomycin producible strain of Streptomyces (Streptomyces verticillus NK 68-144; FERMP 4108, ATCC 31307) on nutrition medium contg. N-[(S)-1'-phenylethyl]-1, 3-diaminopropane or its salt, and recovering the selectively produced NK 631 from the culture broth.

By modification of bleomycins, adverse reaction of bleomycins causing pulmonary fibrosis can be reduced without decreasing the antitumour activity of bleomycins. 18.8.77 as 098997 (13pp52)

BANY ★ D16 36027B/19 ★J5 4041-388
Cephradine prodn. - by acylating 7-amino:des:acetoxy:cephalosporanic acid in presence of culture broth of Azotobacter organisms
BANYU PHARM CO LTD 08.09.77-JA-107268
B02 (02.04.79) C12d-09/20 C12d-13

Prodn. of 7-(D-α-amino-α-1, 4-cyclohexadienylacetamido)-3-methyl-3-cephem-4-carboxylic acid (cephradine) comprises acylating 7-aminodesacetoxycephalosporanic acid (7-ADCA) with D-α-(1, 4-cyclohexadienyl)glycine lower alkyl esters in aq. medium in presence of culture broth of Azotobacter organisms or its processed material.

The organism includes Azotobacter No. 5686 (FERM-P 1661). 8.9.77 as 107268 (3pp52)

TAKE ★ D16 36028B/19 ★J5 4041-3
5'-Purine-ribonucleotide prodn. - by contacting Arthrobact
Brevibacterium or Micrococcus strain with purine ribonucleoside
aq. medium contg. phosphate ions
TAKEDA CHEMICAL IND KK 09.09.77-JA-109061
B02 (02.04.79) C12d-13

The process comprises contacting a strain of Arthrobact
Brevibacterium or Micrococcus with a purine ribonucleo
side in the presence of a phosphate ion in an aq. medium
so that the organism does not grow; and recovering the pr
Said organisms include Arthrobacter citreus, A.tumesc
A.atrocyaneus, Brevibacterium linens, B.alkanophilum,
B.stationis, B.thiogenitalis, B.immariophilium, Micro-
coccus varians, and M.glutamicus.

The prodn. is reduced and the yield increased by avo
ing growth of the organism during the reaction.

The organism may be cultivated in a conventional cult
medium contg. carbon source, nitrogen sources and oth
nutrients at 0-45, pref. 25-40°C. for 5-50 hr. The grow
of the organism collected from the culture broth may be
hibited by freezing-thawing, heating under acidic or bas
conditions (pH 4-10), osmotic treatment, or treatment
with a reagent, such as organic solvent (toluene, xylene
BuOH) or surfactant (e.g. sodium laurylsulphate, polyo
ethyleneamine, polyoxyethylenealkyl allyl ether or alkyl
dimethylbenzylammonium chloride). The purine ribonuc
sides include adenosine, inosine, xanthosine, guanosine
8-azaguanosine, 6-mercaptopurine, etc. The reaction m
be conducted at pH 5-10, and 20-55°C. for 3-30 hr.
9.9.77 as 109061 (6pp52)

TAKE ★ D16 36029B/19 ★J5 4041-
5'-Purine ribonucleotide(s) prodn. - by contacting pyrophosph
acid resistant strain of Arthrobacter, Corynebacteri
Brevibacterium or Micrococcus with ribonucleoside
TAKEDA CHEMICAL IND KK 09.09.77-JA-109062
B02 (02.04.79) C12d-13

Method comprises contacting a pyrophosphoric acid re
ant strain of Arthrobacter, Corynebacterium, Breviba
um or Micrococcus with purine ribonucleosides in the
ence of phosphate ion in an aq. medium under conditio
where the organism does not grow, and recovering the
duced corresponding 5'-purine ribonucleotides. Said
organisms include Arthrobacter citreus, A.tumescens,
atrocyaneus, Corynebacterium acetoacidophilum, C.
alkanolyticum, Brevibacterium linens, B.alkanophilum
B.stationis, B.thiogenitalis, B.immariophilium, Micr
coccus varians, and M.glutamicus.

Reaction time is reduced and the yield is increased
inhibiting growth of the organism in the reaction mediu
9.9.77 as 109062 (7pp52)

TOXF ★ D16 36030B/19 ★J5 404
Coproporphyrin-III prodn. - by incubating Rhodopseudom
spheroides in culture medium contg. glutamic acid and succi
fumaric acid
TOHO BESLON KK 06.09.77-JA-106978
B02 E13 (02.04.79) C12d-13

Prodn. of coproporphyrin-III (I) is effected by incubat
of (I)-producing microbial belonging to Rhodopseudom
sphaeroides in culture medium contg. glutamic acid-s
cinic acid or glutamic acid-fumaric acid as substrate

(I) can be produced in higher conc. in the culture
um and more effectively, in comparison with other kn
methods. In an example, (II) was incubated in 300 ml
the medium of pH 6.8, contg. 20 mM of Na glutamate
mM of succinic acid, 25 mM of monopotassium phosp
25 mM of dipotassium phosphate, 0.8 g. of diammoni
phosphate, 0.2 g. of Mg sulphate, 40 mg. of Ca chlor
0.4 mg. of Mn chloride, 1 mg. of thiamine hydrochlo
1 mg. of nicotinic acid, 10 μg. of biotin and 1 l. of wa
for 5 days under the irradiation of incandescent light
N_2-stream. 42 mg./l. of (I) was obtd. 6.9.77 as 106
(3pp42)

MITU ★ D16 36031B/19 ★J5 4041-392
Prepn. of plasmid used as vector in gene rearrangement - by sepn. of Brevibacterium lactofermentum by density gradient centrifugation
MITSUBISHI CHEM IND KK 07.09.77-JA-107559
B04 (02.04.79) C12d-13/06

Prepn. of plasmid (I) comprises sepn. of (I) from Brevibacterium lactofermentatum (II) which is an amino acid-ferment microbial, by density-gradient centrifugation.

The method is carried out using the fact that the amt. of ethydium bromide bonded to (I) is smaller than that bonded to open circular DNA and linear DNA and (I) gives heavier band in density-gradient of caesium chloride-ethydium bromide.

(I) is used as a vector in rearrangement of genes in vitro. 7.9.77 as 107559 (2pp42)

ISHH ★ D16 36032B/19 ★J5 4041-393
Xanthomycin-type antibiotic A-5945 - prepd. by culturing Streptomyces species
ISHIHARA INDUSTRIES KK 02.09.77-JA-105657
B04 (02.04.79) A61k-35/70 C07g-11 C12d-09/14

Xanthomycin-type antibiotic A-5945 (I) is new. It has elementary analysis: C 56.8%, H 6.9%, N 8.5% and mol. wt. 340 (by vapour pressure method in water). It has UV absorption: 271 mμ ($E^{1\%}_{1cm}$ 114), 315 mμ ($E^{1\%}_{1cm.}$ 50), 450 mμ ($E^{1\%}_{1cm.}$ 27); and IR absorption (KBr): 905, 1140, 1235, 1300, 1445, 1645, 2940, 3400 $cm.^{-1}$ (I) shows antibacterial activity against gram-positive and gram-negative bacteria.

(I) is produced by cultivating a suitable strain of Streptomyces. Streptomyces sp. nov. sp. A-5945 is pref. cultured in a nutrient medium comprising a carbon source (e.g. glycerine, glucose, lactose, molasses, starch, soy bean oil, cotton seed oil, peanut oil), a nitrogen source (e.g. urea, ammonium sulphate, nitrates, meat extract, yeast extract, corn steep liquor, peptone, casein) and an inorganic salt (e.g. NaCl, KCl, $CaCO_3$, $MgSO_4$, phosphates). The cultivation is effected at 20-45°C., esp. (25-35°C., within a pH range of 5-7 for 2-4 days under aerobic conditions. 2.9.77 as 105657 (13pp33)

SAPB ★ D16 36351B/19 ★J7 9007-695
Cultivation of edible mushroom such as Shiitake - using growth medium contg. waste materials from brewing, e.g. waste malt or rice bran and hop lees
SAPPORO BREWERIES 02.04.74-JA-037274
P13 (09.04.79) A01g-01/04

Edible mushroom such as Shiitake, Hiratake, Nameko, etc. is incubated in a culture medium contg. (a) brewer's grain waste malt or rise bran and (b) hop lees, followed by cultivation. Effective growth of edible mushroom can be attained by use of these waste materials. 2.4.74 as 037274 A01g-1/4 (9.4.79) SAPPORO BREWERIES (3pp22) (J50129349)

TAKE/ ★ D16 36352B/19 ★J7 9007-698
Cultivation of edible mushrooms - in culture medium contg. bagasse, compost, wood extract and nutrients at specified temps. for accelerated growth
TAKEUCHI M 22.11.74-JA-134893
P13 (09.04.79) A01g-01/04

Strains of edible mushroom are incubated in a culture medium contg. 80 wt. pts of bagasse and 20 wt. pts of dried pasturage as well as wood extract and a small amt. of nutrient components, followed by keeping at 6-8°C for 96 to 120 hrs. and then keeping at 12-14C for 72-96 hrs. whereby growth is accelerated. 22. 11. 74 as 134893 A01g-1/04 (3pp22) (J51063245)

NATR D16 19943U/15 =J7 9008-318
Enzyme prepns from nocardia microorginisms - for cholesterol determination
NATIONAL RES DEV CORP 19.06.72-GB-028650 (22.09.71-GB-044095)
*B04 R16 +P31 (14.04.79) *DT2246-695 G01n-33/16*

Enzyme prepns. - derived from Nocardia species NCIB 10554 or NCIB 10555 and having a specific cholesterol oxidase activity of ≥1 unit per 5 mg. (esp. 50 μg) of protein N, are useful for the determination of cholesterol in biological fluids. The prepns. may be liquid or solid, the liquid prepns. pref. having an acitivty of $\geqslant 10^{-2}$ units/ml, esp. $\geqslant 10^{-1}$ units/ml. The catalase activity is pref. $< 10^{-1}$, esp. $< 10^{-2}$ units per cholesterol oxidased unit, and may be reduced by adding a catalase inhibitor, esp. an azide.

The cholesterol determination is based on the fact that the prepns. oxidise cholesterol to Δ^4-cholestanone and H_2O, the amt. of H_2O produced being determined, pref. by fluorimetry or colorimetry, the O_2 absorption being measured with an oxygen electrode, or the amt. of Δ^4-cholestanone being determined either directly, by means of its carbonyl absorption, or by forming a deriv. and determining this colorimetrically. 21. 9. 72 as 18408/76 Div ex 95060/72 (clg. 22. 9. 71, 19. 6. 72-GB- 044095, 028650) G01n-33/16 (14. 4. 79) NATIONAL RESEARCH DEVELOPMENT CORP (17pp) (J52052692)

TOXN D16 68361W/41 =J7 9008-549
Semi permeable, cellulose microcapsules contg. powdered adsorbent - in cellulose gel matrix, useful selective adsorbing agents
TOYO BREWING KK 20.02.75-JA-020381
*A97 B04 J04 (17.04.79) *NL7503-577 B01d-15 B01j-13/02*

Cellulose microcapsules with adsorbing properties and an external dia. of 100-5000 μ comprise a semi-permeable outer layer of cellulose 0.5-5 μ thick with micropores of dia. 10-80A, and an inner layer comprising a powdered adsorbing agent dispersed in a cellulose gel matrix.

The prods. have good chemical resistance and are useful e.g. for removing and purifying antibiotics from culture broths, extn. and purific. of nucleic acids from microorganism cells, extraction of natural dyes, recovery of useful materials from effluents, decolourisation, etc. 20. 2. 75 as 020381 B01j-13/02, B01d-15/00 (17. 4. 79) TOYO BREWING KK (8pp) (J51095989)

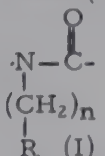
MITC D16 80393X/43 =J7 9008-583
Cultivating mushrooms - using a water permeable resin fibre tube
MITSUI PETROCHEM IND KK 05.03.75-JA-026087
*A97 F09 P13 (17.04.79) *J51102-981 A01g-01/04*

A compsn. consisting of thermoplastic resin fibre and a lightweight filler is moulded into a paper on which resin fibre is adhered by melting, and then moulded into a tube which has water-permeable side walls. In the tube, myce-lia are cultivated so that the mushrooms are allowed to develop on the side wall of the tube. The resinous fibres have 0. 5-50mm ave. length, 5-100 μ dia. and are used in a concn. of 50-90 wt. %. The lightweight fillers are shirasuballon, expandable perlite, etc. The water-permeable coefft. (JISA 1218) of the side wall of the tube is pref. 5×10^{-5}-1×10^{-2} cm/sec.

There is no problem with deficiency or the rising cost of base wood and unstability of the yield which depends on the quality of the base wood, etc. Seasonal factors become small. 5. 3. 75 as 026087 A01g-1/04 (17. 4. 79) MITSUI PETROCHEM KK (3pp)(J51102981)

ASAH D16 15188Y/09 =J7 9008-630
Absorptive sepn. of phenolic cpds. from solns. of foods, drugs or wine - using modified tert. aminated polyamide resin which does not remove the bitter component from beer
ASAHI CHEMICAL IND KK 03.07.75-JA-081414
*A97 B05 J01 (A23) (17.04.79) *J52005-688 B01d-15 C12h-01/04*

Adsorptive removal of phenolic opds. is claimed, from solns., of foods, drugs or wine which contain phenols, polyphenols and cpds. having phenolic amino radical (e. g. tyrosine). The adsorbent is modified tert. aminated polyamide resin having unit of formula (I) in the main chain (e. g. N-methoxymethylated nylon 6) (R is alkyl, alkoxy, phenoxy, aryl, arylalkoxy, hydroxyl, or H, n is integer ≥1)


(I)

$-N(-(CH_2)_n-R)-C(=O)-$

No change in pH of the soln. is observed. The bitter component in beer, isohumulone is practically not adsorbed.

3. 7. 75 as 081414 B01d-15/00, C12h-1/04 (17. 4. 79) ASAHI CHEMICAL IND KK (4pp) (J52005688)

KAKE D16 76509Y/43 =J7 9008-641

New antibiotic 5057, esp. effective against Gram positive bacteria - is obtd. by culturing a microorganism of the genus Streptomyces

KAKEN KAGAKU KK 09.03.76-JA-024636

*B04 C03 (17.04.79) *J52108-902 C12d-09/14 +A61k-35/74 C07g-11*

The new antibiotic 5057 is obtd. by culturing a microorganism belonging to the genus of Streptomyces which is capable of producing the antibiotic 5057, and recovering the objective cpd. (I) from the culture. Cultivation is carried out in a conventional method. Liq. cultivation method, partic. submerged cultivation is suitable. Cultivation is conducted under aerobic conditions at 25-35°C, pref. 30°C.

The accumulation of (I) generally reaches a max. after 3-7 days in the case of shaking cultivation or tank cultivation. Since (I) is fat-soluble and acidic, it can be recovered by extn. by various solvents and/or chromatography by various active adsorbents. The present 5057 substance producing microorganism is deposited as FERM-P No. 464.

(I) has strong antibacterial activity partic. to Gram-positive bacteria. Further, it shows strong growth inhibiting activity to broad spectrum of bacterial such as acid-fast bacteria and funji. 9. 3. 76 as 024636 A61k-35/74, C07g-11/00, C12d-9/14, (17. 4. 79) KAKEN KAGAKU KK (9pp) (J52108902)

SCSP- D16 75625S/48 =J7 9008-746

Bacterial sensitivity testing to antibiotics and chemotherapeutics by - light intensity measurements

SCIE SPECTRUM INC (SCI -) 04.05.70-US-034243

*B04 +R16 (18.04.79) *DT2121-994 C12k-01 G01n-21/22*

The bacteria to be screened are placed in a small, sharply defined beam of light and the intensity of the scattered light is measured in dependence of the angle of scattering. The measurement are repeated in consecutive periods of time, to record changes in the scattered-light intensity which occur when the bacteria are sensitive to an added antibiotic.

The test allows sensitivity-screening of bacteria to one or more antibiotics and/or chemotherapeutic agents in a very short time. Tests can be carried out on suspensions with a high concentration of bacteria or on a representive number of single cells. 4. 5. 71 as 028991 (clg. 4. 5. 70-US-034243) C12k-1/00, G01n-21/22(18. 4. 79) SCIENCE SPECTRUM INC (4pp) (J46006848)

ZAID D16 52956U/37 =J7 9008-747

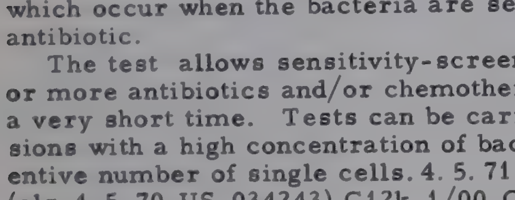
New antibiotic - from genus streptomyces

MICROBIAL CHEM RES FOUND 01.10.71-JA-076253

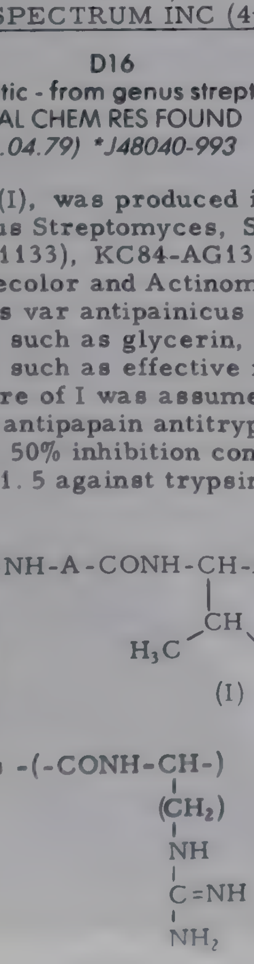
*B05 (18.04.79) *J48040-993 +A61k-37/02 C07c-129/08 C12d-03*

Novel cpd (I), was produced in the culture broth by microbes of genus Streptomyces, S. michiganensis MB 561-C2 (FERM-P 1133), KC84-AG13 (FERM-P1132) very similar to S. mauvecolor and Actinomyces violascens, and S. yokosujanensis var antipainicus MC829-AS1 (FERM-P 1134). C-sources such as glycerin, glucose, and lactose and N-sources such as effective for accumulation of I.

Structure of I was assumed to be (I). I has low toxicity and shows antipapain antitrypsin, but no antichymotrypsin activities. 50% inhibition concns. were 0.31-0.4 against papain, 1-1.5 against trypsin, and 280 mcg against plasmin.



(I)



where A is $-(-\mathrm{CONH}-\underset{\substack{|\\(\mathrm{CH_2})\\|\\\mathrm{NH}\\|\\\mathrm{C{=}NH}\\|\\\mathrm{NH_2}}}{\mathrm{CH}}-)$

1. 10. 71 as 076253 C12d-3/00, A61k-37/02, C07c-129/08 (18. 4. 79) MICROBIOL CHEM RES FOUNDATION (20pp) (J48040993)

AJIN D16 15556Y/09 =J7 9008-74

L:Tryptophan prepd. from D,L or DL form of tryptophan hydantoin using an enzyme produced from Flavobacterium aminogene species

AJINOMOTO KK 04.07.75-JA-082978

*B02 E13 (18.04.79) *J52007-490 C12d-13/06*

Flavobacterium aminogenes or its variant showing decreased utilisability for L-tryptophan is used. The variant cannot grow as sufficiently as the parent stock uses L-tryptophan as the only carbon source and nitrogen source An example of the variant is Flavobacterium aminogenes AJ-3939 (FERM-P 3134).

The enzyme can be obtd. by culturing above stocks aerobically in usual meidum at 20-40°C and pH 6-9 for 1-5 days. The conversion is in 0.1-30% 0.5-10% L-tryptophan soln. at 15-70 30-50°C, and pH 6-11(7-10) 4. 7. 75 as 082978 C12d-13/06 (18. 4. 79) AJINOMOTO KK (5pp) (J52007490)

AJIN D16 18809Y/11 =J7 9008-7

(5)-Amino-(4)-imidazole-carboxamide and D:ribose prodn. - usi microorganism of e.g. genus Achromobacter and (5)-amino-(imidazole-carboxamide-riboside

AJINOMOTO KK 22.07.75-JA-089512

*B03 (18.04.79) *J52012-985 C12d-13*

5-amino-4-imidazolecarboxamide (AICA) and D- ribose are produced by decomposing 5-amino-4-imidazolecarbo amide-riboside (AICAR) with an enzyme of microorganis AICA and D-ribose are physiologically very important substances and are useful as medicaments or raw materials for the prodn. of medicaments. Microorganisms producing the enzymes used in the present invention are e.g. Achromobacter dermarvae AJ-1983 FERM-P 21 Aeromonas formicans AJ-2532 ATCC 13136, Aeromonas hydrophila AJ-2623 IAM 1018, Alkaligenes metalcaligen AJ-2554 ATCC 13270, Arthrobacter aurescens AJ-1430 ATCC 13344, Brevibacterium pussilum AJ-1462 FERM P 3148, Corynebacterium glutamicus AJ 1502 ATCC 130 Enterobacter aerogenes AJ-2653 ATCC 13048, and the like.

Cultivation is conducted at pH of 6-9, at 20-40°C for 1-3 days under aerobic conditions. The enzyme is used in the form of culture liq. cells of microorganism, free dried cells, acetone-dry cells, extract of the cells in th purified form. The concn. of AICAR in the reaction liq. is 0.1-30 (0.5-20% in the aq. medium. The reaction is conducted at 10-80 (30-60)°C, at pH of 5-9 (7). After th reaction is over, the reaction liq. is removed of solid materials such as cells and treated with active carbon.

The liq. is then passed through a strongly cationic e change resin column such as Dowex 50 H^+, Amberlite I 50 H^+, and the eluate is concentrated to give a syrup or powder of D-ribose. The resin column is washed with water and the absorbed AICA is eluted with HCl. The el uate is then treated with active C and then concd. to giv AICA-HCl. 22. 7. 75 as 089512 C12d-13/00 (18. 4. 79) AJINOMOTO KK (4pp) (J52012985)

BEEC D16 02884U/03 =J7 9008-

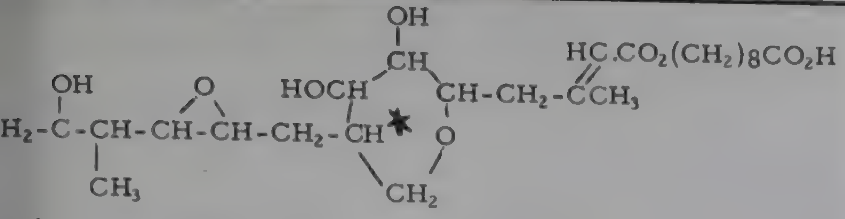
Antibiotic pseudomonic acid - from pseudomonas fluorescens submerged aerobic cultivation

BEECHAM GROUP LTD 12.06.71-GB-027653

*B03 (18.04.79) *DT2227-739 A61k-31/35 C07d-407/06 C 09/20*

Cis-and trans-forms of cpds. (I) their methy- and p-bromophenacylesters and mixts. of cpds. (I) and (II) their salts and esters. In cpd. (II) the H✱ atom is replaced b OH, are antibacterial antibiotics.

Prepd. from Pseudomonas fluorescens by submerge aerobic cultivation and sepn. of the active from the ina products by ion-exchange chromatography or by esterif cation followed by silica gel-chromatography.



2. 6. 72 as 058503 (clg. 12. 6. 71-GB-027653) C12d-9/20, 61k (18.4. 79) BEECHAM GROUP LTD (10pp) (J48008992)

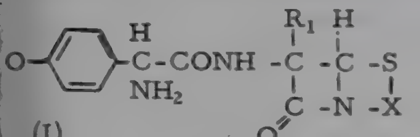
IPK D16 11599A/06 =J7 9008-754

enicillin or cephalosporin derivs. prodn. - by reacting d-para-ydroxyphenyl glycine or ester with appropriate amino acid in the resence of a microbial prod.

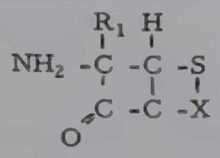
NIPPON KAYAKU KK 23.06.76-JA-073311

*B02 (18.04.79) *J52156-997 C12d-09/06*

eriv. of penicillin or cephalosporin of formula (I) is proiced by reacting D-p-hydroxyphenyl glycine or its ester ith 6 -amino-penicillanic acid or 7-aminocephalosporanic cid of formula (II) in the presence of a cultured prod. or s treated prod. of microbes belonging to Alkaligenes, erococcus, Comamonas or Gibberellal genera. In the

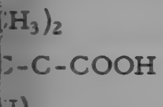


(I)



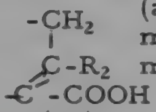
(II)

rmula R_1 is H or methoxy, X is (III) or (IV) where R_2 is (acetoxy)methyl, and carbamoylmethyl, 1, 2, 3-triazole-4-yl thiomethyl, provided, that R_2 is carba-moyloxymethyl when R_1 is me-thoxy, and R_2 is carbamoyloxy nethyl or 1, 2, 3-triazole-4-yl thiomethyl when the micro- used is of Alkaligenes genera.



$$\overset{H_3)_2}{-C-COOH}$$

I)



$$\begin{matrix} -CH_2 \\ | \\ C-R_2 \\ -C-COOH \end{matrix}$$

(IV)

The microbes are cultured at 25-40°C for 24-60 hrs. a medium contg. conventional nutrients and subjected centrifugal sepn. and washing with salt soln. or treated th adsorbent to an insol. one for the enzymatic react. . ıe react is effected for 0. 5-5 hrs. at 30-45°C and pH aintained at 5. 5-6. 0.

The process produces (I). under milder conds. at a gher yield and on a industrial scale, which when coupled th D-p-hydroxyphenyl glycine, produce a broad specum bactericide effective against Gram-negative and posve bacteria. 23. 6. 76 as 073311 C12d-9/06 (18. 4. 79) PPON KAYAKU KK (3pp) (J52156997)

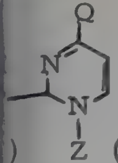
'OW D16 74405T/47 =J7 9008-755

eterocyclic ribosides microbiological prodn - as carcinostatics from eterobases present in cultivation of schizomycet

KYOWA HAKKO KOGYO C 14.04.71-JA-023041

*B03 (18.04.79) *DT2209-078 C12d-13*

odn. of ribosides (I-III) for treating cancer, esp. (II)



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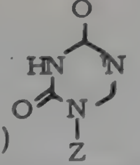
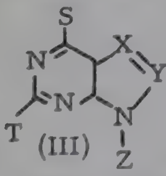
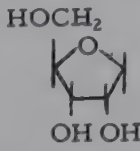


(II)



(III)



(Z)

here P, Q=OH, SH, NH_2, alkyl or halogen, R is H, halogen I, NH_2, alkyl or CF_3, S, T=H, halogen, OH, NH_2, $NHCH_2$ ı, NHOH, SH, $CONH_2$, CH_2Ph, NHalk, $N(alk)_2$, S-alk, kyl or alkO, X, Y=N or CH) is by cultivating Schizomytes e. g. Brevibacterium or Corynebactrium in media ntg. 1 of the corresp. bases besides C. 14. 4. 71 as 3041 C12d-13/00 (18. 4. 79) KYOWA HAKKO KOGYO) LTD. (5pp) (J48001190)

KA ★ D16 36450B/19 ★J7 9008-757

epn. of new pepsin inhibitor PI-X - by culturing a novel eptomyces strain

OTSUKA PHARM KK 08.05.71-JA-030606

B04 (18.04.79) C12d-13

ethod comprises culturing novel strain Streptomyces sp. 23 in a suitable medium, and isolating the pepsin inhibi r formed by usual methods. The substance PI-X consists colourless plate crystals melting at 226-229°C with decomposition. Amount of PI-X required for complete inhibition of 1g pepsin is 1. 2mg. 8. 5. 71 as 030606 C12d-13/00 (18. 4. 79) OTSUKA PHARM KK (5pp83) (J47043290)

TOXN D16 06377V/04 =J7 9008-758

Novel alkaline protease inhibitor, S-SI - prepd from St albogriseoleus S3253

TOYO BREWING KK (TOYO) 17.01.72-JA-007118

*(18.04.79) *J48075-786 +C12d-13*

Title inhibitor, S-Si, is produced by Streptomyces represented by a new isolate identified as St. albogriseolus S-3253 (I, FERM-P 1205) cultured in an appropriate medium at pH 6-9, 27-30° for 30-60 hr. S-Si is wealky acidic (pKa4. 4) colourless giving needle crystd. consisting of C 46. 82%, N 14. 86%, H 7. 25% and S 2. 13%, mol. wt. 27, 000 m. pt. 227-8° (decomp), $/a/_D^{25}$-112. 75(1%$NaHCO_3$).

It is positive in ninhydrin and Sakaguchi's reactions and negative in Molish reaction, insol. in MeOH $(Et)_2O$, $(Me)_2CO$, EtOAc, BuOH and pyridine and sol. in H_2O. Soly. in 0. 1 M citrate buffer (pH 4. 5) was 2. 35 mg/ml. (5°). It is stable at 100°, 10 min. pH 5. 0-6. 0. 17. 1. 72 as 007118 C12d-13/00 (18. 4. 79) TOYO JOZO CO. LTD. (5pp) (J48075786)

TAIS D16 31398W/19 =J7 9008-759

Physiologically active E64 substance - prepd. from Aspergillus jabonicus TPR-64

TAISHO PHARMACEUT KK 06.03.73-JA-026389

*B04 (18.04.79) *J49110-882 C12d-13 +A61k-31*

A novel physiologically active substance, E-64, inhibiting the SH-enzymes is produced from Aspergillus japonicus TPR-64 (FERM-P 1827). It is stable at pH 2-9 treated at 100° for 15 min. and is sol. in water, MeOH, AcH, pyridine, DMS, slightly sol. in EtOH and PrOH, and insol. in Me_2CO, EtOAc, $CHCl_3$, Et_2O, C_6H_6, and petroleum ether. It is assumed to be a peptide with mol. formula of $C_{15}H_27N_5O_5$.

In an example, the microbe was cultured on 10 kg wheat bran medium at 30° for 3 days. The resulting kojibran was extd. twice with 50 and 201. MeOH and the ext. was concd. to 2 1. and filtered with celite. The active substance was adsorbed onto active C eluting with 50% Me_2CO, Amberlite CG-50 (H^+) eluting with water, and phosphocellulose (H^+) eluting with water and was chromatographed on Sephadex G-25. White needle crystals were obtd. at 286 mg from the concd. eluate with addn. of Me_2CO Antipapain activity of the prepn. was 1 unit/0. 146 μg. 6. 3. 73 as 026389 C12d-13/00 A61k-31/00 (18. 4. 79) TAISHO PHARMACEUT KK (6pp) (J49110882)

PFIZ D16 72489W/44 =J7 9008-760

Antibacterial antibiotics from Actinoplanes auranticolor ATCC 31011 - for growth promotion of non-ruminants and control of dysentery in pigs

PFIZER INC 17.01.75-US-541800 (16.04.74-US-461298)

*B04 C03 (D13) (18.04.79) *BE-827-935 A23k-01/17 A61k-35/74 C12d-09/14*

Antibiotics 37277, 37932, and the synergistic antibiotic mixt. of 35763, 36926, 37277 and 37932, are prepd. by fermentation of Actinoplanes auranticolor ATCC 31011.

Prods. are broad-spectrum antibacterial agents for oral or parenteral admin. effective against species of staphylococcus, streptococcus, neisseria, treponema, bacteroides, clostridum and lactobacillus. They are used as growth stimulant in animal foodstuffs, for non-ruminants and esp. for control of dysentery in pigs, at a rate of 10-100 ppm. 16. 4. 75 as 046293 (clg. 16. 4. 74, 17. 1. 75-US-461298, 541800) C12d-9/14, A23k-1/17, A61k-35/74 PFIZER INC (18. 4. 79) (13pp) (J50145592)

ASMI= ★ D16 36481B/19 ★SU -393-931

Yeast biomass prodn. for use in animal feed etc. - by culturing Candida quilliermondii yeast strain using paraffinic hydrocarbon(s) as carbon source

AS USSR MICROBIOL 07.12.71-SU-721615

C03 H04 (D13) (30.11.78) C12k-03

Polyploid strain of yeast Candida quilliermondii INMI 2, assimilating liquid paraffins, was obtd. by the action of mitosis producing toxin, acenaphthena, on the strain Candida quilliermondii NP-4. It has relatively large

cells so that the proteinaceous biomass can be easily sepd. with low loss. A synthetic nutritive medium contg. liquid paraffins can be used.
Imshenetskii, A.A., Solitseva, L.I. and Afanaseva, L. N. Bul. 44/30.11.78. 7.12.71. as 721615 (2pp70)

ASBI= D16 23298Y/13 =SU-514-627
General purpose microorganisms disintegrator - for use in microbiology and food industry contains hollow disc grinding chamber and anti-frictional polystyrene grinding medium
AS USSR BIOCHEM MIC 19.07.72-SU-812044
*A97 P41 (A13) (18.09.78) *SU-514-627 B02c-15 C12k-01*

Simplified disintegration of microorganisms and maintenance of sterile conditions are achieved by using the rotor which features radial recesses, and which is con-concentrically fitted in the hollow disc. The aq. suspension of microorganisms is fed between granules of a polymer and stirred by the rotor. The elastic granules contribute to breaking up of the microorganisms. The centrifugal force pushes the granules to the periphery for retention at the outlet channel.
Fikhte, B.A., Ushakov, V.M., Gurevich, G.A. et al Bul. 38/15.10.78. 19.7.72. as 812044 (2pp89)

AKZO= ★ D16 36584B/19 ★SU-589-700
Entomopathogenic Entomophthora lairdii fungal strain - used in biological control of blood-sucking gnats and mosquitoes in larval or imago stages
AS KAZA ZOOLOG INST 23.02.76-SU-327697
C03 (11.09.78) A01n-15 C12k-01

Entomopathogenic fungal strain Entomophthora lairdii is useful in biological control of blood-sucking insects producing annoyance or acting as disease carriers, without danger to man.

This fungal strain is pathogenic to blood-sucking gnats and mosquitos. It grows in blood cavity of gnats larvae or mosquito imago depleting food-store of the insects, lowering their vital functions and finally killing the insects.

The strain E. lairdii can be stored in a form of dried spores for over two years. It produces death of 60-80% of larvae and imagos of above insects (e.g. Aedes aegyti, Ae. flavescens, Ae. caspins, Culex pipiens molestus, Cx. pipieus).
Dubitskii, A.M., Levchenko, N.G., Nam, E.A. et al. Bul. 39/25.10.78. 23.2.76. as 327697 (3pp938)

BIOT= ★ D16 36587B/19 ★SU-590-957
Microbial cellulase from aq. culture medium sepn. - includes cooling prior to pptn. of enzyme on finely ground cellulose and sorbent sepn. to increase yield and stability
BIOTECH RES INST 18.02.75-SU-106796
(25.12.78) C07g-07/02 C12d-13/10

The sepn. of cellulose (I) by pptn. from its soln. e.g. a culture medium involves pptn. of the ferment on a sorbent, filtration of the resultant sorbate and drying of the latter in the usual way, e.g. hot air. A fermental soln. is cooled to 5-15°C prior to the addn. of the sorbent. The latter is a finely ground cellulose, particle size 10-100 microns. The soln. prior to addn. of the sorbent, should pref. be cooled to 5-15°C and the ground cellulose be added in the amt. of 0.1-10g. per each 50 activity units of the ferment.

The method increases the yield of the ferment to 95-100% eliminates use of the organic solvents and neutral salts for its pptn., enhances purity and storage stability (activity of the ferment remains unchanged after 1 year storage at 20°C), reduces its costs, utilises waste prods. from the cellulose-paper industry as the sorbent.
Feniksova, R.V., Kalunyants, K.A., Vaganova, M.S. et al. Bul. 47/25.12.78. 18.2.75. as 106796 (2pp48)

LEEP= ★ D16 36605B/19 ★SU-604-343
Live combined parotitis and measles vaccine prodn. - by infecting embryonic avian fibroblast tissue culture with corresp. viral strains in stages
LENGD EPIDEM MICROB 22.12.76-SU-432494
(26.11.78) C12k-05

Live associated parotitis-measles vaccine prepn. includes infecting Japanese quail embryo fibroblast tissue with live parotitis and measles
3-4 day interval infecting stages with subsequent sepn. of virus-contg. fluid.

The method gives high activity vaccine and accelerate tissue culture prepn. procedure, due to the stagewise introduction of infecting virus strains into the embryonic tissue culture.
Boichuk, L.M., Vasileva, G.A. Rusetskaya, N.S. et al. Bul. 43/25.1.78. 22.12.76. as 432494 (2pp938)

BIOT= ★ D16 36669B/19 ★SU-612-9
Microorganisms biomass culturing unit - comprises a heat exchan chamber which has coolant connectors and surrounds the exchanger
BIOTECH RES 18.10.76-SU-413245
P13 (29.06.78) A01g-31/02 C12b-01/10

Reduced weight and volume of the microorganisms culture unit is provided by the heat exchanger which featur a chamber with connectors for the coolant. The chamb surrounds the housing of the gas exchange unit, and hol the helical tube of the condenser whose one end is conne ted to the gas exchange for feeding the air-gas mixture. The other end of the tube is connected to the condensate collector. The combination of the parts reduces the connecting lines, and thus decreases the hydraulic resistance of flows.

The liquid flow inducer suction connected to the condensate collector ensures return of the condensate into the circulation, and thus reduces energy consumption.
Anisimov, O.L., Zadorin, N.N. and Nikolaeva, L.A. Bul. 24/30.6.78. 18.10.76. as 413245 (2pp89)

KIFO= ★ D16 36670B/19 ★SU-612-
Baker's yeast prodn. by fermentation of sugar prod. waste - inclu multistage biomass washing using in second step aq. alkali s and then water again
KIEV FOOD IND TECH 07.10.76-SU-410583
(D11) (15.06.78) C12c-11/24

Bakery yeasts, grown e.g. on molasses, are washed stepwise with water at a predetermined pH. This proce is improved by using in the second washing step an aq. alkali soln. having pH 11-13 for 5-15 min.

By this method, colouring substance are removed rapidly from the yeast cell surface; the water consump is reduced by 30-40%; the separation degree is lowere from 5 to 4; and the consumption of the electric energ is decreased. After the alkali washing step, the yeast are washed with artesian water.
Shvets, V.N., Knogotkova, E.I. and Shashenkov, E.F Bul. 24/30.6.78. 7.10.76. as 410583 (2pp70)

BIOT= ★ D16 36671B/19 ★SU-612
Evaluating enzyme amylolytic activity during microbiolo prodn. - by introducing iodine into nutritive medium and meas increase of light transmittance with time
BIOTECHN RES INST 12.07.76-SU-382291
(15.06.78) C12d-13/10 C12k-01

The amylolytic properties of various enzymes can be determined by cultivating the enzyme-producing micr organisms in a heated nutritive medium and measurin their amylolytic activity with an electrophotocalorime in comparison with control samples.

The method is simplified by introducing into the m dium, before the heating, an iodine soln. and measuri the light-transmittance increase (to 30-40%) resulting from the amylolytic activity of the enzyme (as a time ction, using a calibrated chart).
Evtikhov, P.N., Ermoshkin, I.A. Tunev, V.N. et al Bul. 24/30.6.78. 12.7.76. as 382291 (3pp70)

DAGE= ★ D16 36672B/19 ★SU-61
Aromatised semi-sweet and semi-dry wines prodn. - by ble dry grape-vine base with grape juice, alcohol sugar and extr aromatising agents before maturation
DAGESTAN FOOD IND (ASDA=) 14.09.76-SU-405762
(15.06.78) C12g-03/06

The stability of the products is improved (to at least months) and the range of raw materials is extended b additionally introducing into the blend, before the ma ing alcoholic extracts of blackcurrant leaves and aca flowers, and 1-3 days before the filtration, extracts of gooseberry leaves and camomile flowers.

Additives for semi-sweet wines pref. consists of the extracts of (in wt.%) blackcurrant leaves 2.5-3.0 acacia flowers 0.5-0.8, gooseberry leaves 1.0-1.3, and camomile flowers 1.0-1.3. The corresp. figures for semi-dry wines are 2.0-2.5, 1.0-1.3 and 1.5-1.8; 50% alcoholic extracts are used.

Abramov, Sh.A., Makuev, A.M., Starchenoi, E.N. et al Bul. 24/30.6.78. 14.9.76. as 405762 (2pp70)

ASMI= ★ D16 36673B/19 ★SU-612-958
Microbiological purification of water - using Pseudomonas aeruginosa 123 strain to degrade petroleum or its prods.
AS USSR MICROORGANI 01.12.76-SU-425251
H04 (D15) (29.06.78) C02b-09/02 C12k-01/02

Strain Pseudomonas aeruginosa 123, bearing plasmides OCT^+, CAM^+ and NAH^+, is used for biological purification of waters contaminated with petroleum and its prods. The multiplasmide strain Pseudomonas aeruginosa 123 was produced by the conjugational transfer of plasmide CAM from strain Pseudomonas putida C19, and then plasmide NAH from Pseudomonas putida 51.

Pseudomonas aeruginosa 123 grows most intensively in a nutritive medium contg., apart from the usual mineral components, a combination of naphthaleine, camphor, octane and a salicylate (these substances are not so effective when used singly).

Boronin, A.M., Porits, A.L., Skryabin, F.K. Bul. 24/30.6.78. 1.12.76. as 425251 (4pp70)

NOVO/ ★ D16 36677B/19 ★SU-612-962
Mono:saccharide-contg. soln. prepn. - by acid hydrolysis of polysaccharide(s) on specified sorbent, useful in alcohol and feed yeast biomass prodn.
NOVOZHILOV E V 14.05.76-SU-360052
(16.06.78) C13k-01/02

Monosaccharide-contg. solns., suitable for alcohol prodn. or feed yeast cultivation, are obtd. from polysaccharide-contg. sulphite lyes by hydrolysis with mineral acids.

The process is simplified and the monosaccharide yield is increased by passing the lye through a column filled with a sorbent which adsorbs polysaccharides (pref. unbleached sulphite cellulose) and then hydrolysing, on the sorbent, the adsorbed polysaccharides with a hot dil. mineral acid.

Novozhilov, E.V., Gelfand, E.D., Proksin, G.F. et al. Bul. 24/30.6.78. 14.5.76. as 360052 (3pp70)

BOEF D16 40938W/25 =SU-613-731
Activating cholesterol oxidase with surfactants - esp for rapid diagnosis of cholesterol in body fluid
BOEHRINGER MANNHEIM GMBH 16.08.74-DT-439348
*B04 R16 +P31 (15.06.78) *BE-822-843 G01n-33/16*

Cholesterol oxidase (I) is activated by treating it before use with ⩾1 surfactants with lipophilic and hydrophilic props esp. non-ionic surfactants contg. ⩾1 OH gp. e.g. polyethoxylated alcohols, phenols or aralkanols, pref. at 0.005-0.1 wt.% on enzyme soln. Device for determining concn. of cholesterol and its esters in body fluids by oxidation to cholestenone in presence of (I) with simultaneous prodn. of H_2O_2, which is used to oxidise an indicator with peroxidase as catalyst, comprises an absorbent support or film of synthetic matl. which has been impregnated or soaked with (I), an H_2O_2-indicating system a buffer and surfactant (pref. 10-20%). Compsns. are storage stable retaining enzyme activity and detergent need not be removed before use. The surfactants increase rate of cholesterol oxidation by 5-10 times.

Raschlau, P., Lang, G., Beauchamp, K. Bul. 24/30.6.78. 4.12.74. as 084151 (4pp)

KELT- ★ D16 36926B/19 ★US 4150-977
Recovery of silver and film base from photographic materials - including washing in water contg. enzymes
KELTEK PROCESSING 27.10.77-US-846189
A89 G06 M25 (A35) (24.04.79) C22b-11/04

Photographic film having a plastic base layer, an adhesive layer and an organic layer contg. silver is treated to recover the silver and the plastic base by (a) washing the film in agitated water (30-60°C, pH = 5 to 9 pref. 6-8 - 7-2) contg. an enzyme selected from protease, amylase and lipase, to attack the adhesive and organic layers and separate them from the base; (b) rinsing the plastic base in (d) a weak aq. glycol soln. or (ii) a weak caustic soln. to remove remaining adhesive and (c) drying the base and recovering the silver from the wash liq..

The plastic base is recovered and can be reused, as opposed to prior art methods in which the whole film is burnt to recover the silver. 27.10.77 as 846189 (5pp).

TAKE D16 88577A/49 =US 4151-042
Maytansinol, maytanacin and maytansinol propionate prepn. - by aerobically culturing Nocardia microorganism in culture medium at neutral pH
TAKEDA CHEMICAL IND KK 01.04.77-JA-037885 (31.03.77-JA-037167)
*B02 (24.04.79) *J53124-692 C12d-09/20*

Prepn. of maytansinol, maytanacine or maytansinol propionate comprises cultivating microorganism of genus Nocardia in medium contg. C and N sources. Pref. microorganism is Nocardia No. C-15003 (ATCC 31281; IFO 13726; FERM 3992) or its mutants or variants.

Prods. are antitumour agents. Method is more convenient than prior art prodn. by extn. of various plants. 29.6.77 as 811442 (7pp963).

MEIJ D16 18097A/10 =US 4151-041
Microbiological malto-pentose and malto-hexose prodn. - by culturing Streptomyces myxogenes, useful as antibiotic potentiators (BE 23.3.78)
MEIJI SEIKA KAISHA 23.08.76-JA-099756
*B03 E13 (D17) (24.04.79) *DT2737-944 C12d-13/02 +C12b-01*

A maltopentaose and/or maltohexaose saccharide is produced by cultivating a microroganism having the indentifying characteristics of Streptomyces myxogens SF1130 under aerobic conditions in a culture medium contg. nutrient sources.

Pref. strain is aerobically cultivated at 25-38°C. Saccharide is recovered by filtering the culture broth under acidic conditions and passing the filtrate through a strongly acidic ion-exchange resin column.

Good yields are produced compared to equiv. isolation techniques from corn syrup. The prods. have no in vitro antimicrobial activity but increase the resistance of a host to infection and augment the immuno-potentiating and antibacterial activities of specified new antibiotics. 22.8.77 as 826762 (5pp931).

SIGM ★ D16 36952B/19 ★US 4151-043
Enzyme determn. in biological fluids esp. of aldolase - by alkaline treatment in presence of amino alcohol then colour formation
SIGMA CHEM CO 19.11.76-US-743350
B04 J04 R16 (24.04.79) G01n-31/14

Concn. of an enzyme (which catalyses formation of a triose-(phosphate) in a biological fluid is determined by alkaline treatemtn at pH 11-12.25 in the presence of >25 mM. concn. of an aminoalcohol (I). A 2,4-dinitrophenylhydrazine reagent (II) is then added to form a coloured prod., and the enzyme concn. is measured by the depth of colour.

Aldolase concns. in biological fluids are determined with greater sensitivity and reliability in a more accurate and reproducible procedure by a simple method. The blanks are less variable and lower, and a reliable standard is used. The procedure is suitable for automatic or multiple simultaneous determns. Serum aldolase concns. are used in the diagnosis of muscular diseases and of prostate cancer. The test is also useful for monitoring aldolase levels during its isolation in commercial processes. 19.11.76 as 743350 (5pp1248).

HOFF D16 15597B/08 =US 4151-268
Antibodies specific for 5-substd. barbituric acid derivs. - useful in assay of barbiturate(s) in biological fluids
HOFFMANN-LA ROCHE INC 23.03.76-US-670210 (24.08.71-US-174517)
*B04 +R16 (24.04.79) *US4107-157 +G01n-33/16*

Assay of a 5-substd.-1,3-unsubstd. barbituric acid deriv. (I) in a sample comprises (a) adding the sample to a soln. contg. a known amt. of a labelled (I) and an antibody specific for (I) consisting of a γ globulin fraction protein having a multiplicity of sites which selectively complex with (I), (b) measuring the % inhibition of binding of the labelled (I), and determining the amt. of (I) in the sample by comparing the % inhibition value to a standard curve obtd. by adding known amts. of (I) to a fixed mixt. of the labelled (I) and the antibody and (c) determining the % inhibition of binding for each known amt. of (I).

Pref. labelled (I) is pentasorbital-C^{14}, phenobarbital-C^{14} or barbital-C^{14}. The (I) in the sample is pref. also as above but unlabelled. Method is useful for assaying (I) in biological fluids at the nanogram level.

Parent Patent described the antibodies and their prepn. 15.12.77 as 860810 Div.ex. 4107157, 3766162 (+24.8.71, 12.7.73, 23.3.76 - US - 174517, 378744, 670210) (5pp393).

ZAID D16 92049A/51 =US 4151-347

Isolation of coformycin and related cpds. from aq. soln. - by passing through weak cation exchanger comprising activated carboxyl as ion exchange gp.

ZAIDAN HOJIN BISEIB 15.03.77-JA-027648

*B04 (24.04.79) *J53130-493 A61k-31/70 +C07h-17*

Coformycin (I) is sepd. from a mixt. of (I) and $\geqslant 1$ related nucleoside (II) selected from formycin A, formycin B, isocoformycin and 2' deoxycoformycin, by (1) subjecting an aq. soln. contg. (I) and (II) to column chromatography on a cation exchanger having carboxylic gps. partially activated by conversion into ammonium carboxylic gps. or alkali metal carboxylate gps. as the ion exchange function and developing with water or a buffer soln. of pH 6.6; (2) collecting in fractions the eluate leaving the column such that the fractions each contain solely (I); (3) opt. collecting fractions contg. (II) and opt. (I); and (4) recovering (I) from the fractions contg. (I).

(I) has biological and physiological properties, and c be used in chemotherapy of e.g. tumours. 27.2.78 as 881258 (6pp918).

EBAR ★ D16 37125B/19 ★WP 7900-

Composting appts. e.g. for municipal garbage - compris horizontal floors and stirring unit, the garbage being gradu transferred from the upper to the lower floor

EBARACORP (ITOH/) 08.10.77-JA-121049

(03.05.79) C05f-09/02

D/S: N(BR, DT, GB, SW, US) + E(FR).

Apparatus for converting municipal garbage or similar material to compost comprises several stages in vertic succession. Each stage includes a fixed floor (19) carr ing garbage and defining a hole, and a shaft which has mixer blades (9) attached. The shaft is moved in circul sweeping motion parallel to the floor while rotating abo its axis.

The blades mix garbage on the floor, simultaneously displacing garbage rearwards. Garbage near the hole i thus moved through the hole to the next lower stage at each sweep of the shaft. Holes and shafts of successive stages are in staggered relation. Garbage is supplied t the top stage, and transferred to successive lower stag

9.10.78 as JA0006 (20pp1412)

(J) ISR: US3756784; US3736120; US2639902; J52112567; GB1001028; JA36-19302; J51040135; JA41-21728; J53086373; BE813056; J52107969.

See Also

D13 DT 2816326
D13 J7 9007869
D15 SU 613171
D13 GB 2006823
D13 SU 590989
D13 J5 4041395
D15 J7 9008551

D17: SUGAR; STARCH

DASU- ★ D17 B/19 ★BR 7806-360

Sugar cane feed mechanism to disintegrator - has vibratory conduit arranging cane fragments parallel to each other

DANSKE SUKKERFAB 27.09.77-DK-004272

(24.04.79) C13d-01/06 26.9.78 as 006360

CELL- D17 28873A/16 #GB 1545-404

Continuous starch hydrolysates prepn. using acid starch suspension - passing from heating zone via orifice to reactor zone under pressure

CELLCOR CORP CANADA 14.12.77-BE-861863 (02.12.77-GB-050416)

*+R26 (D13) (10.05.79) *BE-861-863 C08b-31*

A polysaccharide-contg. material is converted into a dextrine-contg. prod. by continuously moving an aq. acidic polysaccharide slurry through a tubular heating zone at $>$20kg. cm^{-2} pressure to raise temp. of slurry to $>$100°C.

Polysaccharide slurry is caused to (partially)gelatinise and form a hot liq. The hot liq. is forced from the tubular zone through a restricting zone and into a tubular reaction zone having an elevated pressure below the pressure in the heating zone. A highly reactive polysaccharide liq. emerges in the form of a fine spray or mist, with a sudden release of energy, which is continuously moved through the reaction zone to form a homogeneous dextrose-contg. prod.

Uniform hydrolysis of polysaccharide is achieved without using enzymic means. 2.12.77 as 050416 (8pp931).

CONF= ★ D17 36540B/19 ★SU -534-226

Caramel prodn. for confectionery use - by melting sorbitol, adding syrup, heating and cooling mixt. in two stages, introducing additives and solidifying in starch cells

CONFECTIONERY RES 02.01.75-SU-093981

(08.12.78) A23g-03

After melting sorbitol, is treated with sugar syrup heated followed by cooling the melt in two stages, whilst introducing during the interval aromatic and flavouring agents: then shaping the product and leaving it aside to set in starch cells.

The process can be shortened by introducing a syru into the molten sorbitol before the first cooling stage; then heating the mixt. to 170-175°C and cooling it in th first stage to 90°C, and in the second stage to 60-65°C whilst stirring during the both stages.

The syrup is pref. added in an amt. of 10 wt.% w.r the sorbitol. The maturing period is 30-40 min.

Nikiforova, V.N., Kuznetsova, L.G., and Knopova, S Bul. 41/5.11.76. 2.1.75. as 093981 (2pp70)

MOFO= ★ D17 36575B/19 ★SU -576

Dextrin prodn. from starch - includes thermal treatment in pres of catalyst and infrared irradiation

MOSC FOOD IND TECH (STAR=) 15.01.76-SU-317059

(14.08.78) C13l-01/10

Dextrin can be produced by admixing a catalyst to sta and heating the latter in thin layer with stirring.

This process is intensified and the quality of the product is improved by applying infrared heating in th wavelength range between 0.4 and 5.0μ (λ_{max} = 1.0- μ) for 5-30 min. the thickness of the starch layer is 15 mm. The energy consumption is reduced.

Syroedov, V.I., Ilyasov, S.C., Zhushman, A.I., et Bul. 28/30.7.78. 15.1.76. as 317059 (3pp70)

KREM= ★ D17 36674B/19 ★SU -61

Sugar beet cutter - has a blade with a supplementary ang inclination extending from the tip

KREMENCHUG CAR WORK 03.03.76-SU-332596

(16.06.78) C13c-01/08

Fibrous liquified roots of sugar beet is cut to cossett with blades featuring a supplementary angle of edge of 50-60° at a distance of 1.5-2.0 of blade thickness ne tip. The basic wedge angle of the blade is 8-10°, hile the additional angle is 4-5°. The blade is fitted in he knife frame for setting in the opening of the beet cutter ousing. The rotor in the latter ensures that the mass of eets is pressed to the housing for cutting the woody ibres.

urik, Yu.A., Branitskii, V.N. and Kuzub, A.I. Bul. 4/30.6.78. 3.3.76. as 332596 (2pp89)

FOO= ★ D17 36675B/19 ★SU -612-960

leaning of sugar juice extractor screen - is controlled by low equency and high amplitude longitudinal and transverse brations of diffusion juice

UKR FOOD SUPPLY EQU 14.05.76-SU-360047

(16.06.78) C13d-01/10

nproved cleaning of sugar juice extractor screen is chieved by continuous longitudinal and transversal scillations of the diffusion juice at a frequency of 3-5 Hz. he amplitude of the longitudinal vibrations is 5-12mm hile that of the transversal oscillations is 2-4 mm. The nitial longitudinal vibrations prevent beet cossettes adering to the screen. When maximum amplitude is reached, then the transversal vibrations are started to free the penings of the screen from the pulp.

The vibrations take place without interruption during ne continuous pumping of the juice and with the pulp discharged from the extractor.

harchenko, A.A., Semerik, I.E., Shapran, V.Z. et al ul. 24/30.6.78. 14.5.76. as 360047 (3pp89)

UCO= ★ D17 36676B/19 ★SU -612-961

ystallisation of sugar from beet-sugar mfg. massecuite - regulated adding small amt. of lithium chloride as indicator, and aintaining its concn. at optimal level by regulating supply of syrup

AS UKR COLL CHEM 17.05.76-SU-362147

(16.06.78) C13f-01/02

ugar is crystallised from massecuite by evaporating the rrup and introducing crystallisation nuclei, whilst unsatd. syrup is added. The maintenance of the supersaturation coefficient of the liquid phase at the optimal level (1.10) is facilitated and the regulation is rendered more accurate by introducing LiCl as an indicator, in an amt. of 0,008-0.012 wt.% w.r.t. the water contained in the syrup.

The supplementation of the syrup is regulated in such a manner that the LiCl concn. is maintained within the above range. The concn. of LiCl in the liquid phase is measured by the flame photometric method. LiCl does not co-crystallise with sugar.

Bazhal, I.G., Dzyubenko, E.P., Trebin, L.I. et al. Bul 24/30.6.78. 17.5.76. as 362147 (3pp70)

VUKE/ D17 58810A/33 =US 4151-004

Sugar cane milling roll unit - for longitudinally split cane machine, has small dia. clearing roll in pinch outlet at edge of deflector plate

VUKELIC B 10.12.76-CA-267626

*(24.04.79) *CA1035-656 C13c-01/02*

A sugar cane pith and rind sepn. unit comprises a rind grinding roll and a parallel pith milling roll each having surface indentations and driven so that incoming split stalk halves are flattened, with the pith being milled away from the rind.

A plate allows the rind and sepd. pith to travel on separate paths. A rotating roller is positioned close to the leading edge of the plate and to the output side of the rolls to remove any clogging fibres. The appts. does not have to be shut down for fibre removal. 17.10.77 as 843143 (7pp1379).

See Also

D16 US 4151041

D18 : SKINS ; HIDES ; LEATHER ; TOBACCO

OLF/ ★ D18 35335B/19 ★DL -134-190

taining moisture in e.g. tobacco using carboxy methycellulose - prevent embrittlement and facilitate mechanised processing

WOLF F 29.11.77-DL-202290

A97 P15 (A11) (14.02.79) A24b-15/04

oisture retainer for vegetable matter, esp. tobacco, nsists of carboxymethlcellulose (CMC), which is apped in amts. of 0.02-0.2, (esp. 0.05-0.1) wt.% w.r.t. e vegetable matter in the form of an aq. soln. or suspsion.

Treatment prevents embrittlement of the tobacco and proves its smoking properties and its handling properes in mechanised mfr. of tobacco prods. The hygroscop city is increased by up to 20%. 29.11.77 as 202290 pp016)

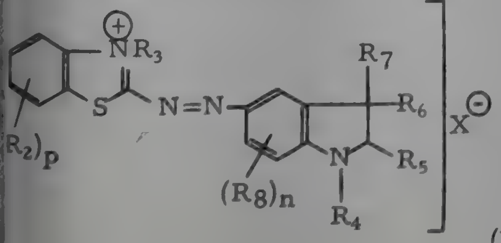
RB D18 38274V/21 =DS 2255-058

sic azo dyes from benzothiazoles and indolines - giving blue ades to leather cotton and synthetic polymers

BAYER AG 10.11.72-DT-255058

*A60 E21 F06 (03.05.79) *BE-807-058 C09b-39 D06p-01/08 D06p-03/76 D21h-01/46*

w basic benzthiazole azo dyes are of formula (I) (where p = 0-4; n = 0-3; X is an anion; and R_{2-8} are e.g., halogen, alkyl, cyclohexyl, aralkyl, OH, alkoxy, etc.).



(I)

(I) are prepd. by diazotisation of corresp. 2-aminothiazoles and coupling with appropriate indoline derivs., followed by quaternisation with cpds. of formula R_3X, or with epoxides in the presence of acids HX.

The props. are used to colour acrylonitrile and/or dicyanoethylene (co)polymers, acid modified polyesters or polyamides, leather, paper, tanned cotton wool, writing fluids, printing pastes and fibres contg. lignin. 10.11.72 as 255058. (12pp047)

HENK D18 28198S/16 =J7 9008-721

Leather fatting agents

HENKEL KG AUF AKTIEN 13.10.69-DT-951557

*(18.04.79) *BE-757-382*

PHIM ★ D18 36879B/19 ★US 4150-677

Extn. of tobacco flavouring volatiles - by heating tobacco in stream of inert gas and condensing

PHILIP MORRIS INC 24.01.77-US-761732

P15 (24.04.79) A24b-03/12 A24d-01

Tobacco is contacted with a stream of non-reactive gas and heated to volatilise the flavourants, which are then condensed from the gas stream. The improvement is that the tobacco is heated to 140-180°C, for sufficient time to achieve a wt. loss from the tobacco of 3-10% in excess of the loss represented by oven volatiles.

The fraction of volatiles obtained has the flavour and aroma of tobacco, and is storable. It is used to augment the flavour of low flavour smoking materials, esp. the low tar type. When high flavour tobaccos are used, e.g. Oriental, the residue is still suitable for smoking. 24.1.77 as 761732 (11pp955).

CIBA D18 75885Y/43 =US 4150-944
Condensates of aromatic sulphonic acid and formaldehyde or aminoplasts - used as tanning agents for skins and leather
CIBA GEIGY CORP 22.04.76-CH-005046
*A97 (A21) (24.04.79) *BE-853-790 C14c-03/20 +C08g-75/20*

A sulphonated, aromatic reaction prod. for tanning hides and leather is obtd. from (1) 100 pts. wt. of a sulphonation prod. (I) and (2) 4-24 pts. wt. of a reaction mixt. of (d) an aminoplast-forming agent and (e) HCHO (releasing agent) or (3) 4-24 pts. wt. of an aminoplast precondensate.

(I) is obtd. from (a) 10-90 wt.% of a diphenyl ether opt. substd. by CH_3, (b) 90-10 wt.% of a phenol opt. substd. by CH_3, the sum of (a) and (b) being 1 mol., and (c) 1-2 mols, calculated as sulphonic acid, of a sulphonating agent.

Prodn. comprises (i) reacting (a), (b) and (c) at 110-
180°C, (ii) reacting (a) with (c) at 110-120°C and then w
(b) at 110-180°C or (iii) reacting (b) with (c) at 110-120°
and then with (a) at 110-180°C to give (I). (I) is then rea
ed at 60-95°C with (2) or (3), and (in)organic base is ad
ed and then an organic acid is added. 11.4.77 as 786161
(8pp992).

See Also

D13 US 4151161

BERT- ★ D13 35717B/19 ★FR 2399-213
Mfg. pure solns. of natural aminoacid(s) - by ultrafiltration then electrodialysis of liq. hydrolysate of biological proteinaceous material
BERTIN & CIE 04.08.77-FR-024069
B05 C03 (06.04.79) A23j-01/04 A61k-31/19

Suitable source is fish refuse from fishing grounds, ports etc. Ultrafiltration removes proteins and degradation prods. of molecular mass > 25,000, or even 5,000 if necessary. Salts, e.g. chlorides are removed by electrodialysis. Higher yields and purity than by known process. Prod. is used as human or animal foodstuff.

In an example, fish guts and non-commercial fish were hydrolysed enzymatically and the hydrolysate was pasteurised at 90°C for 1 hr. in a medium at pH 3 (citric acid). The hydrolysate was centrifuged and the liq. phase ultrafiltered to give a fraction with a threshold of ⩽ 10,000 for molecular mass. The filtrate, 1/5 to 1/6 vol. of the concentrate was collected, assayed from protein, peptide etc. (Sørenson) and treated with sodium lauryl sulphate at 80°C, then filtered (0.22μm pore size). The ppte. was discarded and the filtrate was electrodialysed until the salt concn. was about 100 ppm. The soln. may be concd. by inverse osmosis to give a prod. of 66 g./l. or by evapn. under reduced press. at < 60°C. 4.8.77 as 024069. (8pp288)

SALI- ★ D13 35718B/19 ★FR 2399-217
Non-proteinaceous nitrogen-based cattle lick - contains conc. residues from wine and cider mfr.
CIE SALINS MIDI EST 03.08.77-FR-023956
C03 (06.04.79) A23k-01/17

Licking block, for ruminants contg. 1-60% of non-protein nitrogen, also contains a cpd. from concentrates from distillation of wine, by-prods. of wine-making and cider-making, notably sugars, glycerol, tartaric acid and its salts, tannins and anthocyanins.

Consisting of hardness of block is improved to give correct supply of nitrogen to cattle, etc., e.g. ⩾ 11.5 g./100 kg. body weight of nitrogen daily. Magnesium, present as hydroxide, salts etc., improves absorption of non-proteinaceous nitrogen. Citric acid present in the residues prevents deposition of insoluble Mg salts; anthocyanins present have bactericidal, provitamin and antitumour properties. 3.8.77 as 023956. (7pp288)

BONR/ ★ D13 35719B/19 ★FR 2399-218
Rotary drum pre-cooker for corn prod. - coats corn with oil to prevent loss of flavour, colour and vitamin(s)
BON R 03.08.77-FR-024570
(06.04.79) A23l-01

The pre-cooking cylinder comprises a horizontal, cylindrical, rotary drum through which the prod. is conveyed. The drum rotates coaxially inside a cylindrical, fixed casing fitted with heaters to cook the corn. Oil is dispersed on to the prod. from a supply tank, the coating action being assisted by agitator blades on the drum interior.

Prior to reaching the precooking cylinder, the hard corn is drawn from a supply silo and pref. passes through

milling and winnowing. The prod. delivered from the r
ary drum is pref. passed through another winnower.
Used for mfr. of Boulgour' corn prod. The prod. r
tains the attractive colour of hard corn, loses none of it
flavour and scarcely any of its vitamin content. 3.8.7
as 024570. (5pp448)

CSIN- ★ D14 35720B/19 ★FR 2399-
**Hydraulic sepg. machine for washing soiled potatoes etc. - di
from harvesting, requires mush less water than previous systems**
CONSTR IND DANJOU 03.08.77-FR-023872
Q35 (06.04.79) A23n-13 B65g-37

The machine comprises a reception hopper for vegetab
complete with field waste. A water supply delivers ac
vegetables which are gravity-fed from the hopper and h
raulically conveys them via a series of tank compartme
Waste is sepd. in these compartments and conveyed aw
for disposal. Cleaned vegetables are rinsed at the discharge end of the machine and delivered on to a convey
to transfer them to the next stage of processing.

The hopper pref. has an adjustable discharge openi
and is designed to receive harvested vegetables tipped
from tractors using tote boxes. The water is pref. re
culated in closed circuit via a primary circuit, providi
an initial water curtain, and a secondary washing circu
The first two compartments pref. are used successive
remove stones and then soil. These compartments ha
screw conveyors extracting this heavy waste and trans
ring it to a disposal conveyor.

Cleaning heavily soiled vegetables, partic. potatoes
direct from harvesting. Continuous flow-line operatio
with continuous disposal of sepd. waste. Economical
of water by recirculation. Increased yield of prod. be
damage is reduced by improved handling. Water usag
quoted as 0.5-0.6 m^3 per tonne of potatoes compared w
2.0 to 3.0 m^3 per tonne previously. 3.8.77 as 023872
(8pp448)

PECE- ★ D15 35740B/19 ★FR 239
**Surface aerator for biological purificn. of waste water -
channels flowing around horizontal rotor for more eff
contacting**
PEC-ENGINEERING 02.08.77-FR-023700
(06.04.79) C02c-01/10

Aerator uses a partly-immersed rotor turning on a h
zontal axis, within a flow guide channel. The flow ch
has a horizontal base below the rotor. The size of th
base is such that its perimeter encloses the vertical
jection of the plan view of the rotor.

The dia. of the rotor is pref. 60-80 cm., the depth
immersion of the rotor is 10-30 cm. and the channel
is clear of the rotor blades by 5-10 cm. The channel
directs and evenly distributes incoming water to the
The channel discharge outlet pref. reintroduces aera
water downwards at an angle of 20-30° to the horizon

Aeration is achieved more efficiently with reduce
ergy requirement. This is mainly due to more inten
contacting, higher pumping speed and controlled dire
of discharge. 2.8.77 as 023700. (12pp448)

CHO ★ D16 35725B/19 ★FR 2399-250

**ntibacterial serum fraction - obtd. from animals treated with Gram
egative bacteria lipo-polysaccharide(s) and Klebsiella
neumoniae**

CHOAY SA 01.08.77-FR-023661

A96 B04 (06.04.79) A61k-35/16

water soluble antibacterial fraction is obtd. from anim-
l serum by the following process: the animal(s) are giv-
n a non-lethal dose of gram-negative bacteria lipopoly-
accharides (LPS) and, after sufficient time for the anim-
l to acquire protection, an infecting agent such as Kleb-
iella pneumoniae is given in a dose that is higher than
D$_{100}$ to untreated animals but lower than the toxic dose
o the treated animal and, after sufficient time for the bio-
ynthesis of antibacterial prods., the serum contg. the
ntibacterial properties, is taken.

The LPS is pref. obtd. from Salmonella enteritidis,
nd the time between injection of LPS and injection of K.
neumoniae is about 24 hrs. The serum is pref. taken 1-
days after admin. of the LPS. The fraction may be
oncd. by selective pptn. of the serum using ammonium
ulphate. This may be purified by dissoln. in a buffer, di-
lysis, and fixation on a DEAE cellulose resin. 1.8.77
s 023661. (15pp520)

VERN- ★ D16 35748B/19 ★FR 2399-467

Betalaine colourant prodn. from beet juice - comprises removing sugars by fermentation then concentrating and crystallising

VERNIERS SA 01.08.77-FR-023583

E24 (06.04.79) C09b-61

Prodn. of betalaine (95% betanine, 5% betaxanthine)-based colourants (I) from beet juice comprises removing the sugars from the juice by bacterial (sic) fermentation. The fermented juice is then conc. to colour strength 400% of that of the starting material and finally crystallised.

Prod. is obtd. in high yield in a stable, highly conc. form. 1.8.77 as 023583. (6pp949)

D2: DISINFECTANTS; DETERGENTS

D21 : DENTAL ; TOILET PREPARATIONS

COLG ★ D21 35477B/19 ★DT 2747-852
Dentifrice with improved cleansing and polishing action - contg. abrasive agent together with zinc cpd. to reduce abrasion of dental enamel
COLGATE PALMOLIVE CO 26.10.77-DT-747852
E37 (03.05.79) A61k-07/16

Dentifrice with improved cleansing and polishing properties contains ≥ 1 abrasive agent with a particle dia. of 1-15 μ, and a non-toxic Zn cpd. in an amt. of ≥ 0.0065 wt.%. The abrasive agent is either (a) Ca pyrophosphate in an amt. of ≥ 7.5 wt.% or (b) a hard abrasive agent selected from calcined Al_2O_3, Zr, silicate, crystalline SiO_2, Ca silicate, $KAlSi_3O_8$, sand, SiC, pumice, ilmenite, CeO_2, Fe_2O_3, ZrO_2, SnO_2 and topaz in an amt. to give the dentifrice a radioactively determined enamel abrasion (REA) value of ≥ 400.

When the abrasive is Ca pyrophosphate, the Zn cpd. is ZnO and is pre-mixed with the Ca pyrophosphate before incorporating into the dentifrice. When the abrasive is Zr silicate or crystalline SiO_2, the Zn cpd. is $ZnCl_2$ and/or ZnO.

Incorporation of a Zn cpd. reduces the effect of the abrasive agent on the dental enamel without adversely affecting its effectiveness in removing resistant flecks and food residues from the tooth surface, so that a good polishing and cleansing effect is obtd. without the risk of damage to the enamel. 26.10.77 as 747852 (32pp280)

LIOC ★ D21 35643B/19 ★DT 2845-822
Caries-preventing dental treatment compsn. - contains acid, and stannous salt and fluoride salt in controlled fluoride to stannous ion mole ratio
LION DENTIFRICE KK 20.10.77-JA-126102
B06 E32 (03.05.79) A61k-05 A61k-33/24

Dental treatment compsn. contains an Sn (II)-salt, a water-sol. fluoride salt and an edible acid, to set pH 2-4. Sn(II)-salt quantity ranges from 0.07 wt.%, calculated as Sn (II)-ions and w.r.t. total compsn., up to saturation in water. Mol. ration $F^-:Sn^{2+}$ ions in aq. medium is 3.2 : 1 to 7:1.

The compsns. may be dentifrices, toothpastes, fillings, gels for ultrasonic treatment, mouth-washes, prophylactic pastes, dental floss, - powder and - desensitisers. The compsn. inhibit dental caries and maintain their activity also without repeated use. The Sn^{2+} ions are present in a stable, easily available condition. The acid solubility of the dental enamel is reduced. A difficulty soluble film or deposit is formed on teeth surface, e.g. contg. 15000 ppm F^- down to a depth of 3μ. Dental enamel surface can reach Vickers harness 280-290, compared with 80 for controls. 20.10.78 as 845822 (56pp)

REDK- D21 02285Y/02 =GB 1545-297
Sprayable hair curl fixer - contg. synergistically acting water soluble reactive polyamide epichlorohydrin resin and vinyl pyrrolidone polymer
REDKEN LABORATORIES 19.06.75-US-588383
*A96 (10.05.79) *DT2617-528 A61k-07/11 +C08l-39/06 C08l-77 C09k-03/30*

A temporary curl setting compsn. comprises a water soluble, reactive, polyamide-epichlorohydrin resin and a water soluble vinylpyrrolidone polymer dissolved in a solvent-carrier for resin and polymer.

Resin and polymer concn. in compsn. is sufficient upon application to hair and evapn. of the solvent-carrier to impart resistance to curl relaxation under humid conditions, but insufficient to impart tackiness and flakiness to the hair. Pref. polyamide-epichlorohydrin resin is present to 1-4 wt.% and vinylpyrrolidone to 1-4 wt.%.

Compsn. can be prepd. in aerosol and non-aerosol hairsprays and hair setting lotions. 21.4.76 as 016073 (5pp231).

PROC D21 56322X/30 =GB 1545-31
Keratinous materials protected against detergents - or climati conditions, with compsn. contg. foaming non-cationic detergen and chemically modified protein (BE130776)
PROCTER & GAMBLE CO 17.03.75-GB-011003 (13.01.75-GB 001319)
*A97 (10.05.79) *DT2600-514 C11d-01/22 C11d-03/38 +C11 10/02*

A foaming and conditioning detergent compsn. comprises an alkyl benzene sulphonate contg. an 8-18C straight- or branched-chain alkyl gp., and an auxiliary natural or sy thetic anionic, nonionic, amphoteric or zwitterionic surfactant.

Compsn. further contains a modified protein having a isoionic pt. > pH 6 and mol. wt. > 5000, where carboxyl gps. of precursor protein have been replaced by -COOR or -CONHR. The R gp. has <8C and is of formula $CH_2(CHQ)_p(CH_2)_qQ'$ where Q and Q' are R', OR', NHR' o NR'_2 where R' is H, alkyl or alkenyl. p is 0 or 1 and q is 0-(5-p). Wt. ratio of sulphonate moiety to surfactant is 1.5-10:1, and that of sum of sulphonate plus surfactant t protein is 4-500:1

Compsn. protects keratinous material such as skin o hair, from the deleterious effect of deleterous or solven and from adverse climatic conditions. 16.3.76 Div. ex 1529841 (9pp931).

BEGO- D21 60630A/34 =GB 1545-4
Artificial tooth enamelling preparation unit - has galvanising a electrophoretic baths with cathodes in glass vessels with plug connectors
BEGO BREMER GOLDSCH 11.02.77-DT-705770
*P32 (10.05.79) *DT2705-770 A61c-05/10 A61c-13 +C25d-13/*

Prodn. of dental crowns and bridges consists of applyin a layer of base mass to a non-corrosive metal alloy bas blank to serve as a base layer for the subsequent applica ion of a layer of dentin and cutting mass. The layer of base mass is applied to the base blank by electrophoreti deposition.

The base blank is pref. a noble metal (i.e. Au, Ag, alloy and is first provided by an electroplating process with an intermediate metallic layer of Zn or Zn before t base mass layer is applied. 31.1.78 as 003799 (7pp1363

DAHM/ D21 83125X/45 =GB 1545-
Cosmetic stick with applicator and wiper blades - for applyi cosmetic liquid or powder without forming drips or soiling hands
DAHM K P 08.11.75-DT-550256
*Q32 +P24 Q33 (10.05.79) *BE-843-227 +B65d-51/32*

A cosmetic applicator for applying a liq. or powdery prepn. from a container to a user's skin is provided wi a wiper inserted into an opening in the container. The wiper comprises a series of resilient annular wiper lip spaced apart axially along the wiper. Each lip has a cr -section which tapers in width to a wiper edge and defin an opening of smaller dia. than the dia. of the shaft member.

At least one further resilient wiper element is locat nearer to the closed end of the container than the wiper lips and surrounds the applicator to be in wiping contac therewith when the applicator is within the container. 8.6.76 as 023657 (-pp1363).

PENN D21 16212A/09 =GB 1545-
Acrylic dental compsn. - enabling teeth to be rebuilt with requiring drilling for keying
PENNWALT CORP 16.08.76-US-714553
*A96 (10.05.79) *DT2736-891 +C08k-03/40 C08l-33/10*

A dental restorative compsn. is prepd. comprising the polymerised reaction mass which forms on mixing a pa iculate solid mixt. contg. 95-105 pts. wt. finely divide silane treated opaque glass or quartz powder, 0.1-2 pt

t. finely divided silica powder, 0.5-2.5 pts. wt. of ben-
oyl peroxide and a trace amt. of iron oxide pigment.
Compsn. contains a liq. binder system contg. 45-65
s. wt. of a bisphenol-A/glycidyl methacrylate prepoly-
er, 5-25 pts. wt. of hydroxethyl methacrylate, 15-45
s. wt. of ethylene glycol dimethacrylate, 0.001-3 pts.
t. of methacrylic acid, 0.03-0.2 pts. wt. of stabiliser
r first three items of binder system, and 0.005-1 pts.
t. of N, N-di(hydroxyethyl)-p-toluidine or N, N-dimethyl-
-toluidine.
Prepn. of tooth cavity to provide retention angles is
educed, lessening the risk of further weakening the
oth. 4.8.77 as 032782 (7pp931).

P ★ D21 35802B/19 ★GB 2006-792
thodontic adhesive for bonding teeth to brackets - comprises two
parably applied curable monomer filler components
LEE PHARMACEUTICALS 26.10.77-US-845739
A96 G03 (10.05.79) C08f-02/44 C08f-20/10
e adhesive for bonding a metal or plastic bracket to
oth enamel comprises two curable components designed
be coated in separate layers on ≥1 of the surfaces to
joined, and cured on contact of the layers. Component
) is a curable liq. resin of viscosity 500-750000cPs. at
°C, and component (B) is a curable liq. resin and (in)-
ganic filler of viscosity ≥1000000cPs. at 23°C. One
mponent contains a polymerisation accelerator and the
er [contains] a polymerisation catalyst.
No premixing is required and the brackets do not stick
the tooth while the adhesive is curing. 19.10.78 as
1145 (7pp904).

OY ★ D21 36003B/19 ★J5 4041-322
ible ointment base compsn. - comprising liq. paraffin, mineral
x and dextrin fatty acid ester
SHOWA YAKUHIN KAKO KK 06.09.77-JA-107092
A96 B07 (A11) (02.04.79) A61k-09/06
e ointment base comprises (1) a liq. paraffin, (2) an im-
bile mineral wax and (3) a dextrin fatty acid ester. No
on. of liq. paraffin is observed.
A typical mineral wax is vaseline or microcrystalline
x. The ointment base may be combined with zinc flower,
atin, CMC sodium, sodium polyacrylate or dextrin.
9.77 as 107092 (5pp16)

K ★ D21 36008B/19 ★J5 4041-335
metic compsn. contg. aq. sodium lactate soln. - with ethyl
ohol and/or propyl alcohol and surface active agent
OLA KASEI KOGYO KK 03.09.77-JA-105399
A96 E12 (E17) (02.04.79) A61k-07
lti-phase type cosmetics comprise 20-90% of 50-70% aq.
ium lactate soln., 5-35% of ethyl alcohol and/or propyl
ohol and 2-80% of surface active agent.
The cosmetics are of two or three-phase type upon
rage and can be dispersed homogeneously upon use, and
her have good appearance and high spreadability. The
face active agent includes polyoxy ethylene olelyl alco-
ether, polyoxyethylene sorbitan fatty acid ester, etc.
n an example, 20 pts. wt. of ethyl alcohol is mixed
10 pts. wt. of propyl alcohol, and to the mixt. is ad-
a mixt. of 20 pts. wt. of polyoxyethylene oleyl alcohol
er and a suitable amt. of perfume, and then to the mixt.
added 50 pts. wt. of 50% aq. sodium lactate soln. and
itable amt. of water-soluble dyestuff, followed by agi-
on and standing. This procedure gives two-phase type
et water. 3.9.77 as 105399 (4pp22)

S ★ D21 36009B/19 ★J5 4041-336
metic compsn. contg. oil-swelling inorganic powder (gel) -
ace treated with nonionic or anionic surfactant
NIPPON SURFACTANT KK 09.09.77-JA-108658
A96 (02.04.79) A61k-07
metics compsn. contain oil-swelling inorganic powder
its gel, which is surface treated to improve its water-
elling inorganic powder using non-ionic and/or anionic
face active agent. The cosmetics compsn. is safe, non-
ic and non-irritable to the human body. It has high dis-
sbility and spreadability.
The water-swelling inorganic powder includes bentonite
other natural clays. The surface active agent usable
ludes polyoxyethylene alkyl ether, polyoxy ethylene
alkyl aryl ether, polyoxyethylene sorbitan ester, polyoxyethylene glycerin fatty acid ester, and the like. For example, the inorganic powder is welled in low-boiling solvent in the presence of the surface active agent under heating with agitation, whereby the surface of the inorganic powder is improved to give oil-swelling inorganic powder. 9.9.77 as 108658 (4pp22)

LIOC ★ D21 36117B/19 ★J5 4041-909
Shampoo compsn. - contg. cationic cellulose ether, water-insoluble fine particles and amphoteric high polymer
LION DENTIFRICE KK 08.09.77-JA-107292
A96 (D25) (03.04.79) A61k-07/06 C11d-01/88 C11d-03/12 C11d-10/02

A shampoo compsn. contains cationic cellulose ether and water-insoluble fine solid particles admixed with an amphoteric high polymeric cpd.

Stable dispersion of water-insoluble fine particles, such as disinfectant, pigment, emulsifier, etc. into a shampoo compsn. contg. cationic cellulose ether which is added to improve the finishing effect for the hair, is possible.

A typical compsn. contained 15 wt.% Mg- Polyoxyethylene (p=3) laurylether sulphate; 3 wt.% coconut oil fatty acid diethanolamide; 1 wt.% cationic cellulose-ether ("Polymer JR 400 (RTM)"); 1 wt.% ethyleneglycol distearate; and 0.5 wt.% amphoteric high polymer ("Yuka foamer AM75W (RTM)"). 8.9.77 as 107292 (5pp126)

NIHS ★ D21 36218B/19 ★J5 4042-378
Modified clay material used as cosmetic gelling and thickening agent - obtd. by treating clay with nonionic or cationic surfactant in polar non-aq. solvent mixt.
NIPPON SURFACTANT KK 09.09.77-JA-108659
E19 G01 (04.04.79) C04b-31/20 C09k-03

A method of making organic modified clay mineral comprises modifying organically clay mineral with nonionic surfactant and/or cationic surfactant in polar non-aq. solvent consisting of ≥1 proton-donating type polar organic cpd. of dielectric constant >8 and non-proton-donating type polar organic cpd. of dielectric constant >3 and b.pt. <250°C.

The resulting organic modified clay mineral is widely used as gelatinising agent or viscosity-increasing agent for fundamental cosmetics, make-up cosmetics, ointment, etc.

Proton-donating type organic solvent is e.g. monohydric alcohol such as methanol, polyhydric alcohol such as glycerin, carboxylic acid such as acetic acid etc. Non-proton-donating type organic solvent is e.g. DMF, N, N-diethylacetamide, etc. Clay mineral is e.g. bentonite, vermiculite, etc. Nonionic surfactant is e.g. polyoxyethylene alkyl ether, polyoxyethylene sorbitan ester, etc. Cationic surfactant is e.g. alkylamine salt, alkyl quaternary ammonium salt, etc. The modified clay mineral is highly dispersible into non-polar oil, low polar oil, etc. 9.9.77 as 108659 (5pp50)

AMAL D21 69810V/40 =J7 9008-039
Inorg. filler contg. tooth-filling compsn. - with binder derived from diisocyanate, hydroxyalkyl-(meth)acrylate and bisphenol deriv
AMALGAMATED DENTAL CO 15.03.73-GB-012620
*A96 +P32 Q34 (12.04.79) *DT2411-760 A61k-05/* C08f-02/44 +C08f-220/28*

Filling compsn. contains a polymerisable binder comprising the reaction prodt. of (A) an org. diisocyanate and (B) a hydroxyalkyl (meth)acrylate. The binder additionally contains (C) a bisphenol A deriv. with ≥2 terminal (meth) acrylate ester gps., pref. "GMA".

Pref. the filler is70-80wt.% of the compsn. and of particle size 5-60μ. 15.3.74 as 029278 (clg. 15.3.73-GB-012620) A61k-5/01 C08f-2/44 220/28 (12.4.79) AMALGAMATED DENTAL CO (3pp) (J50000687)

LEEH/ ★ D21 36855B/19 ★US 4150-485
Liq. paint-on dental restorative compsns. - contg. (meth)acrylate resin, filler, curing cpds., and UV-absorber
LEE H L 13.09.77-US-832927
A96 G02 (A14 A82) (24.04.79) A61k-05

Protective and cosmetic dental coating compsn. for restoring enamel defects and for repairing artificial teeth (including chipped acrylic or porcelain veneers) consists of: (a) a liq. opt. substd. acrylate resin (I); (b) a finely divided (equiv. spherical dia. 0.2-20(μm) particulate filler (II); (c) curing ingredients (III) including a peroxide-type initiator and an accelerator; and (d) an ultraviolet absorber (IV).

(I) is (i) a blend contg. 20-90% by wt. of an aromatic or cycloaliphatic-diacrylate, dimethacrylate, polyacrylate, or polymethacrylate, with ≮10% by wt. of an aliphatic tri-, di-, or mono-acrylate or methacrylate, and/or (ii) a homopolymerisable hydrogenated aromatic diacrylate or dimethacrylate (total amt. of aromatic or cycloaliphatic di(meth)acrylate ≯ 90% of (I).

(II) is a mixt. of 1-20% by wt. of filler of a fluorescent inorganic metal oxide pigment, and 80-99% of non-flourescent inorganic filler. Amt. of (III) used effects curing of the mixt. in 0.5-10 min. Amt. of (II) used is 30-70% by wt. of compsn. (< 50% by vol.). The density and vol. of (II) is so that compsn. is flowable but does not drip or run.

Flowable, paint-on compsn. can be applied to tooth surfaces and will flow to a feather edge, but dripping and running does not occur. Cured compsns. have excellent vitality and cosmetic appearance, and appear natural under UV light. In addn., staining on ageing, or with tea, coffee, and nicotine does not occur. 13.9.77 as 832927 (10pp478).

EMER/ ★ D21 36885B/19 ★US 4150-707

Pressure casting of dental restorations in investment cavity - positioned beneath crucible contg. molten material heated by arc electrodes to eliminate oxygen in purge gas

EMERICK H C 05.01.78-US-867115 (07.04.77-US-785495)
M22 P53 (24.04.79) B22d-21/02 B22d-27/02

Dental castings are made using a porous casting investment mould which is in fluid-tight communication with an overheat crucible having a bottom opening that registers with the mould cavity. A compressed gas is used to purge the crucible and the investment mould and the casting material is rapidly heated to cause it to flow into the crucible opening. Compressed gas is then admitted to the crucible above the molten material to force the material through the opening and into the cavity. The casting material is heated by an electric arc of C rich electrodes.

Used for casting of metal alloys for the manufacture of dental restorations, such as crowns and bridges. The oxygen component of the air enveloping the casting alloy is eliminated during melting and while it is forced under pressure into the cavity so as to prevent oxidn. and contamination of the casting. A positive pressure is exerted on the molten alloy to change the cavity rapidly and prevent premature cooling and incomplete casting. The mould may be rapidly positioned and charged. The castings have sharp features and no internal porosity. 5.1.78 as 867115 (7pp1044).

ALKU D21 31945B/17 =US 4151-001

Natural beeswax substitute compsn. - obtd. from a difunctional aliphatic acid, aliphatic alcohol and glycol

AKZONA INC 11.10.77-US-841261
*A25 (A96 D23) (24.04.79) *EP---1-471 +C08l-91/06*

Compsn. useful as a substitute for natural beeswax, comprises the reaction prod. obtd. by reacting under esterification conditions, (a) a difunctional 7-36C aliphatic acid; (b) a 10-22Caliphatic alcohol; and (c) glycolic cpd. (I).

(I) is ethylene glycol, propylene glycol, polyoxyethylene glycol of mol.wt. 100-1500 or polyoxypropylene glycol of mol.wt. 150-1025. Reactants are present in an amt. such that the number of acid functionalities is approximately equal to the number of hydroxyl functionalities. The alcohol and glycolic cpds. each supply ≥10% of the hydroxyl functionalities present. Reaction is continued until the reaction mixt. has attained an acid value of 10-30.

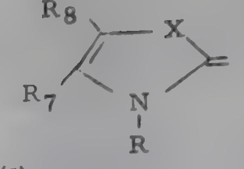
Prod. may be mixed with other esters, or with a minor amt. of natural beeswax. 11.10.77 as 841261 (6pp936).

OREA D21 20716X/12 =US 4151-162

Pyridine-azo dyes - for hair colouring

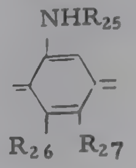
L'OREAL SA 30.08.74-LU-070835 (04.06.71-LU-063287)
*A96 E21 (24.04.79) *BE-832-887 A61k-07/13 C09b-29/06*

Diazamerocyanine and its mesomeric forms of formula A=N-N=B are new. In the formula A is (I). R is 1-4C alkyl or phenyl; X is O, S,



(I)

is 1-4C alkyl; R'$_9$ is H, cyano, or 1-4C alkyl; R'$_{1o}$ is H, 1-4C alkyl or -CR'' N-; R'' is H or 1-4C alkyl R$_7$ is H, 1-4C alkyl, cyan or phenyl; R$_8$ is H, haloge 1-4C alkyl, provided that and R$_8$ can together form a halo-substd. benzene ring w the attached C-atoms; B is (II); Y is a substd. amine; R is H or -CWR' where Wis or S and R' is amino or 1 alkyl; R$_{26}$ and R$_{27}$ are ea H, 1-4C alkyl or methoxy



(II)

Prods. are used as dyes for application to the hair to impart rich colour nuances.

22.7.76 as 707769 Div.ex. 3986499 C.i.p. 3869544 (+5.6.72, 3.3.75 - US - 259689, 554701) (+6.1.72, 30.8.74 - LU - 064565, 070835) (25pp931).

SHIS D21 39164Y/22 #US 4151

Hair cosmetics contg. polyether cpd(s). - are oily, hold hair, do damage hair, are non corrosive to celluloid and are easily was from hair and clothing

SHISEIDO KK 21.10.75-JA-126807 (11.04.77-US-786540)
*A96 (A25) (24.04.79) *J52051-035 A61k-07/06*

A hairdressing prepn. comprises ≥1 polyether cpd. resulting from the addition polymerisation of 29-90 moles of propylene oxide to 1 mole of polyhydric alcoh to form a main chain, and subsequent addition polymer ation of 1-10 moles of ethylene oxide to the resulting main chain.

Amt. of ethylene oxide is 1-10 wt.% w.r.t. propyle oxide and ethylene oxide. Polyhydric alcohol is ≥1 cp contg. 3-6 functional terminal -OH gps. Prepn. contai water or water-alcohol mixt. as solvent in amt. to fo liq., gel, cream or aerosol prepn..

Prepn. has good dressability, good feeling in use, good washability from the hair and wearing apparel, a extremely low eye irritation and toxicity. 11.4.77 as 786540 (7pp931).

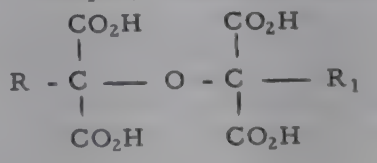
MONS ★ D21 37076B/19 ★US 415

Oral compsns. for inhibiting dental calculus - contg. alkyl-ox (propanedioic acids)

MONSANTO CO 17.03.78-US-887709 (01.11.76-US-737817)
B05 E17 (24.04.79) A61k-07/16 A61k-09/68 A61k-31/19

Oral compsns. effective in inhibiting dental calculus formation contain: (a) a tetracarboxylic acid (I); (b) a conventional oral carrier, (where RR$_1$=1-4C n-alkyl).

Simple, relatively low mol.wt. (I), which are prep



$$R-\underset{CO_2H}{\overset{CO_2H}{C}}-O-\underset{CO_2H}{\overset{CO_2H}{C}}-R_1$$

(I)

without polymerisatio methods, are highly e ive in inhibiting the fo ion of dental calculus.

Used in toothpaste, mouthwashes, chewin or human/animal food

17.3.78 as 887709 (5pp478).

AMCY ★ D21 37077B/19 ★US 41

Wax-like antiperspirant stick compsns. - contg. fatty al astringent, silicone, and ethoxylated fatty alcohol

AMERICAN CYANAMID CO 13.01.78-US-869077 (02.08. 710951)
A96 E33 (24.04.79) A61k-07/34

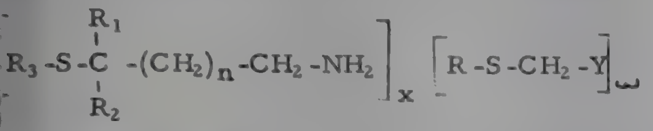
Antiperspirant stick consists of 15-30 wt.% wax-like fatty alcohol (I); 15-35 wt.% astringent (II); ≯80 wt. atile silicone (III); and 0.01-5 wt.% of a polyethoxyla fatty alcohol (IV) $R-O\left(CH_2CH_2O\right)_n H$ (IV) (where R 16-18C alkyl; n =100-200).

In (IV), pref. R are stearyl and/or cetyl. (I) is su stearyl alcohol and/or cetyl alcohol, and ≯5 by wt. be replaced by a modified clay. Pref. (III) are oligo of dm ethyl siloxane. (II) are suitably Al chlorhydra of Al-Zr chlorhydrate (ratio Al:C l=2.1-0.9:1; ratio Al:Zr=2.5-10.5:1), pref. Al chlorhydrate. Pref. co contain 1-3 wt.% (IV), 15-25 wt.% (II).

Incorporation of (IV) into the antiperspirant compsns. considerably enhances the efficacy of the compsns. 13.1.78 as 869077 (5pp478).

OREA D21 27726U/20 =US 4151-301
Aminoacid-amine salts containing sulphur - hair and skin prepns
L'OREAL SA 28.10.71-LU-064174 (22.12.65-LU-050125)
*E13 (24.04.79) *NL7214-520 A61k-31/20*

A compsn. is prepd. from oral admin. to a human having a scalp or skin having excessive secretion of sebum, to improve the condition by reducing secretion. An admixture of a solid ingestible carrier is prepd. contg. 0.75-20 wt.% of a non-toxic active cpd. of formula (I).



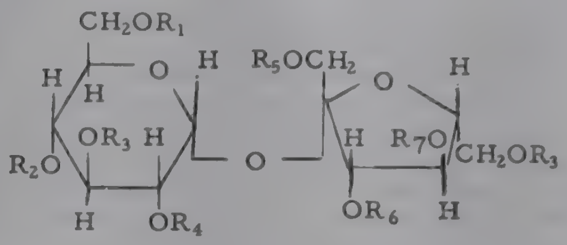
$$\left[R_3\text{-S-}\overset{R_1}{\underset{R_2}{\mathrm{C}}}\text{-(CH}_2)_n\text{-CH}_2\text{-NH}_2\right]_x\left[\text{R-S-CH}_2\text{-Y}\right]_\omega \qquad \text{(I)}$$

In the formula, when n is 0, R_1 and R_2 are H or Me; when n is 1, R_1 and R_2 are H. R_3 is 1-18C linear or branched alkyl, 3-18C alkenyl or other stated substit. Y is $-CHNH_2COOH$ contg. opt. substd. amino gp. x is 1 or 2, ω is 1 or 2.

Compsn. can be administered at the rate of 1-5 mg/kg/day w.r.t. wt. of human being for a time to reduce sebum secretion. 29.10.76 as 737192 Div.ex. 3879560 4002671, C.i.p. 3671643 (+ 23.2.68, 19.4.68 - LU - 055553, 055935) (+ 25.1.65, 19.12.66, 24.2.69, 17.4.69, 14.6.69, 15.9.69, 17.2.70, 11.5.70, 29.11.71, 20.12.74 - US - 427796, 602480, 801840, 817193, 736690, 858161, 121222, 036405, 203038, 534804) (13pp931).

UNIL D21 62216A/35 =US 4151-304
Cosmetic water-in-oil emulsions - contg. hemi-succinate ester of sucrose, used for hydrating the skin
LEVER BROTHERS CO 05.11.76-US-739374
*E13 (24.04.79) *FR2371-921 A61k-07*

A moisturising cosmetic compsn. is prepd. comprising a water-in-oil emulsion and an amt. effective to provide a moisturising effect of cpd. of formula (I)



(where R_1-8 are H or $-CO-CH_2CH_2COOM$, where M is H, Na and/or K). Cpd. has average degree of esterification of $\geqslant 62$ mol.%.

Pref. (I) is present in compsn. > 1 wt.%. Water-in-oil ratio of emulsion is 1:2-3:1. Compsn. also contains an emulsifier contg. lime water and stearic acid, an emollient and a humectant.

Compsn. provides a moisturising effect over extended periods of time when applied to the skin. 5.11.76 as 739374 (7pp931).

See Also

D25 US 4151105

D22 : BANDAGES; DRESSINGS

WACH/ ★ D22 35336B/19 ★DL-134-191
Indicator for testing hot air sterilisation esp. for medicines - contains xylene solvent, Sudan red dye and pine resin binder
WACHTEL S 28.10.77-DL-201753
E24 G04 P34 R16 (14.02.79) A61l-01 G01n-31/22

A mixt. of xylene, as solvent, Sudan II (RTM), as dye, and pine resin, as binder, is used as indicator for testing hot air sterilisation processes in dental, veterinary, pharmaceutical and partic. medical field. A pref. mixt. for indicating a 15 min. action time at 180-190 °C contains 50 ml xylene, 0.15 g Sudan II (RTM) and 40 g pine resin.

The mixt. is easily applied by writing, spreading and spraying, and can be handled and interpreted by unqualified staff. Indicator colour changes, from red to yellow-brown, only after a given period at the required temp. The dye can be used to provide a water-insoluble, wipe-proof inscription on smooth-surfaced articles, e.g. of glass, ceramic or metal. 28.10.77 as 201753(6pp200)

OETT/ ★ D22 35415B/19 ★DL-134-433
Sterilising system - treats substance with hot alkaline lye and then with peracetic acid
OETTEL R 16.12.77-DL-202687
P34 (28.02.79) A61l-01 A61l-13

The sterllising system treats a substance with a hot alkaline lyeat>70 °C for 30 mins.-5 hours, the pH being >10, (>12). The substance is then washed with water then passed through peracetic acid 0-50 °C, (20-30 °C) at a concentration of 0.01 to 0.1% of peracetic acid.

The active substance is then removed and the remainder processed. 16.12.77 as 202687 (8pp349)

SUTR- D22 45321S/27 =DS 2063-099
Surgical sutures
SUTRAMED SARL (SUT -) 26.12.69-CH-019216
*A27 P34 (A96) (03.05.79) *DT2063-099 A61l-17*

Surgical suture material is produced by immersing a resorbable catgut suture thread (I) in a liq. silicone, pref. dimethylpolysiloxane.

The new process accelerates the dissolution of (I) in human tissue. 15.12.70 as 063099. (2pp481)

TEIJ D22 00594V/01 =DS 2330-328
Pressure sensitive adhesive - for adhesive tapes and medical dressings
TEIJIN KK 26.07.72-JA-074089 (14.06.72-JA-058582)
*A14 G03 (A81 A96) (03.05.79) *NL7308-139 C08f-220/12 C09j-03/14*

Copolymers (I) contg. alkyl acrylates (II), acrylic acid (III) and/or methacrylic acid (IV) are produced by copolymerising (1) 94-98 mol.% of $\geqslant 1$ (II) in which the alkyl gp. contains 1-14C and the mean number of C atoms is 4-12; or a mixt. of (II) with methylmethacrylate and/or vinyl acetate in a mol. ratio of $\geqslant 5:1$; (2) 2-6 mol.% of (III) and/or (IV); and (3) 0.002-0.05 mol.% of a polyfunctional cpd. which is copolymerisable with (1) and (2) and which contains > 2 non-conjugated C=C double bonds in the mol.

(I) are useful as pressure-sensitive adhesives in adhesive tapes or adhesive material comprising a base tape or -sheet and layer of (I). 14.6.73 as 330328. (7pp481)

HENK D22 72481W/44 =DS 2418-362
Anhydrous, deodorising cosmetic prods esp. aerosols - contg. esters of aliphatichydroxy-carboxylic acid and aliphatic or alcyclic alcohol
HENKEL KG AUF AKTIEN 16.04.74-DT-418362
*E17 (E15) (03.05.79) *BE-827-905 A61k-07/32*

Anhydrous cosmetic prepn. e.g., powder, stick or spray, contains as deodorant 1-25wt.% of an ester of a mono- or di-basic 2-4C aliphatic hydroxyacid with 1-6C (cyclo)aliphatic alcohols.

The ester, e.g. dibutyltartrate, remains stable in the cosmetic prepn. 16.4.74 as 418362. (4pp068)

ALPU D22 40372X/22 =DS 2507-790
Sterile packaging machine chamber - disinfected by injecting hydrogen peroxide and steam mixt at specified temp through nozzles BE170576)
ALPURA KORECO AG 19.11.74-CH-015348
*P34 Q31 (03.05.79) *DT2507-790 B65b-55/10*

A sterile chamber of a packaging machine is disinfected by spraying the cold chamber with a mixt. of steam and H_2O_2, the initial concn. of H_2O_2 being 20-40%. The steam is pref. at 110-180°C and 1.46-10 bar.

The mixt. is pref. sprayed into the chamber through a two-component injection nozzle connected to a reservoir of H_2O, and a steam source. 22.2.75 as 507790. (5pp068)

DESO- D22 41665Y/24 =DS 2555-984
Wood preservative contg. metal corrosion inhibitor - with fungicide, insecticide and oily solvent, and does not discolour in contact with metals
DESOWAG-BAYER HOLZS 12.12.75-DT-555984
*C03 F09 M14 P63 (03.05.79) *BE-849-159 B27k-03/50*

Agents (I) to preserve wood and woody materials, consisting of 1-50(3-8)wt.% of a fungicide or -mixt. in an organic, difficultly volatile, oily or oil-like solvent with a degree of dilution > 35 and a flame point > 30°C; and/or 0.3-15 (1-5)wt.% insecticide or -mixt. soluble in a similar solvent; as well as > 55(>87)wt.% of signified solvent or -mixts. The agent also contains per 100 g. 0.01-0.5(0.05-0.1)wt.% mandelic acid and/or benzotriazole as a corrosion inhibiting agent.

(I) have very good wood-preserving and wood-protecting properties as well as reduced corrosion and/or anti-corrosion effects. (I) have strongly reduced or no corrosive properties for metal esp. iron. 12.12.75 as 555984. (7pp279)

NIED/ D22 04313B/03 =DS 2730-121
Dividing filled hose esp. sausage string - using scissor arm associated with die
NIEDECKER H 04.07.77-DT-730121
*(03.05.79) *DT2730-121 A22c-11/12*

Device to subdivide packages from a filled continuous hose, e.g. a sausage strand emerging from a sausage filling machine, uses one pair of inner and one pair of outer claw arms to end the filling of one sausage. A tail is formed by splaying the pairs apart. The closures are formed by introducing a die and a punch which apply an end clip for the finished sausage and a start clip for the next sausage, the former with a cord loop.

The finished sausage with its closure can be moved without stopping so that the prodn. is never interrupted. 4.7.77 as 730121. (5pp39)

CULL/ ★ D22 35543B/19 ★DT 2748-679
Disinfectant store for sterilising appts. in common use - esp. for telephones, microphones, automatically ejecting fluid when used
CULLENDER E 29.10.77-DT-748679
R57 R58 (03.05.79) H04m-01/17 H04r-01/12

A quite serious source of infection caused by telephones, microphones, dictation apparatus, intercommunication speakers etc., used by numbers of different people, is eliminated by a disinfecting arrangement which can be enclosed inside the instrument. The disinfectant store in the moulding may have leads to the ear and mouth pieces of the telephone, so as to release via a valve a definate dose of disinfectant, on activation by a pin when the instrument is lifted off or replaced on its support.

The store which may be filled from outside through a valve is under slight pressure, and may include an ejector piston which works with a pin on the support. Alternatively the store may be a disposable item which may be inserted and pressed into contact with the dosing valve. 29.10.77 as 748679 (6pp1045)

RAIT/ ★ D22 35553B/19 ★DT 2748-752
Long-lasting, odour-suppressing litter for small animals - comprising mixed wood chips and powdered, burned argillaceous earth
RAITH A 31.10.77-DT-748752
P14 (03.05.79) A01k-23

A litter for all types of small animals, esp. cats, mice, cavies, etc. has the advantage not only of being highly absorbent for fluids but also prevents the build up of unpleasant odours, for a relatively long period. It consists of a mixt. of 75-80 wt.% wood chips and 20-25 wt.% of agrillaceous earth, burned and bleached pref. at 800°C.

This is much cheaper than a litter formed by 100% argillaceous earth burned and bleached at 1400°C and has the further advantage that the granules formed at 800°C fall into powder and so cannot harm small animals with delicate feet. 31.10.77 as 748752 (5pp1045)

NIRA ★ D22 35563B/19 ★DT 2748-85
Polymer articles prodn. with reduced thrombogenic tendency - b
treating with soln. of synthetic fibrinolytic cpd.
UNITIKA KK 31.10.77-DT-748858
A96 B04 (B05) (03.05.79) A61k-37/54 A61k-45/08 C08f-08 C08 07/12

Prodn. of antithrombogenic polymer materials comprises treating a polymer material (I) with a soln. of a synthetic fibrinolytic cpd. (II) so that (II) is attached to (I) by chemical bonding or adsorption. (II) can be a 1,2-diphenylpyr -zolidine deriv. (e.g. phenylbutazone), an anthranilic aci deriv. (e.g. mefenamic acid), a salicylic acid deriv. (e. g. a chlorobenzyl-salicylic acid), a cinnamic acid deriv. (e.g. an α-alkyl-halocinnamic acid), a β-aryl-substd. ali phatic acid (e.g. β-phenyl-n-butyric acid) or a heterocyc -ic carboxylic acid deriv. (e.g. niflumic acid).

The process can be used to treat polymer articles com ing into direct contact with blood, e.g. prosthetic device catheters, artificial organs and suture materials. The coating of (II) is easy to apply (even to complicated shape and provides long lasting inhibition of thrombus formatio 31.10.77 as 748858 (43pp367)

RAVA/ ★ D22 35566B/19 ★DT 2748-88
Plaster protecting wound against infection - esp. during applicatio
of intravenous catheter, permitting continuous use for ten days
RAVA A 02.11.77-DT-748882
P34 (03.05.79) A61l-15/03

A plaster forming an anti-bacterial protection for a woun esp. when an intravenous catheter is applied, has a pad soaked in a viscous antibiotic. This is sealed upwards b a cap, and there is around the cap an adhesive covering strip. Beneath, the adhesive strip and the pad are protected by a tear-off film.

System makes it possible to leave an intravenous catheter in place for 10-12 days without the possibility of penetration of the subcutaneous tissue and the vein by skin bacteria resulting in inflammation of the skin and/or thrombophlebitis. 2.11.77 as 748882 (11pp1045)

ALLI- ★ D22 35597B/19 ★DT 2749-5
Bacteriostatic soln. esp. for treating food packaging materia
contains at least two quat. ammonium salts contg. higher alkyl gp
ALLIANCE SMURFIT 02.11.77-DT-749528
E19 F09 G03 P34 (D13) (03.05.79) A61l-13

Bacteriostatic soln., for controlling the bacterial contan ination of materials coming into contact with the human body, contains $\geq$2 quat. ammonium salts, each of which contains $\geq$1 8-12C alkyl gp.

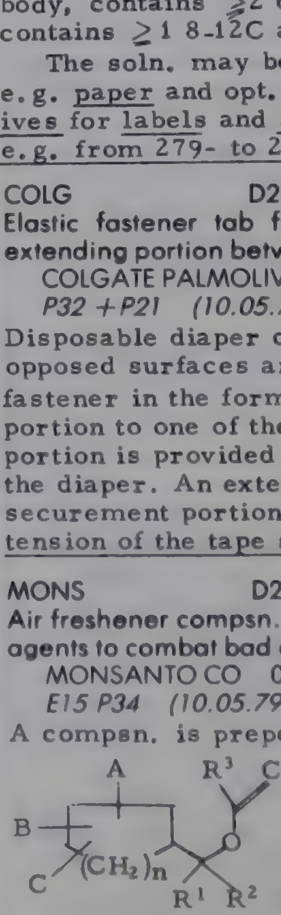
The soln. may be used to treat food-packaging mater e.g. paper and opt. corrugated cardboard, and also adh ives for labels and stamps. Bacterial count can be redu e.g. from 279- to 21 colonies/g. 2.11.77 as 749528 (15

COLG D22 19359A/10 =GB 1545-
Elastic fastener tab for disposable diaper - having constrai
extending portion between fixed and free ends, providing good f
COLGATE PALMOLIVE CO 03.01.77-US-756309
*P32 +P21 (10.05.79) *US4074-716 A41b-13/02*

Disposable diaper comprises an absorbent pad having opposed surfaces and a pair of side and end faces. A ta fastener in the form of a tape strip is secured by a first portion to one of the surfaces of the pad. A securement portion is provided for attachment to a spaced portion o the diaper. An extensible portion connects the first and securement portions and an elastic strip constrains extension of the tape strip. 22.12.77 as 053496 (8pp1363).

MONS D22 32763Y/19 =GB 1545-
Air freshener compsn. - contains ester(s) of satd. cyclic alcohol(s
agents to combat bad odours
MONSANTO CO 05.11.75-US-628855
*E15 P34 (10.05.79) *BE-847-980 C07c-69/02 +A61k-07/46*

A compsn. is prepd. contg. an amt. of ester of formul



(I)

to counteract malodours. In the f mula, n is 1-4, A, B and C are e H, 1-5C alkyl, such that alkyl gp are attached to different ring car ons and total ≯ 7C.

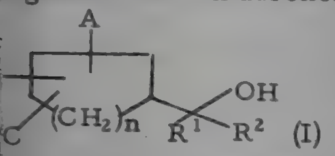
R^1 and R^2 are each H, 1-5C a

r together form - (-CH_2-)m- where m is 2-6, provided
nat when both R^1 and R^2 are H, each of A, B and C is H or
. is tert-butyl and B and C is H. R^3 is H or $\leq$6C alkyl,
rovided that the sum of C in the larger of R^1 or R^2 plus
^{3} is $\leq$10C.

Compsns. is used as a room freshener as an aerosol
ropellant, a wax, plastics material, powder or gel.
.11.76 as 045884 (17pp931).

ıONS D22 43934Y/25 =GB 1545-562
ir fresheners contg. cycloalkyl alcohol derivs. - partic. cyclohexyl
lcohols and alkyl cyclohexyl ethanol derivs.
MONSANTO CO 15.12.75-US-640614
*E15 P34 (10.05.79) *DT2656-405 A61k-07/46 C07c-31/13*

ompsns. for treatment of offensive odours comprise a
agrance and an alcohol of formula (I).



In (I), n is 1-4. A, B and C each is H or 1-5C alkyl, each alkyl being attached to different carbonatoms and there being $\geq$7C atoms in A, B and C. R^1 and R^2 each is H or
-5C alkyl or together form - (CH_2)m- where m is 2-6,
rovided that when R^1=R^2=H, (a) each of A, B and C is H
r (b) A is methyl or t.-butyl and B and C each is H, when
ne of R^1 and R^2 is alkyl, then A, B and C each is H or 1-3
alkyl.

Pref. the compsn. is a room freshener in the form of
a aerosol propellant. Typically, (I) is cis/trans-4-
ıethylcyclohexyl methanol. 13.12.76 as 051869 Add to
545561 (9pp992).

ONS D22 43934Y/25 =GB 1545-563
r fresheners contg. cycloalkyl alcohol derivs. - partic. cyclohexyl
cohols and alkyl cyclohexyl ethanol derivs.
MONSANTO CO 15.12.75-US-640614
*E15 P34 (10.05.79) *DT2656-405 C07c-31/13*

ne cpds. cis-trans-1-(4'-ethylcyclohexyl)ethanol and cis-
ans-1-(4'-isopropylcyclohexyl)ethanol are claimed. Cpds.
e useful as malodour counteractants. The cpds. can be
epd. by hydrogenation over a suitable catalyst (pref. a
n metal-contg. catalyst) of the corresp. alkylphenyl
ethyl ketones. 13.12.76 as 655/78 Div ex 1545562
pp992).

TQ D22 47271Y/27 =GB 1545-635
onisation process utilising fine pored synthetic zeolite - for drying
supply, allowing regeneration without decomposing ozone
MITSUBISHI DENKI KK 19.01.76-JA-004735 (19.12.75-JA-152521)
*E36 J03 (J01) (10.05.79) *DT2655-621 C01b-13/11*

ozone-generating appts. comprises an ozoniser, at
ast two moisture absorbent towers in which synthetic
olite having fine pore dia. of <4 Å is provided as a
oisture absorbent.

Electro-magnetic valves are provided to alternately
itch the inlet and outlets of the towers to repeat a mois-
re absorbing operation for drying air by passing wet air
rough one of the towers before feeding the air to the ozo-
ser and a moisture absorbent-regeneration operation for
ying the synthetic zeolite by passing the dry ozone-
ntg. air generated from the ozoniser through the other
oisture absorbent tower.

Pref., in each of the moisture absorbent towers, silica
l is provided at the side where air is supplied for the
oniser and the synthetic zeolite is provided at the ozon-
er side. The moisture absorbent in the towers is provid-
with NO_2. 3.12.76 as 050609 (+ 16.1.76 - JA -
38288) (8pp1363).

)Y ★ D22 35854B/19 ★J5 4040-810
n-forming cleaning compsn. - comprising PVA and PVP,
yethylene oxypropylene block copolymer, surfactant and
lypropylene glycol as release agent
LION FAT & OIL KK 07.09.77-JA-107446
A97 (A14 A25) (31.03.79) C11d-10/02

cleaner contains PVA and PVP as film forming material
d as surfactant, polyoxyethylene-polyoxypropylene block-
lymer having <45% (pref. <40%) of ethyleneoxide gp. and
2000 (pref. <1750) of mol. wt. of polypropyleneglycol
releasing agent. PVA and PVP are used in a wt. ratio
9:1-2:1 (esp. 6:1-3:1), and PVA and the surfactant are blended in amt. of 5-15 wt.% and 1-3 wt.% respectively on total amt.

Stains of hand, etc. are removed without water washing by peeling the film which is formed by the coating of this compsn. The formed film is easily releasable. It has high cleaning ability for the stains of machine oil, etc. 7.9.77 as 107446 (5pp170)

SHIN/ ★ D22 35981B/19 ★J5 4041-288
Decolourising, deodorising agent prodn. from soft stone material - by grinding, compression moulding resulting powder and firing; used for industrial waste treatment
SHINOZAKI M 07.09.77-JA-107369
J01 (02.04.79) B01d-15 B01d-53/02

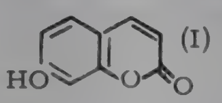
Soft stone material of stuff such as "Oya-stone" is ground and powdered, then compression moulded under (normal) pressure and fired at the temp. of ca. 150-300°C.

By throwing the product into industrial waste water etc. stinking material from fish processes, animal wastes, etc. and coloured materials such as pigments and dyes (which cause water pollution) can be adsorbed and removed effectively. As this product can be produced as a standard product in a large scale, handling and transportation is easy.

Specifically cutting waste obtd. when "Oya-stone" is cut in a stonepit etc. is ground to $\leq$100 mesh, and the compression moulding is effected at (normal) pressure. In the case of "normal pressure" the water content of the obtd. powder ($\leq$100 mesh) is adjusted to ca. 25-30% before moulding, and in the case of "under pressure" the water content of the powder ($\leq$100 mesh) is adjusted to ca. 15-20%, before moulding under pressure of 100 kg./cm.^{2} 7.9.77 as 107369 (2pp55)

JAPM D22 80385Y/45 =J7 9008-680
Umbelliferone prepn. - by sepg. undifferentiated cells from cultivated callus of Hydrangea and extracting umbelliferone
JAPAN MONOPOLY CORP 25.03.76-JA-031947
*E13 (17.04.79) *J52116-500 C07d-311/08*

Prepn. of umbelliferone (7-hydroxycoumarine) of formula (I) comprises segp. undifferentiated cells from cultivated



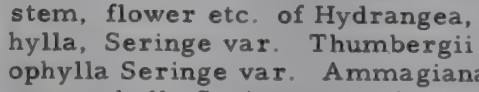
callus of Hydrangea and extracting the umbelliferone. Umbelliferone is a precursor for 7-methoxycounmarine having anti-bacterial activity.

Callus if induced by cultivating leaves, stem, flower etc. of Hydrangea, e.g. Hydrangea macrophylla, Seringe var. Thumbergii Makins, Hydrangea macrophylla Seringe var. Ammagiana Makins, Hydrangea macrophylla Seringe var. Ot aksa Makins etc. in a Linsmeyer-Skogg medium Undifferentiated cells are sepd. from the callus and cultivated under white to blue light (1-8x10^4 erg/sec cm^2) in a liq. medium with stirring at 90-110 strokes/min. at 20-32°C pref. 28°C for 1-5 weeks, pref. 3 weeks.

Collected fresh cells, opt. freeze dried are extd. with an organic solvent e.g. (m)ethanol, chloroform, ethyl acetate and/or dichloromethane etc. at 15-30°C to obtain crude umbelliferone, which is subjected to column chromatography using magnesium silicate, aluminium silicate, alumina etc. to obtain pure umbelliferone. 25.3.76 as 031947 C07d-311/08 (17.4.79) C07d-311/08 (17.4.79) JAPAN MONOPOLY CORP (4pp) (J52116500)

MARK/ ★ D22 36499B/19 ★SU-502-003
Chloro-di:nitro-methyl bis-methyl-carbamyl hydrazine - prepd. by chlorination of corresp. di:nitro methyl deriv., used as antibacterial and polymerisation initiator and accelerator
MARKOVSKII V I 12.09.74-SU-058814
A60 E16 (18.05.76) C07c-109/08

N-(chlorodinitromethyl)-N,N'-bis(methyl-carbamyl)-hydrazine is of formula (I):



$$\underset{\mathrm{CH_3}}{\mathrm{HN}} - \mathrm{CO} - \mathrm{NH} - \underset{\mathrm{Cl-C(NO_2)_2}}{\mathrm{N}} - \mathrm{CO} - \underset{\mathrm{CH_3}}{\mathrm{NH}} \quad (I)$$

This cpd. is physiologically active and can be used as an antiseptic. It can also be used as initiator and accelerator of polymerisation or copolymerisation of vinyl monomer or oligomer based compsn. to give polymers resistant to bacterial degradation.

Cpd. of formula (I) is prepd. by reacting dinitromethane potassium salt (II) with azo-dicarboxylic acid bis (methylamide) (III) at 20-50°C. The resulting prod. is subsequently treated with chlorine in aq. medium. Markovskii, V.I., Marchenko, G.A., Zalesov, V.S. et al. Bul. 5/5.2.76. 12.9.74. as 058814 (2pp938)

36762B/19 ★SU-613-755

ENAM= ★ D22

Material for mfr. of artificial teeth - additionally contains oxide(s) of aluminium, lithium and iron, to improve strength

ENAMELLED CHEM EQUI (POME=) 05.04.76-SU-347340

L02 P32 (14.06.78) A61c-09

Material for the mfr. of artificial teeth comprises (in wt. %) calcium oxide 27.9-40; potassium dioxide (sic) 10-12; aluminium oxide 10-12; lithium oxide 1-2; ferric oxide 0.1-1; and silicon oxide is the remainder. The presence of aluminium oxide, lithium oxide and ferric oxide improves the quality of the prosthesis. Yalanskaya, V.A., Miroshnichenko, I.T., Yalanskii, A. V. Bul. 25/5.7.78. 5.4.76. as 347340 (2pp932)

37005B/19 ★US 4151-125

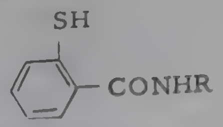
ABBO ★ D22

Liq. compsn. contg. 2-mercapto-benzamide deriv. - for use as preservative in metal working fluids

ABBOTT LABORATORIES 31.05.77-US-801892 (30.08.76-US-719039)

A97 E14 H07 (A25) (24.04.79) A01n-09/12 C07c-103/28 C10m-03/32

Liq. compsn. for dissolution in metal working fluids contains 5-50% 2-mercaptobenzamide deriv. of formula (I).



(I)

In (I) R is H or 1-4Calkyl.
(I) is in a mixt. of di-
methylacetamide and di-
cyclohexylthiourea in a ra
of 4.5-5.5:1. The mixture
also contains 3.5-4.5 pts. of the adduct between ethylen
oxide and t-octyl- or t-nonyl-phenol contg. 5-15 ethylen
oxide gps. per molecule.

The compsns. are stable and they prevent bacterial
and fungal contamination when present at low concns. in
metal working fluids; the compsns. are not corrosive.
31.5.77 as 801892 (3pp1248)

37079B/19 ★US 4151-

WESI ★ D22

**Stabilised iodine tincture - comprises iodine, sodium iodide and
vinyl-2 pyrrolidone polymer in aq. ethanol**

WEST LABORATORIES INC 11.10.77-US-841012 (07.06.76-
693724)

A96 E36 (A14) (24.04.79) A61k-31/79 A61k-33/18

Modified iodine tincture comprises aq. EtOH contg. pe
100 ml, (a) 1.8-2.2 g. iodine, (b) 2.1-2.6 g. NaI and
(c) 0.25-2.5 pts. povidone per 1 pt. iodine. The aq. Et
contains 25-85 % by vol. EtOH.

The tinctures are suitable for topical bactericidal
use and have good stability, reduced skin burning tende
and retain their activity for prolonged periods. 11.10.7
as 841012 (3pp1248).

See Also

D15 US 4151419 D25 DS 1642065

D23: OILS; FATS; WAXES

35259B/19 ★BE-871-803

FARH ★ D23

Surfactant mixt. of per:fluoroalkyl quat. ammonium alkyl sulphate(s) - and corresp. sulphato betaine(s) prepd. from sulphate cpds., used esp. as fire extinguisher

HOECHST AG 04.11.77-DT-749330

A60 E16 K01 P35 (A14) (07.05.79) A62d C07c C11d

The compsn. comprises 10-80% of ≥1 cpd. of formula $[R_f(CF=CH)_m-(CH_2)_p-N(R_1)(R_2)-Q-OH]^+SO_4R_1^-$ and 90-20% of ≥1 cpd. of formula (II) $R_f(CF=CH)_m-(CH_2)_p-N^+(R_1)(R_2)-Q-OSO_3^-$, where R_f is 3-16C perfluoroalkyl; R_1 is 1-4C alkyl; R_2 is 1-4C alkyl, cyclohexyl or 2-4C (2-hydroxyalkyl); Q is $-CH_2-CH_2-$ or $-CH_2-CH(CH_3)-$; m is 0 or 1; p is 1-4 when m is 0 and 1 when m is 1. The mixt. is prepd. by treating 1 cpd. (I) at 20-140°C and 1-1000m. bar pressure for 0.3-6 hrs.

The mixt. is used e.g. to prepare dispersions of esp. low m.w. polytetrafluoroethylenes, or as flowagents for waxes, as dry cleaning reinforcing agents, and esp. as fire extinguishers. The mixt. has better surfactant properties than the individual components and is compatible with cationic and nonionic surfactants. 6.11.78 as 871803 (20pp597)

B/19 ★BR 7806-374

CORP ★ D23

Regeneration of used bleaching clay - by suspending in aq. alkaline soap soln. to remove adsorbed oils

CPC INTERNATIONAL INC 29.09.77-US-837471

J01 (24.04.79) B01d-15/06 C01b-33/30 C11b-13/04

27.9.78 as 006374

06277T/04 =DS 2038-804

DYNN D23

Colour clarification and stabilisation of 8 12cfatty acids - obtained as a head fraction by heating with silicon

DYNAMIT NOBEL AG 05.08.70-DT-038804

*E17 (03.05.79) *BE-769-985 +C11c-01/10*

The first runnings of 8-12C fatty acids are lightened and colour stabilised by heating with 0.1-0.6wt.% technical silicon at 180-250°C for 0.5-4 hrs. under normal pressure. The fatty acids are then distilled under vacuum. 5.8.70 as 038804. (3pp068)

84972W/52 =DS 2427

HENK D23

**Acetals useful in perfumery - prepd by reacting cycloalkar
aldehydes and hydrogen chloride, and reacting product with a
metal alcoholate**

HENKEL KG AUF AKTIEN 07.06.74-DT-427500

*E15 (03.05.79) *BE-829-946 C07c-43/30 C11b-09*

New acetals have the formula $R-O-CHR_1-O-R_2$ (I) (wl
R is a 8-12C cycloaliphatic gp.; R_1 is H or $-CH_3$ and
methyl, ethyl, propyl, isopropyl, allyl or propargyl).
Cpds. (I) may be prepd. by reacting a cycloalkanol wit
formaldehyde or acetaldehyde and hydrogen chloride to
tain the corresp. cycloalkylchloroalkyl ether, which is
further reacted with an alcoholate $R_2 \cdot OMe$.

Cpds. (I) are useful as perfumes with a woody, amb
overtone. 7.6.74 as 427500. (5pp068)

35708B/19 ★DT 284

KARL/ ★ D23

**Heat candle mfr. - with wick support feeder and pneu
assembly piston**

KARLSSON L H 01.11.77-SW-012347

(03.05.79) C11c-05/02

A machine for the mfr. of heat candles uses a compre
air operated piston for the assembly of wick support a
wax disc. A bore through the piston directs a jet of a
the support and helps to centre it and to retain it duri
the piston return stroke.

This eliminates difficulties in the assembly of wick
ports into the wax discs of heat candles. 2.11.78 as
847422 (17pp39)

See page 48 *FR 2399-

35850B/19 ★J5 404

HARA/ ★ D23

**Removing impurities from mineral, animal, vegetable oil etc.
adsorption, filtration, precipitation etc. using polyamide resin**

HARA K 06.09.77-JA-106339

*A97 H07 (A23) (31.03.79) C10g-25 C10g-29/22 C10m-03
03/10 C11b-13*

Polyamide resin is mixed with deteriorated mineral
(e.g., petroleum oils), animal oil, vegetable oil (e.g
palm oil, rice bran oil), synthetic oil (e.g., polyglyc
oily materials contg. these oils, and ≥1 deterioratior
tors of these oils is removed by pptn. or by filtratior

esin adsorber (i.e., inorganic or organic powdery, granu-ar, lumpy, film-form or fibrous material contg. poly-mide resin).

Deteriorated components in oil are removed by pptn., iltration, adsorption or absorption using polyamide resin or composite material contg. polyamide resin. Liquid poly-amide resin is more effective than the solid, and is used singly or as the composite material compounded with white clay, silica gel, ceramics board or porous board. 6.9.77 as 016339 (6pp170)

TANA ★ D23 36010B/19 ★J5 4041-338

Perfume compsn. imparting almond or sponge-cake like odour - is prepd. by reacting lysin or a lignin on its hydrochloride with a sugar in presence of lecithin

TANABE PHARMACEUTICAL KK 07.09.77-JA-108290
E19 (02.04.79) A61k-07/46

Lysin or alginin or its hydrochloride is reacted with a sugar in the presence of lecithin under heating. The sugar includes monosaccharides such as glucose, fructose, xylose, etc. and polysaccharides such as sucrose. The amt. of sugar used is 2.0 to 0.5 pts. wt. per pt. amino acid. Lecithin is used in amt. of 0.1-0.5 pt. wt. per pt. amino acid. The heating is at 100 to 230°C. for 2-10 mins.

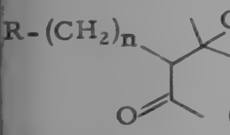
The compsn. is useful for adding to foodstuffs. For example 1 pt. wt. lysin and 1 pt. wt. glucose are heated in the presence of 0.2 pt. wt. lecithin at 170°C. for 5 mins. This gives product having sponge-cake like odour. Even after storage at -20°C. for 1 month, the odour does not disappear. 7.9.77 as 108290 (3pp22)

KURS ★ D23 36068B/19 ★J5 4041-809

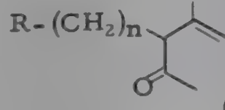
Perfume agent beta,gamma-epoxy ketone(s) - prepd. by reacting beta,gamma-unsatd. ketone with organic peracid; also useful as intermediate for Jasmone or prostaglandin(s)

KURARAY KK 06.09.77-JA-108250
B03 C02 E13 (03.04.79) A61k-07/46 C07d-301/14 C07d-303/32

New β,γ-epoxy ketones of formula (I) are prepd. by reacting β,γ-unsatd. ketones of formula (II) with organic peracid.



(I)



(II)

In the formula, R is H, (substd.) satd. aliphatic hydrocarbyl or (nucleus-substd.) aromatic hydrocarbyl; and $1 \leqslant n \leqslant 10$.

(I) are useful as perfumes in situ or as synthetic intermediates for jasmone and prostaglandins. 6.9.77 as 108250 (7pp38)

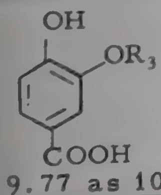
UBEI ★ D23 36083B/19 ★J5 4041-838

4-Hydroxybenzoic acid deriv. prepn. - by treating 2-hydroxy-phenol (deriv.) with alkyl carbonate alkali metal salt in organic solvent

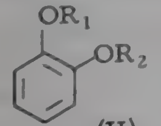
UBE INDUSTRIES KK 02.09.77-JA-104975
B05 C03 E14 (03.04.79) C07c-51 C07c-65/04

Prodn. of a hydroxybenzoic acid cpd. of formula (I) comprises treating a cpd. of the formula (II) with an alkyl carbonate alkali metal salt in an organic solvent.

In the formulae, R_1 is H or alkali metal; R_2 is H, alkali metal or lower alkyl; R_3 is H or lower alkyl). (I), such as 3, 4-dihydroxybenzoic acid and 3-alkoxy-4-hydroxybenzoic acid, are useful in the pharmaceutical, agrochemical and perfume industries.



(I)



(II)

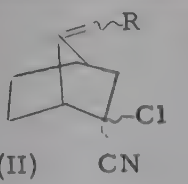
2.9.77 as 104975 (5pp69)

SAGA ★ D23 36092B/19 ★J5 4041-859

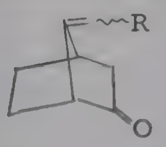
7-Alkyl-nor:camphor perfume prepn. - by hydrolysing 7-alkylidene-bi:cyclo(2,2,1) heptane and hydrogenating the prod.

SAGAMI CHEM RES CENTRE 09.08.77-JA-094680
E15 (03.04.79) A61k-07/46 B01j-23/42 C07c-49/27 C11b-09

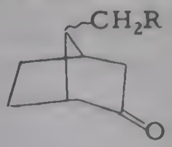
7-Alkylnorcamphor (I) (where R is alkyl) is prepd. by hydrolysing 2-chloro-2-cyano-7-alkylidenebicyclo(2, 2, 1)-heptane (II) to afford 7-alkylidenenorcamphor (III) and hydrogenating (III) over hydrogenating catalyst.



(II)



(III)



(I)

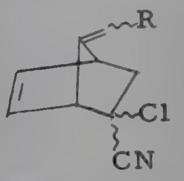
Hydrolysis is carried out with alkali hydroxide or sodium sulphide in solvent (e.g. alcohol, dimethylsulphoxide) at room temp. to 50°C. Hydrogenation is carried out over platinum oxide, palladium, nickel or rhodium in solvent (e.g. benzene, alcohol, tetrahydrofuran) at room temp. to 50°C. 9.8.77 as 094680 (8pp104)

SAGA ★ D23 36093B/19 ★J5 4041-860

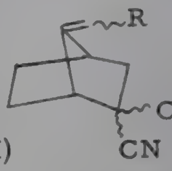
2-Chloro-2-cyano-7-alkylidene bi:cyclo(2,21) heptane prodn. - by reducing the corresp. heptene

SAGAMI CHEM RES CENTRE 09.08.77-JA-094681
E15 (03.04.79) B01j-23/44 C07c-121/48

2-Chloro-2-cyano-7-alkylidenebicyclo(2, 2, 1)heptane (I) is prepd. by reducing 2-chloro-2-cyano-7-alkylidenebicyclo-(2, 2, 1)-5-heptene (II):



(II)



(I)

(where R is 2-7C opt. branched alkyl).

(I) is an intermediate for 7-alkylidenenorcamphor a useful perfume.

(II) is prepd. by reacting 6-alkylfulvene with 2-chloroacrylonitrile at room temp. in argon atmosphere. Reduction is carried out by hydrogenation over platinum oxide, Pd, Ni, Rh, etc. catalyst at 0-50°C. in solvent (e.g. benzene, n-hexane, alcohol, tetrahydrofuran).

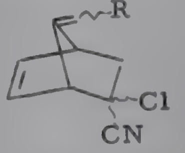
In an example, H was taken up by a mixt. of 10% palladium,charcoal and ethanol. A soln. of 2-chloro-2-cyano-7-pentylidenebicyclo(2, 2, 1)-5-heptene (5.67 pts.) in ethanol (39 pts.) was added to the mixt. Reaction mixt. was filtered and the filtrate conc. and distd. to afford 2-chloro-2-cyano-7-pentylidenebicyclo(2, 2, 1)heptane (4.86 pts.). Yield was 84%, and b.pt. was 76.80°C. at 0.07 mm.Hg. 9.8.77 as 094681 (8pp104)

SAGA ★ D23 36094B/19 ★J5 4041-861

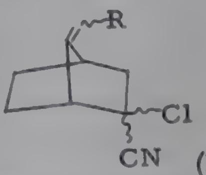
Perfume component 7-alkylidene-nor:camphor - prepd. by reducing 2-chloro-2-cyano-7-alkylidene 2,2,1)-5-heptene and hydrolysing prod.

SAGAMI CHEM RES CENTRE 09.08.77-JA-094682
E15 (03.04.79) A61k-07/46 B01j-23/42 C07c-49/27 C11b-09

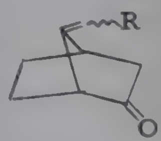
7-Alkylidenenorcamphor (I) (where R is n- or branched 2-7C alkyl), is prepd., by reducing 2-chloro-2-cyano-7-alkylidenebicyclo(2, 2, 1)-5-heptene (II) to afford 2-chloro-2-cyano-7-alkylidenebicyclo(2, 2, 1)heptane (III) and hydrolysing (III) with a base.



(II)



(III)



(I)

(I) (R = 2C) has menthol-like perfume and (I) (R = 3-7C) have flower-like perfumes. (I) are stable to oxygen, sunlight, temp. and moisture, and also to acids and alkalis. They are non-toxic and non-irritating to skin. 9.8.77 as 094682 (8pp104)

ASAE ★ D23 36115B/19 ★J5 4041-906

Palm oil purificn. - by treating with oxalic acid and adsorbent, removing adsorbent and insolubles and steam-distilling

ASAHI ELECTROCHEM IND KK 09.09.77-JA-108419
(03.04.79) C11b-03

Crude palm oil is treated with oxalic acid, then with an adsorbent. The adsorbent and insolubles are then removed from the oil prod., and the prod. is steam distilled in vacuo to remove free fatty acid and odour.

Prod. has superior hue and preservability.

In an example, 200 g. palm oil having acid value of 4.0 and peroxide value of 4.7 was mixed with 0.2 wt.% oxalic acid, at 65°C. for 12 min. under 10 mm.Hg reduced pressure. 2 wt.% acid treated clay was then added to the mixt., and threated at 85°C. under 20 mm.Hg reduced pressure for 25 min. The prod. was filtered by reduced pressure to remove the acid treated clay and insolubles. Steam was blown into the obtd. oil at 250°C. for 1 hr.continuously under 25 mm.Hg reduced pressure. The oil was thus distilled and the hue of the obtd. palm oil was 0.2 red, and 2.3 yellow, using 2 inch glass cell according to the "Standard Method for Analysis of Oil and Fat". And the AOM value was 85 hr. 9.9.77 as 108419 (3pp126)

FIRM D23 44570T/28 = J7 9008-652

Gamma-delta-unsatd carbonyl derivs - for perfumery, prepd esp from acrylates or propiolates and alkenyl cpds

FIRMENICH EE CIE 29.04.71-CH-006354 (22.12.70-CH-019019)

*B05 E17 (17.04.79) *DT2163-868 C07c-45 C07c-47/20 C07c-49/20 C07c-51 C07c-57/02 C07c-69/52*

Cpds. for modifying, reinforcing or improving odour of perfumes or organoleptic cpds. and/or aromatising properties of food, animal fodder, beverages, pharmaceuticals and tobacco products of formula.

$R_6R_1C{=}CR_2CR_{3n}R_5{=}{=}{=}CHR_{4n}CO(O)_mR7$ (where dotted line is a covalent or double bond in α-posn. (a), R_1, R_2 R_3, R_4, R_5 and R_6 are opt. linear, cyclic or acyclic, opt. satd. monovalent hydrocarbyl or H, provided R_3 and R_5 have no multiple bonds in conjugation to α, β-C-C bond, (b) R_7 is same as (a), (c) m and n each are 0 or 1 and (d) R_3, R_4 or R_5 may be bonded to R_7 and may form a cycloaliphatic ring) are prepd. by reacting. $R_{3n}R_5C{=}{=}{=}CR_{4n}\text{-}CO(O)_m\,R7$ (where dotted line is a double or triple bond) with an organ-ometallic cpd. $\left[R_1R_6C{=}CR_2\right]_y Me^- X^+$ (where Me is a transition metal esp. $_+Cu^I$, and X^+ is a cation, esp. Li^+ or (Mg-halogen) and y v+1, where v is oxidn. state of Me).

Pref. products are $R_6\text{-}CH{=}CH\text{-}(CH_2)_2C(O)OR8$ and $R_6\text{-}CH{=}CH\text{-}CH{=}CH\text{-}C(O)\text{-}OR8$ (where R8 is alkyl and R_6 is esp.. prepd. by reacting an alkyl acrylate or an alkyl propiolate with organometallic cpd. 22. 12. 71 as 082661 (clg. 22. 12. 70, 29. 4. 71-CH-019019, 006354) C07c-47/20 49/20, 57/02 69/52 45/00 51/00, 67/00 A61k-7/46 (17. 4. 79) FIRMENICH ET CIE. (20pp) (J51125014)

FIRM D23 88896R/48 = J7 9008-677

Lactones with 14 to 17 ring C-atoms - used in perfumery

FIRMENICH SA 27.05.70-CH-007865 (29.05.69-CH-008192)

*E13 (17.04.79) *DT2026-056*

AGEN D23 69027X/37 = J7 9008-663

Formyl-substd. phenoxy cpds. from methyl-substd. cpds. - by reaction with oxygen in a fatty acid or anhydride contg. a metal salt

AGENCY OF IND SCI TECH 18.02.75-JA-019458

*B05 E14 (17.04.79) *DT2605-678 C07c-45/02 C07c-47/56 +B01j-23/74 B01j-31/04*

Methyl-substd. phenoxy cpds. (I) are selectively converted into the corresp. formyl-substd. cpds. (II) by heating a soln. of (I) in a lower fatty acid or anhydride solvent with a pressurised O_2-contg. gas in the presence of a catalyst comprising at least one soluble Co, Mn, Cr and/or Ni salt.

The products (II) are useful as perfumes, medicaments, and intermediates for other fine chemicals. The process gives high conversions (e. g. 50-90%) with high selectivities (e. g 40-70%) for (II). 18. 2. 75 as 019458 C07c-47/56, 45-/02, B01j-31/04, -23-/74 (17. 4. 79) AGENCY OF IND SCI TECH (6pp) (J51098232)

SHEL ★ D23 36463B/19 ★NL 7810-355

Carvone prepn. - by thermal dehydration of 1-methyl-1-hydroxy-4 isopropenyl-2-cyclohexanone

SHELL INT RES MIJ BV 19.10.77-GB-043499

E15 (23.04.79) C07c-45 C07c-49/48

Prepn. of carvone (I) is carried out by thermal dehydration of 1-methyl-1-hydroxy-4-isopropenyl-2-cyclohexanone (II) at 150-350°C(200-300°C, esp. 250-280°C).

Dehydration is pref. effected by passing a mixt. of (II) and an inert diluent through a heated tube. (II) is pref. prepd. by reacting d-limonene with nitrosylsulphuric acid (III) in 50-90 wt. % H_2SO_4 at -20 to +10°C, opt. in the presence of H_3PO_4; hydrolysing the resulting limonene nitrosylsulphate with H_2O to form 1-methyl-1-hydroxy-2-hydro-xyimino-4-isopropenylcyclohexane (IV); and treating the product with an alkali metal bisulphite at 40-70°C in anhydrous MeOH or EtOH.

The process gives high yields of (I) with high purity; e dehydration of (II) prepd. from d-limonene gives l-carvone with a specific rotation of ⩾-60°. 16. 10. 78 as 01035 (11pp367)

KDFO= ★ D23 36561B/19 ★SU -543-41

Cleaning and classifying sunflower seeds - using vibrating, steppe conical tray in electrostatic field, and sieves in stream of air, f separation of seed into three fractions

KRASD FOOD IND RES 22.05.72-SU-786715

J01 P41 (25.11.78) B03c-07/02

Improved sepn. of particles of free flowing dry material particularly of sunflower seed, in the electrostatic separator claimed in Parent Certificate No. 512611, use in the vegetable fats and oil inds. is ensured by addn. of a screening section to the edge of the earthed electrode. Serdyuk, V.I., Khomyakov, V.A. Bykov, V.V. et al. B 42/15.11.78. 22.5.72. as 786715 Add to 512611 (4pp135)

KOEB/ ★ D23 37028B/19 ★US 4151-1

Removing unsaponifiable cpds. from tall oil heads - by converti fatty acids to metal soaps and distilling

KOEBNER A 22.11.77-US-854035

F09 (24.04.79) C09f-01/02 C11b-13 C11c-01/10

The head fraction of tall oil is (a) treated with a source c Zn and/or Pb cations in mole ratio fatty acids to metal o 1:1 to 2:1 to obtain a homogeneous soln. of metal soaps and unsaponifiable components, and (b) vacuum distilled below 250°F to remove the unsaponifiable components. The residual soaps are treated with a slight excess of ac in an aq. medium, to yield the free acids as an oily laye which opt. may be purified by further distn..

The process provides fatty acids from a source that was hitherto valueless. The unsaponifiable materials ma be used to make paper sizes. 22.11.77 as 854035 (5pp).

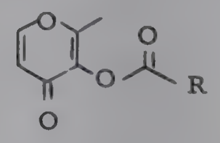
INFL ★ D23 37036B/19 ★US 4151-1

Maltyl tiglate - with strawberry-pineapple odour, used in perfum compsns.

INT FLAVORS & FRAGR INC 08.03.78-US-884381

E13 (24.04.79) C07d-309/22 C11b-09

Maltyl tiglate of formula (I) is new: (where R is trans-C(Me)=CHMe).



(I)

At 1% in food grade EtC (I) has a sweet, fruity, jammy, pineapple, strawberry-like aroma. (I) is thus useful in a wide varie of perfume compsns..

8.3.78 as 884381 (14pp478).

MONT D23 14434A/08 = US 4151-

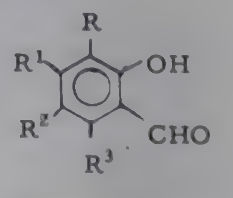
(2)-Hydroxy-benzaldehyde(s) prepn. - by reacting phenol(s) v formaldehyde in the presence of tin chloride, aprotic acid bin and aprotic solvent

MONTEDISON SPA 13.08.76-IT-026270

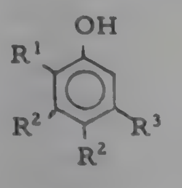
*A60 C03 E14 (24.04.79) *DT2736-523 C07c-45*

Prepn. of 2-hydroxy benzoic aldehydes of formula (I): (where R, R^1, R^2 and R^3 are independently H, alkyl, ar cycloalkyl, alkoxy, OH or acylamino or halogen) is described.

Method comprises condensing a phenol (II) with HCH at 90-150°Cin stoichiometric molar ratio, in presence anhydrous $SnCl_2$ and/or $SnCl_4$, in ratios, 0.02-0.2 mole (as Sn) per mole (II), and of a binder, in aprotic solvent.



(I)



(II)

The binder is pyridine, alkylpyridine, acetylpyridin hexamethylphosphotriamide, tetramethylenediamine, tetramethylpropylenediamine, aquinoline, a quinoxalin an aniline or tert. amine.

Good yields and high selectivity are achieved. (I) are useful, e.g. in perfumes, as fungicides and larvicides and as stabilising agents for polystyrene resins. 12.8.77 as 824090 (6pp393).

See Also

D13 DT 2748885
D13 GB 2006729
D15 DL134192
D21 US 4151001
D25 US 4151103

D24: SOAP; SOAP DETERGENTS

SHIS ★ D24 36116B/19 ★J5 4041-908
Transparent soap prepn. - by adding carboxylic acid of five-member ring cpd. e.g. pyrrolidone to transparent anhydrous soap glue, solidifying, cutting, etc.
SHISEIDO KK 09.09.77-JA-108412
E13 (E12) (03.04.79) C11d-13

Transparent soap is prepd. by adding 1.5-12.0 wt.% (based on 100 wt.% anhydrous prod. of the transparent soap glue) carboxylic acid type 5-membered ring cpd. to the transparent anhydrous soap glue, to obtain a transparent soap which can be solidified by cooling, cut, dried, shaped, and packaged in a short time after perfuming addn.

The coagulating temp. of the transparent soap glue is elevated, and the hardness after it is solidified is elevated. Time for the prepn. is reduced because the prod.attains to the proper transparency and hardness in a short time. Pref. carboxylic acid is 2-pyrrolidone-5-carboxylic acid (salt), 2-pyrrolidone-4-methyl-5-carboxylic acid (salt), 2-pyrrolidone-4-methyl-5-carboxylic acid (salt), 1-methyl-2-pyrrolidone-5-carboxylic acid (salt), DL-proline, L-hydroxyproline, L-histidine, etc. 9.9.77 as 108412 (5pp126)

D25: OTHER DETERGENTS

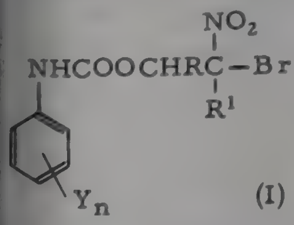
KNYL/ ★ D25 35328B/19 ★DL-134-119
Aq. soln. cleaning radioactively contaminated instruments etc. - ontains poly:phosphate, alkylbenzene sulphonate, sec. alkyl sulphonate, alkyl-ether sulphate and alkali hydroxide
KNY L 13.12.77-DL-202594
A97 E19 K07 (A25) (07.02.79) C11d-03/06

Liq. detergent compsn. for cleaning laboratory instruments consists of an aq. soln. contg. 10-20 % highly condensed Na polyphosphate, (I), e.g. Na hexametaphosphate; 0.5-4 % alkylbenzene sulphonate having formula $R-C_6H_4-SO_3Na$ (II) (where R is an 8-18C aliphatic gp.), e.g. Rodapon N 50 (RTM); 1-8 % alkylsulphonate having formula $R-CH(SO_3Na)-R'$ (III) (where R' is a short-chain aliphatic gp.), e.g. Emulsifier E 30 (RTM); 2-10% alkylether-sulphate having formula $R-O-(C_2H_4O)_n-SO_3Na$, (IV) (where n = 2-25), e.g. Elropon K 3 (RTM); and 2-8 % alkali hydroxide.

The compsn. is used for cleaning laboratory apparatus and industrial plant made of glass or other smooth-surfaced materials, and for radioactive decontamination of instruments. The compsn. has the cleaning power of chromosulphuric acid and is safe to handle. 13.12.77 as 202594 (8pp200)

HENK D25 35910F/00 =DS 1642-065
Nitro-alkyl-N-phenyl carbamates - antimicrobial compsns
HENKEL KG AUF AKTIEN 04.12.67-DT-H64654 (04.12.67-DT-642065)
*B05 C03 E14 +P34 (D22) (03.05.79) *NL6810-408 +A61l-13*

Antimicrobial compsn. contg. bromonitroalkyl N-phenyl-carbamates of formula (I) as the active component is modified by the inclusion of dimethyl sulphoxide and EtOH or iso-PrOH. In (I), Y is Cl or NO_2; n is 0-2; R is H or Me; and R^1 is H, Me, Et or $Y_nC_6H_{5-n}-NHCOOCH_2-$. Pref. such compsns. contain cpds. (I) (0.05-5, esp. 0.1-1wt.%); dimethyl sulphoxide (10-50, esp. 20-40wt.%); and EtOH or IsoPrOH (5-30, esp. 10-20wt.%). 4.12.67 as 642065, Add. to 1668195. (5pp047)



(I)

KAOS D25 40395A/23 =GB 1545-456
Metal wire cleaning pad, e.g. for cooking utensils - contg. a soap and specific phosphoric ester salts
KAO SOAP KK 25.02.77-JA-020112
*E11 P28 (10.05.79) *BE-863-327 C11d-01/34 C11d-17/04 +C11d-10/04*

A scouring pad comprises a spongy pad of fine metal threads impregnated with a detergent compsn. contg. ≥1 phosphoric acid ester salt of formula $(R(OCH_2CH_2)_m)_xPO_4H_{3-x-y}M_y$. In the formula, R is 10-22C branched or linear alkyl or alkenyl or 6-18C alkyl, phenyl, m is 0-10, x is 1.0-2.0. y is 0.5-2.0, such that $x+y \ngtr 3$. M is an alkali metal, ammonium, alkanolamine, alkaline earth metal, zinc or aluminium cation or 10-22C fatty acid soap.

Scouring pad is composed of a steel mat and is used for removing stains on cooking pots and pans, stoves and ovens, ventilation fans and tile joints in homes. 30.1.77 as 003668 (13pp931).

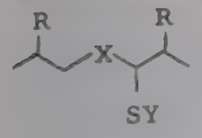
NAKA/ D25 21012Y/12 =J7 9008-482
Detergent compsn. for cleaning tableware, wood, metal, leather - contg. ascorbic acid (derivs.), iodine, sodium bicarbonate and surfactant
NAKAI S 04.08.75-JA-095254
*E13 (E34 E36) (16.04.79) *J52018-708 C11d-07/60*

Detergent comprises (A) l-ascorbic acid or d- araboascorbic acid, (B) iodine and sodium bicarbonate and if necessary (C) surfactant. The composition is made neutral or alkaline. Other additives such as sodium chloride, industrial salt, vinegar, potassium tertiary phosphate etc. can be added.

Deposits on the material to be cleaned are easily removed. The compsn. imparts a lustre to the matter cleaned does not give bad odours and can prevent skin roughness. 4.8.75 as 095254 C11d-7/60 (16.4.79) NAKAIS (2pp) (J52018708)

INFL ★ D25 36992B/19 ★US 4151-103
Perfumed soap compsn. prepn. - by mixing soap chips or solid detergent with 3 thioalkyl-4-heptanol cpds.
INT FLAVORS & FRAGR INC 07.03.78-US-884318 (15.09.76-US-723584)
E17 (D23) (24.04.79) C11d-03/50 C11d-09/44

The compsns. are prepd. by mixing soap chips or a solid detergent with 0.005-2 % by wt. of a thioether (I);



(I)

(where R=H or Me; X=CH(OH); Y is Me, $CH_2C(Me)=CH_2$, Pr, CH_2CHMe, or COMe).

(I) impart sweet, green, floral, herbal, vegetative, basil-like, minty, melony, grapefruit, fruity and alliaceous aromas with yara, neroli and/or verdiam-like nuances to a range of perfumed articles. 7.3.78 as 884318 (+ 28.7.77 - US - 819958) (28pp478).

CLOR- ★ D25 36993B/19 ★US 4151-104

Built aq. bleaching compsns. - contg. sodium hypochlorite, orthophosphate buffer, and pyrophosphate builder

CLOROX CO 06.02.78-US-875404

E34 (24.04.79) C11d-07/56

Built aq. bleaching compsn. for addn. to fabric laundering solns. contg. detergents consists of: (a) 1.5-7 wt.% of NaOCl; (b) 0.5-5.5 wt.% of M_3PO_4 buffer (M=Na or K; to give pH 11.5-13); (c) 4-20 wt.% of $M_4P_2O_7$ builder; and (d) H_2O (to 100%). Wt. ratio $M_4P_2O_7$:M_3PO_4 $\nless$ 1.5 to 1.

Compsns. contg. the above buffer have relatively high ionic strengths, are very stable over long periods of time, but provide bleaching action equiv. to non-built aq. hypochlorite bleaches.

A typical compsn. contg. 1.66% NaOCl, 5.51% K_3PO_4, 9.03% $K_4P_2O_7$, 1.3% NaCl, and H_2O (to 100%) mixed with detergent showed improved soil removal and comparable bleaching to conventional bleach/detergent compsns.. 6.2.78 as 875404 (5pp478).

HEWI- ★ D25 36994B/19 ★US 4151-105

Low pH milled synthetic detergent bar - contg. synthetic detergent, paraffin, powdered starch, dextrin, and coconut oil fatty acid

HEWITT SOAP CO INC 19.04.78-US-897878 (02.02.77-US-764875)

E19 (D21) (24.04.79) C11d-01/28 C11d-03/22 C11d-17

Milled synthetic detergent bar providing pH 4-7 at 1% by wt. in H_2O consists of: (a) 20-40% by wt. of synthetic detergent (I); (b) 10-30 % by wt. paraffin (II); (c) 5-15% by wt. powdered starch (III); (d) 10-30% by wt. dextrin (IV); (e) $\ngtr$ 5% by wt. coconut oil fatty acid (V); and (f) 8-15% by wt. H_2O. (I) is (i) Na lauryl sulphoacetate and/or (ii) coconut oil fatty acid ester of Na isethionate.

The low pH detergent bar is produced using conventional equipment, and has the fuel and hand-washing (lather) characteristics of a milled soap bar. 19.4.78 as 897878 C.i.p. 4100097 (6pp478).

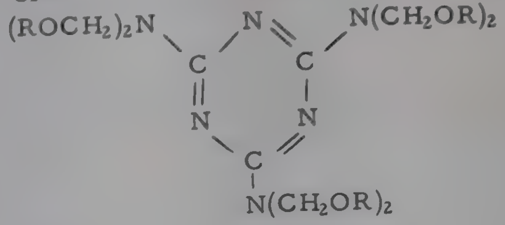
BADI D25

Melamine ether and ester deriv. antifoaming agents - used anionic, nonionic and cationic detergent and cleansing compsns.

BASF AG 10.03.77-DT-710355

*E13 (24.04.79) *DS2710-355 C11d-03/38 +B01d-17 C11d-07/*

The foaming of a detergent or rinse is reduced by adding an anti-foam agent contg. 0.1-3 wt.% (w.r.t. detergent or rinse) of a cpd. of formula (I), where 25-100% of all R gps. are 7-22C alkyl or acyl gps. derived from an alk



(I)

ane- or alkene-carboxylic acid. The remaining R gps. are 1-4C alkyl. Pref. the sum of all carbo atoms in the R gps. > 80.

Melamine de are esp. used i anti-foam agent and are effective at high washing temps. (about 95°C) a at low concns. Industrial mfr. is easy. 3.3.78 as 88321 (10pp931).

ALLC ★ D25 37075B/19 ★US 4151-

Wegscheider's Salt prepn. from anhydrous sodium carbonat giving low bulk density, low friability, free flowing prod.

ALLIED CHEMICAL CORP 22.06.78-US-918179

E34 (24.04.79) C01d-07/14

Free flowing, absorptive particles of Wegscheider's Sa ($Na_2CO_3.3NaHCO_3$), bulk density 350-500 g/l are prepd. from Na_2CO_3, bulk density > 750g/l by (a) introducing anhydrous Na_2CO_3 particles into a reaction zone preheated to 200 - 275°F; (b) heating particles to 100 - 150°F; (c) introducing a gas mixt. of 45-70 wt.% steam 30-55% CO_2 into the zone; (d) intimately contacting at $\geqslant$ 10 psig, 240-275°F until particles contain $\geqslant$ 50 wt.% Wegscheider's Salt prod. (e) removing from zone; and (f) drying particles to reduce moisture content < 5 wt.

Prods. are highly absorptive (absorbing 30 - 60 wt. nonionic wetting agent or surfactant), have low bulk de sity, are mildly alkaline, and have low friability and g flow properties (flow through an orifice $\geqslant$ 80% as fast a an equal vol. sand). 22.6.78 as 918179 (9pp091).

See Also

D21 J5 4041909

Omitted from page 44

VOSG/ ★ D23 35722B/19 ★FR 2399-239

Solid perfume compsn. contg. alkali soap gelling agent - prepd. in situ by adding caustic to heated mixt. of perfume, free fatty acid and glycol ether

VOSGANIANTZ J J 01.08.77-FR-023654

E17 (06.04.79) A61k-07/46

Solidified perfume compsn. comprises 40-80wt.% perfume which is liq. at room temp., 5-15wt.% of a fatty acid alkali soap, 10-50wt.% of a mono-(1-4C)alkyl ether of (di)-ethylene glycol, and 50-80% (on wt. of soap) of water.

The compsn. is prepd. by heating to $\ngtr$ 60°C, the p fume, free fatty acid and glycol ether, then adding (wi stirring) aq. caustic to saponify the fatty acid.

Prods. are stable and homogeneous and lack lumps undissolved soap obtd. when the ingredients are simpl mixed. Prods. have high perfume loading and are use as space odourants, cosmetic perfume sticks, as solid concentrates for soap mfr. etc. 1.8.77 as 023654. (9pp949)

CPI INDEXES

ALERTING PATENTEE INDEX (II)

Weekly by section and overall, lists all current patents in patentee code order and, within a given patentee, in earliest priority date order. The first line gives patentee code, earliest priority date, patentee name, CPI classes and finally the current patent number. The second line gives the first part of the title, followed by the accession number.

```
EIGE/ 24.01.75  EIGENMANN L   A93  *DT 2602-948
     Bonding fluid for road marking strips - 60224X/32
EIGE/ 27.01.75  EIGENMANN L   A93 L02(A21)  *DT 2602-947
     Bonding fluid for road marking strips - 60223X/32
```

Not in Basic Abstracts Journal

CPI CLASS INDEX (IV)

Weekly only. Headings are all the CPI classes within the section to which an Alerting Bulletin relates, arranged in numerical order. Posted under each class heading is a list, in country then patent number order, of all basic or equivalent documents referenced or cross-referenced under that heading.

```
     M22
*BE -836-489
*CA -987-881
=DS 1569-023
=DS 2245-330
*DS 2517-206
*DS 2519-679
=DS 2520-359
*DT 2450-918
*DT 2451-494
=DT 2451-607
```

In Country Alerting Bulletin only

BASIC NUMBER INDEX (V)

Weekly by section and overall, lists all entries by accession number. Each heading consists of the accession number in bold, followed by the CPI section letters. There then follows a list of all the family members, commencing with the basic and finishing with the current week's patent. For each family member the CPI week of issue is quoted, and a plus sign indicates that a multiple priority has been claimed.

```
09125-X ACDF
  US 3933-788   X05+
  CA -990-674   X26
09192-X BC
  US 3933-948   X05
  BE  -832-423  X10
  NL 7509-762   X10
  DT 2535-514   X11
  SW7509-042    X15
  NO7502-837    X16
  SF 7502-292   X19
  ZA 7504-766   X21
```

In all Editions

PATENT NUMBER INDEX (VII)

Weekly by section and overall. Lists left to right the patent type (* for basic, = for equivalent or # sign for non-convention equivalent or where the priority has been artificially "added" to the specification), patent number, accession number and CPI classes.

```
US 3963
#636 36477U  A97D15M14
*645 49861X  A41E19J04
=646 19776V  A41E19J04
=647 21100X  A17+R4
=650 06289S  A22
#651 24399W  A97K05L02M22
=652 73248V  A12
=653 70544V  A81G03
*654 49862X  A88H01Q4
*655 49863X  A81G03
```

In all Editions

BASIC PATENTEE INDEX (X)

Weekly by section in BAJ only. Entries under any given patentee code heading are in earliest priority date order. The title, truncated to 105 characters, is followed by the accession number and current patent number. The last line of each entry consists of the patentee name, the priority details (earliest then latest if there is more than one) and finally the Derwent classes. This index is cumulated quarterly and annually by section as hard copy. Overall A—M cumulations of from a quarter up to 5 years are available as COM.

```
CALI
Nitrile rubber smooth rolled sleeve for well impression packer - also contg
natural rubber, hydrated                              49862X/26  *US 3963-654
   CHEVRON RESEARCH CO 25.06.73-US-373341 +29.07.74-US-492377 A88 H01
Mica contg. plastified sulphur mixt - for coating walls and floors or solidifying
earth in dams                                         49433X/26  *DT 2554-327
   CHEVRON RESEARCH CO 03.12.74-US-529258 +13.11.75-US-631781 A82L02
CANA
Emulsifying agents of microbial origin - used esp. for oil spills, are made by
cultivating a species of                              48076X/26  *CA -990-668
   CANADIAN PAT & DEV LTD 31.08.72-US-285159 A97 D16 H03
```

In Basic Abstracts Journal only

MANUAL CODE INDEX

IN Basic Abstracts Journal only

At the start of each main group of codes, the manual code and its descriptor are printed in the middle of the column. Each sub-division of a manual code group appearing during the week is given, accompanied by its descriptor. All manual codes occurring during the week within each sub-division are then listed, with accession numbers posted against them.

In all there are about 3,600 manual codes in CPI, each one having an average of less than 200 documents assigned to it per year. The full classification is set out in the Manual Code Instruction Manual, which also contains a keyword index of terms for easy reference.

COUNTRY COVERAGE

"Major" Countries

Covered completely in CPI and WPI from the commencement of the service except: Research Disclosure 1978, Europe and PCT 1979, Sweden transferred from "Minor Countries" 1979. Average weekly numbers are listed alongside.

Fast publishing

Belgium	180	
Europe	150	
France	740	
Germany, W. unexamined	1050	
Japan unexamined	845*	
Netherlands unexamined	240	
PCT	40	
Research Disclosure	20	
South Africa	100	
Sweden	260	
United Kingdom unexamined	600	3325

Slow publishing

Canada	450	
Germany, E.	100	
Germany, W. examined	465	
Japan examined	340*	
Netherlands examined	60	
Soviet Union	1200	
Switzerland	260	
United Kingdom examined	300	
United States	1200	4375

*Only CPI coverage for Japan.

"Minor" Countries

Complete coverage, but only introduced during 1975, with exception of Italy 1978.

Fast publishing

Brazil	140	
Denmark	120	
Finland	60	
Norway	80	
Portugal	30	430

Slow publishing

Austria	125	
Czechoslvakia	180	
Hungary	35	
Israel	40	
Italy	155	
Rumania	25	560

MINOR AND MAJOR COUNTRIES

If the first publication of an invention takes place in one of the 'major' countries listed above, then this publication is called the basic patent, a WPI accession number is assigned, and this is used for all subsequent members of the family.

If, however, the first publication occurs in one of the 'minor' countries listed above, then the document is regarded as a provisional basic. No accession number is assigned, since an abstract is not provided. If this provisional basic is then followed by further family members also from 'minor' countries, these produce entries in the same indexes even though an accession number has still not been assigned.

However, as soon as a member of the family is published in one of the 'major' countries, then this is regarded as the first disclosure. An accession number is assigned, and will apply also to all the earlier members of the family (from the 'minor' countries). Hence it is possible to see, in Index V, entries where the basic has a later week number than some of its equivalents.

For CPI, if the first publication occurs in Sweden, South Africa or Japan — in the case of Non-Japanese nationals — then the document is treated as a provisional basic as outlined above. Other than for Japan where a heading is given, an Alerting abstract is included in CPI at this stage.

Subsequently, when a documentation abstract is available an accession number is assigned to the document and the abstract published in the BAJ and related products. Headings will be included in the Alerting Bulletins for Sweden and South Africa together with abstracts for the Japanese at this later stage.

Entries are included in WPI Gazettes at both stages. At the later stage both a basic and an equivalent heading will be given for each such patent number.

COUNTRY CODES

For patent number (not priority) purposes, DS distinguishe accepted West German specifications (DAS) from the unexamined applications (OLS) which are given the norma DT code. in the case of Japan J5 represents the unexamined applications, and J7 the examined of the present series.

Argentina	AR	Luxembourg	LU
Australia	AU	Malawi	MW
Austria	OE	Mexico	MX
Belgium	BE	Monaco	MC
Brazil	BR	Netherlands	NL
Bulgaria	BG	New Zealand	NZ
Canada	CA	Norway	NO
Chile	CE	Pakistan	PK
Colombia	CO	PCT	WP
Czechoslovakia	CS	Philippines	RP
Denmark	DK	Poland	PO
Europe	EP	Portugal	PT
Finland	SF	Rhodesia	RH
France	FR	Rumania	RU
Germany, East	DL	South Africa	ZA
Germany, West	DS	South Korea	KS
Germany, West	DT	Spain	ES
Greece	GR	Sudan	SD
Hungary	HU	Sweden	SW
Iceland	IS	Switzerland	CH
India	IN	Syria	SR
Ireland	EI	Trinidad	TD
Israel	IL	Turkey	TR
Italy	IT	Untd. Kingdom	GB
Japan	JA	U.S.A.	US
Japan, unex.	J5	U.S.S.R.	SU
Japan, ex.	J7	Yugoslavia	YU

*ABBO 30.08.76 ABBOTT LABORATORIES A97 D22 E14 H07 (A25) *US 4151-125
Liq. compsn. contg. 2-mercapto-benzamide deriv. - 37005B/19
ABER/ 08.07.77 ABERHAM H D11 =DS 2731-025
Healing herb extract-contg. bread prepn. - 04335B/03
AGAA 02.09.77 AGA HEATING AB D15 =BR 7805-727
Combined biological dry toilet and waste water purifier - 20411B/11
AGEN 18.02.75 AGENCY OF IND SCI TECH B05 D23 E14 =J7 9008-663
Formyl-substd. phenoxy cpds. from methyl-substd. cpds. - 69027X/37
AGEN 06.05.75 AGENCY OF IND SCI TECH D15 J01 =J7 9008-555
Particulate aggregating agent used for waste water contg. heavy metals - 97089X/52
AGEN 12.09.75 AGENCY OF IND SCI TECH D15 F09 J01 =J7 9008-631
Absorbing agent prodn. for treating waste liquor - 53067Y/30
AIRL 01.06.77 AIR LIQUIDE L'ETUDE B05 D16 =J5 4041-394
Tetracycline antibiotics fermentation prodn. - 00263B/01
AJIN 04.07.75 AJINOMOTO KK B02 D16 E13 =J7 9008-749
L:Tryptophan prepd. from D,L or DL form of tryptophan hydantoin - 15556Y/09
AJIN 22.07.75 AJINOMOTO KK B03 D16 =J7 9008-750
(5)-Amino-(4)-imidazole-carboxamide and D:ribose prodn. - 18809Y/11
AJIN 02.09.77 AJINOMOTO KK D13 *J5 4041-365
Prune drink contg. threonine - 36020B/19
AKZO= 23.02.76 AS KAZA ZOOLOG INST C03 D16 *SU -589-700
Entomopathogenic Entomophthora lairdii fungal strain - 36584B/19
ALKU 11.10.77 AKZONA INC A25 D21 (A96 D23) =US 4151-001
Natural beeswax substitute compsn. - 31945B/17
ALLC 02.08.77 ALLIED CHEMICAL CORP A85 D15 J03 (A18 A91) #FR 2399-457
Bipolar membrane of polyolefin matrix and vinyl polymer surface - 82742Y/46
ALLC 22.06.78 ALLIED CHEMICAL CORP D25 E34 *US 4151-266
Wegscheider's Salt prepn. from anhydrous sodium carbonate - 37075B/19
ALLI- 02.11.77 ALLIANCE SMURFIT D22 E19 F09 G03 (D13) *DT 2749-528
Bacteriostatic soln. esp. for treating food packaging material - 35597B/19
ALPU 19.11.74 ALPURA KORECO AG D22 =DS 2507-790
Sterile packaging machine chamber - 40372X/22
ALTO- 01.11.77 ALTO CORP D11 *DT 2842-011
Piercing machine for English muffins forming sawtooth tear - 35619B/19
AMAL 15.03.73 AMALGAMATED DENTAL CO A96 D21 =J7 9008-039
Inorg. filler contg. tooth-filling compsn. - 69810V/40
AMCY 02.08.76 AMERICAN CYANAMID CO A96 D21 E33 *US 4151-272
Wax-like antiperspirant stick compsns. - 37077B/19
AMMA 29.06.77 AMF INC A97 D18 =J5 4041-397
Reconstituted tobacco mfr. - 78436A/44
ANDE- 07.06.77 THE ANDERSONS D13 *US 4151-310
Soybean protein extracts - 37092B/19
ANVR 04.08.77 AGENCE NAT VALORISATION B04 C03 D16 =FR 2399-437
Immunostimulant 34129 RP from Streptomyces stimulosus - 06048B/04
ARVE 26.10.77 ARVEY CORP D22 =DT 2846-508
Disposable sterilisable pouch esp. for medical supplies and equipment - 33329B/18
ARVE 26.10.77 ARVEY CORP D22 =GB 2006-716
Disposable sterilisable pouch esp. for medical supplies and equipment - 33329B/18
ASAE 09.09.77 ASAHI ELECTROCHEM IND KK D23 *J5 4041-906
Palm oil purificn. - 36115B/19
ASAH 03.07.75 ASAHI CHEMICAL IND KK A97 B05 D16 J01 (A23) =J7 9008-630
Absorptive sepn. of phenolic cpds. from solns. of foods, drugs or wine - 15188Y/09
ASBI= 19.07.72 AS USSR BIOCHEM MIC A97 D16 (A13) =SU -514-627
General purpose microorganisms disintegrator - 23298Y/13
ASDA= 14.09.76 AS USSR DAGESTAN D16 *SU -612-957
Aromatised semi-sweet and semi-dry wines prodn. - 36672B/19
ASKO- 02.09.77 ASKO-UPO OY D15 =BR 7805-727
Combined biological dry toilet and waste water purifier - 20411B/11
ASMI= 07.12.71 AS USSR MICROBIOL C03 D16 H04 (D13) *SU -393-931
Yeast biomass prodn. for use in animal feed etc. - 36481B/19
ASMI= 01.12.76 AS USSR MICROORGANI D16 H04 (D15) *SU -612-958
Microbiological purification of water - 36673B/19
AUCO= 17.05.76 AS UKR COLL CHEM D17 *SU -612-961
Crystallisation of sugar from beet-sugar mfg. massecuite - 36676B/19
AUTE= 26.05.76 AS UKR TECH THERMO D13 *SU -613-173
Fruit with skin convection drying - 36724B/19
AUTH= 23.02.76 AS UKR THERMO PHYS D15 (D13 D16) =SU -613-171
Freeze crystalliser for brine desalination or concn. of drinks - 86975Y/49
AZOV= 12.07.71 AZOV BLACK SEA FISH D12 *SU -496-028
Fish filleting machine - 36490B/19

BABW 08.05.75 BABCOCK CONTROLS D15 H03 J04 =GB 1545-512
Continuous oil in water measurement by fluorescence - 82832Y/46
BADI 10.03.77 BASF AG D25 E13 =US 4151-127
Melamine ether and ester deriv. antifoaming agents - 58882A/33
BADI 23.09.77 BASF AG D25 E16 =SW 7809-827
Stabilising nonionic surfactant against alkali discolouration - 23957B/13
*BANY 08.09.77 BANYU PHARM CO LTD B02 D16 *J5 4041-388
Cephradine prodn. - 36027B/19
BATT 31.01.77 BATTELLE MEMOR INST D13 (D12) =GB 1545-457
Protein food having meat-like structure - 57182A/32
*BEAF 12.05.78 BEATRICE FOODS CO D13 *US 4151-308
Fast mixed and milled candy - 37091B/19
BEEC 12.06.71 BEECHAM GROUP LTD B03 D16 =J4 8008-992
Antibiotic pseudomonic acid - 02884U/03
BEEC 12.06.71 BEECHAM GROUP LTD B03 D16 =J7 9008-753
Antibiotic pseudomonic acid - 02884U/03
BEGO- 11.02.77 BEGO BREMER GOLDSCH D21 =GB 1545-460
Artificial tooth enamelling preparation unit - 60630A/34
BEHW 27.10.77 BEHRINGWERKE AG B04 D16 =DT 2748-132
Stabilising meningococcal polysaccharide for use in vaccine - 33342B/18
BEIE 21.09.77 BEIERSDORF AG B05 D21 E16 =NO 7803-111
Caries and parodontosis inhibiting dental and/or oral hygiene compsns. - 06142B/04
BEIE 21.09.77 BEIERSDORF AG B05 D21 E16 =SW 7809-634
Caries and parodontosis inhibiting dental and/or oral hygiene compsns. - 06142B/04
BENC 05.10.77 BENCKISER J A GMBH D25 E37 =GB 2006-742
Granulation products contg. polymerised phosphate and aluminosilicate - 11963B/07
*BENC 28.10.77 BENCKISER-KNAPSACK D15 E11 F06 (F09) *DT 2748-366
N-Sulpho-hydroxy-alkane amino-alkane phosphonic acids - 35518B/19
BERO- 19.09.77 BERO-ENERGIE BERATU D15 =SW 7809-782
Waste effluent heat recovery - 26268B/14
*BERP 28.10.77 BEROL KEMI AB D15 E11 *GB 2006-744
Removing oil fat, wax, etc. from a surface - 35799B/19
*BERT- 04.08.77 BERTIN & CIE B05 C03 D13 *FR 2399-213
Mfg. pure solns. of natural aminoacid(s) - 35717B/19
*BERT- 02.11.77 BERTUZZ SA D13 *DT 2846-800
Sterile, oxygen-free, sugar syrup continuous prodn. - 35679B/19
BIOT- 07.12.76 GES BIOTECH FORSCHU B04 D16 =DS 2655-265
Automatic determination of intracellular and extracellular material - 42422A/24
*BIOT= 18.02.75 BIOTECH RES INST D16 *SU -590-957
Microbial cellulase from aq. culture medium sepn. - 36587B/19
*BIOT= 12.07.76 BIOTECHN-RES INST D16 *SU -612-955
Evaluating enzyme amylolytic activity during microbiological prodn. - 36671B/19
*BIOT= 18.10.76 BIOTECH RES D16 *SU -612-953
Microorganisms biomass culturing unit - 36669B/19
BOEF 16.08.74 BOEHRINGER MANNHEIM GMBH B04 D16 =SU -613-731
Activating cholesterol oxidase with surfactants - 40938W/25
BOEF 26.10.77 BOEHRINGER MANNHEIM GMBH B04 D16 =GB 2006-784
Maltose-phosphorylase and beta-phosphoglucomutase prodn. - 33326B/18
BOLI 24.10.77 BOLIDEN AB D15 =NL 7810-573
Purificn. of water with magnetic sepn. of pptd. sludge - 31595B/17
BOLI 24.10.77 BOLIDEN AB D15 =WP 7900-230
Purificn. of water with magnetic sepn. of pptd. sludge - 31595B/17
*BONR/ 03.08.77 BON R D13 *FR 2399-218
Rotary drum pre-cooker for corn prod. - 35719B/19
BORS/ 12.08.77 BORST A H D15 =BR 7805-183
Combined waste water treatment and rubbish disposal - 89700A/50
BORS/ 12.08.77 BORST A H D15 =BR 7805-184
Combined waste water treatment and rubbish disposal - 89700A/50
BOSC 23.12.76 BOSCH-SIEMENS HAUSG D11 =DS 2658-686
Baking oven with hot-air fan - 48010A/27
BOSS/ 00.00.75 BOSSERT E C03 D13 =DS 2709-750
Rinsing agents for cleaning foodstuffs - 65570A/37
BRAU- 10.03.72 BRAUN & KEMMLER D14 =DS 2211-644
Pressure cooker safety device - 85173W/52
BREA- 08.06.76 BREADCO SERVICES L D11 =GB 1545-552
Oven heated by circulating air - 83776A/46
BROW/ 25.09.70 BROWN H D15 J01 K06 #J7 9008-468
Fluid/solid contact process - 11666S/06
BROW/ 25.09.70 BROWN H D15 J01 K06 #J7 9008-469
Fluid/solid contact process - 11666S/06
BRPE 24.04.75 BRITISH PETROLEUM LTD A97 D16 E17 H04 =GB 1545-490
Microbiological oxidn of hydrocarbons - 83021X/45
*BRPE 21.09.77 BRITISH PETROLEUM LTD C03 D13 (D16) *GB 2006-823
Protein sepn. from microbial cells - 35807B/19
BUCL 25.10.77 BUCKMAN LABS INC A97 D15 E11 M14 =NL 7803-311
Compsn. used to prevent corrosion and incrustation in aq. systems - 44129A/25
BURN- 02.08.77 BURNS FOODS LTD D12 =FR 2399-215
Food product similar to bacon prepd. by extrusion - 19718A/11
*BUTT= 07.01.74 BUTTER CHEESE IND D13 *SU -534-225
Dietetic cheese with increased protein content - 36539B/19

*CADB 13.07.77 CADBURY TYPHOO LTD D13 *GB 2006-606
Canned, shaped, textured vegetable protein - 35781B/19
*CANP 14.06.76 CANADA PACKERS LTD D13 G03 (D18) *US 4151-161
Prepn. of gelatin with low chromium content - 37029B/19
CARG- 22.10.77 CARGO FLEET CHEM D25 E19 F06 =NL 7810-512
Concentrate of quaternary ammonium cpd. and oily material - 31587B/17
CELL- 02.12.77 CELLCOR CORP CANADA D17 (D13) #GB 1545-404
Continuous starch hydrolysates prepn. using acid starch suspension - 28873A/16
*CEPA 10.07.74 CELLULOSE PAPER IND RES D15 *SU -613-820
Effluent water purification by froth flotation - 36813B/19
CHUS 08.03.66 CHUGAI SEIYAKU KK B04 D16 =DS 1617-397
Treatment of streptococcus haemolyticus and resultant - 28655F/00
CIBA 22.04.76 CIBA GEIGY CORP A97 D18 (A21) =US 4150-944
Condensates of aromatic sulphonic acid and formaldehyde or aminoplasts - 75885Y/43
CIBA 28.09.77 CIBA GEIGY AG D25 E34 =BR 7806-382
Aq. or powdery detergent compsns. - 28144B/15
*CLAR/ 07.04.78 CLARK V D D12 *US 4150-460
Fish or small game holder used during processing - 36853B/19
*CLOR- 06.02.78 CLOROX CO D25 E34 *US 4151-104
Built aq. bleaching compsns. - 36993B/19
COLG 03.01.77 COLGATE PALMOLIVE CO D22 =GB 1545-409
Elastic fastener tab for disposable diaper - 19359A/10
COLG 25.10.77 COLGATE PALMOLIVE CO D21 E34 =NL 7810-652
Deodorant stick based on alkali metal bi:carbonate - 18051B/10
*COLG 26.10.77 COLGATE PALMOLIVE CO D21 E37 *DT 2747-852
Dentifrice with improved cleansing and polishing action - 35477B/19
COLG 17.03.78 COLGATE PALMOLIVE CO A97 D25 E19 =BE -873-318
Conc. single phase liq. detergent-softener compsn. - 17866B/09
*CONF= 02.01.75 CONFECTIONERY RES D17 *SU -534-226
Caramel prodn. for confectionery use - 36540B/19
*CORP 29.09.77 CPC INTERNATIONAL INC D23 J01 *BR 7806-374
Regeneration of used bleaching clay - B/19
*CORP 28.10.77 CPC INTERNATIONAL INC D13 (D16) *DT 2816-326
Vital wheat gluten and starch mixt. hydrolysis - 35611B/19
*COUD- 28.10.77 COUDERT J SA D14 *DT 2846-895
Sterilising plant for foodstuffs in unsealed packagings - 35684B/19
COUD- 28.10.77 COUDERT J ENG SA D14 =GB 2006-605
Sterilising plant for foodstuffs in unsealed packagings - 35684B/19
*CSIN- 03.08.77 CONSTR IND DANJOU D14 *FR 2399-219
Hydraulic sepg. machine for washing soiled potatoes etc. - 35720B/19
*CULL/ 29.10.77 CULLENDER E D22 *DT 2748-679
Disinfectant store for sterilising appts. in common use - 35543B/19

*DAGE= 14.09.76 DAGESTAN FOOD IND D16 *SU -612-957
Aromatised semi-sweet and semi-dry wines prodn. - 36672B/19
DAHM/ 08.11.75 DAHM K P D21 =GB 1545-627
Cosmetic stick with applicator and wiper blades - 83125X/45
*DAIE 12.09.77 DAINICHI NIPPON CABLES D15 J01 *J5 4043-176
Extracting solvent from soln. - 36337B/19
DALE/ 19.09.77 DALE J A97 D15 (A25) =NO 7703-215
Removing salts from aq. soln. - 26470B/14
*DANA 27.10.77 DANFOSS A/S D15 E36 J04 *DT 2748-191
Polarographic measurement of oxygen in liquids - 35501B/19
DANA 27.10.77 DANFOSS A/S D15 E36 J04 =GB 2006-965
Polarographic measurement of oxygen in liquids - 35501B/19
*DASU- 27.09.77 DANSKE SUKKERFAB D17 *BR 7806-360
Sugar cane feed mechanism to disintegrator - B/19
*DEAK 24.10.77 AKAD WISSENSCHAFT DDR A88 D15 J01 (A14) *DL -134-447
Asymmetrical polyacrylonitrile membrane - 35426B/19
*DEAK 27.10.77 AKAD WISSENSCHAFT DDR A88 D15 J01 (A14) *DL -134-448
Asymmetrical polyacrylonitrile membrane prepn. - 35427B/19
DEGG- 09.07 77 DEGGENDORFER WERFT D15 =J5 4042-366
Water desalination system - 06241B/04
DEGS 29.07 77 DEUTSCHE GOLD UND SILBER D25 E33 =BR 7804-876
Prepn. of cation-exchanging aluminosilicate(s) - 08024B/05
DEGS 31.10.77 DEUTSCHE GOLD & SILBER D25 E34 =DT 2748-783
Stabilisation of sodium percarbonate particles against moisture - 33354B/18
DEGS 31 10.77 DEUTSCHE GOLD & SILBER D25 E34 =GB 2006-738
Stabilisation of sodium percarbonate particles against moisture - 33354B/18
DEJI- 05.08.77 DEJ INT RES CO A97 D13 =FR 2399-212
Removing caffeine from green coffee beans - 09978B/06
DEJI- 06.08.77 DEJ INT RES CO D13 =FR 2399-265
Selective extn. of a sol. component from granular material - 09979B/06
DESO- 12.12.75 DESOWAG-BAYER HOLZS C03 D22 F09 M14 =DS 2555-984
Wood preservative contg. metal corrosion inhibitor - 41665Y/24
*DIAC- 07.09.77 DIA CHEMIFA KK . D13 E36 G04 *J5 4041-289
Deoxygenating agent - 35982B/19
DIDI 05.12.74 DIDIER-WERKE AG D15 =DS 2457-514
Industrial wastes treatment - 46273X/25
DNTO 20.12.73 DAINIPPON TORYO KK D15 G06 =J5 0093-430
Photographic waste liquor treatment - 36385B/19
*DNTO 20.12.73 DAINIPPON TORYO KK D15 G06 *J7 9008-025
Photographic waste liquor treatment - 36385B/19
*DOWA 07.09.77 DOWA MINING CO LTD D15 *J5 4041-551
Treating waste liquor having high metal salts concn. - 36050B/19
*DOWC 07.10.76 DOW CHEMICAL CO D15 H03 J01 *US 4151-078
Removal of oil from water - 36973B/19
*DOWC 02.11.77 DOW CHEMICAL CO A97 D15 F09 H01 *US 4151-140
Hydrolysing carboxamide polymer emulsions - 37016B/19
DYNN 05.08.70 DYNAMIT NOBEL AG D23 E17 =DS 2038-804
Colour clarification and stabilisation of 8 12cfatty acids - 06277T/04
*DYNN 04.11.77 DYNAMIT NOBEL AG B04 D16 *BE -871-735
Immobilising enzymes on amorphous silica carrier - 35242B/19

EAST 09.09.77 EASTMAN KODAK CO A97 B04 D16 J01 =GB 2006-640
Chromatographic material for purificn. of biologically active materia
24191B/13
*EBAI 08.09.77 EBARA INFILCO KK D15 *J5 4041-552
Sewage sludge concn. - 36051B/19
*EBAR 08.10.77 EBARACORP D16 *WP 7900-216
Composting appts. e.g. for municipal garbage - 37125B/19
*EBIO- 06.09.77 EBIOS YAKUHIN KOGYO D13 (D16) *J5 4041-395
Seasoning suitable for Japanese cooking - 36033B/19
*EIDE/ 27.03.78 EIDELBERG J D15 *US 4151-046
Floating solar still with submerged condenser - 36954B/19
ELIL 05.08.77 ELI LILLY & CO A96 D21 G02 (A14 A82) =FR 2399-238
Nail varnish based on aq. polymer emulsion - 42204A/24
ELIL 20.10.77 ELI LILLY & CO B03 C02 D13 E13 =GB 2006-774
Antibiotics 20-deoxy-narasin and 20-deoxy-epi-17 narasin - 19939B/10
ELLC- 15.02.77 ELLCO PROTEIN AB D13 =DL -134-049
Removing iron cpds. from blood hydrolysates for food product
44132A/25
ELLE/ 05.08.77 ELLENBERGER W C03 D13 =FR 2399-216
Hydrolysing casein with aq. acid avoiding darkening - 87876A/49
*EMER/ 07.04.77 EMERICK H C D21 M22 *US 4150-707
Pressure casting of dental restorations in investment cavity - 36885B/1
EMEY 21.09.77 EMERY INDUSTRIES INC A35 D23 E13 (A23) =SW 7809
672
Hetero-macrocyclic perfume ingredients - 08055B/05
*ENAM= 05.04.76 ENAMELLED CHEM EQUI D22 L02 *SU -613-755
Material for mfr. of artificial teeth - 36762B/19
ENVI 03.08.77 ENVIROTECH CORP D15 J04 =FR 2399-653
Appts. for taking liq. sample from flowing stream - 12488B/07
*ENVI- 13.02.78 ENVIRO DEV CO D15 *US 4151-080
Dewatering slurry e.g. sewage by pumping into press - 36975B/19

FARB 10.11.72 BAYER AG A60 D18 E21 F06 =DS 2255-058
Basic azo dyes from benzothiazoles and indolines - 38274V/21
FARB 16.09.77 BAYER AG A88 D15 J01 (A14) =DK 7804-094
Semipermeable membranes for reverse osmosis and ultrafiltratio
24128B/13
FARB 25.10.77 BAYER AG B02 C02 D13 =DT 2747-700
Quinoxaline-di-(N)-oxide derivs. - 33712B/18
FARB 26.10.77 BAYER AG B05 C03 D22 E14 =DT 2747-825
Aryl-thiocarboxylic acid thiocyano-methyl ester derivs. - 33714B/18
*FARE= 13.11.74 FAR-E KUIBYSHEV POL D12 *SU -613-748
Single-operation fish-filleting machine adjustment device - 36760B/1
*FARH 00.00.76 HOECHST AG C03 D13 (D23) *DT 2748-885
Lipoid and water-soluble cpd. extn. from crushed oil seeds - 35568B/
FARH 25.07.77 HOECHST AG A60 D22 E16 M25 (D21) =BR 7804-746
Non-symmetrical sec. ether-amine derivs. - 10263B/06
FARH 20.08.77 HOECHST AG D13 E17 (D21 E16) =BR 7805-331
Simultaneous prepn. of fatty acid nitrile(s) and glycerol - 18378B/10
FARH 20.08.77 HOECHST AG D13 E17 (D21 E16) =J5 4041-806
Simultaneous prepn. of fatty acid nitrile(s) and glycerol - 18378B/10
FARH 19.09.77 HOECHST AG D15 E19 M14 =SW 7809-820
Anticorrosion compsn. for ferrous metals - 22078B/12
FARH 02.11.77 HOECHST AG C03 D13 (D23) =BE -871-745
Lipoid and water-soluble cpd. extn. from crushed oil seeds - 35568B/
*FARH 04.11.77 HOECHST AG A60 D23 E16 K01 (A14) *BE -871-803
Surfactant mixt. of per:fluoroalkyl quat. ammonium alkyl sulphat
35259B/19
*FARH 16.12.77 HOECHST AG D15 *DS 2756-171
Overloaded clarifying plant relief - 35443B/19
FIND- 29.11.68 PROD FINDUS SA D14 =DS 1959-851
Apparatus for stripping vegetables fromstalks - 62327S/39
FIND- 29.09.77 PRODUITS FINDUS D11 =BR 7806-452
Pizza bottom mfr. - 28140B/15
FIRM 30.04.65 FIRMENICH SA D13 E13 #DS 1695-505
Synthetic flavour - 54472S/34

FIRM 29.05.69 FIRMENICH SA D23 E13 =J7 9008-677
Lactones with 14 to 17 ring C-atoms - 88896R/48
FIRM 22.12.70 FIRMENICH EE CIE B05 D23 E17 =J7 9008-652
Gamma-delta-unsatd carbonyl derivs - 44570T/28
FMCC 03.10.77 FMC CORP D25 E23 F06 (E14) =GB 2006-846
Aromatic sulphonyl azide(s) - 78107A/43
FMCC 03.10.77 FMC CORP D25 E19 F06 =GB 2006-847
Low temp. fabric bleaching with per-oxygen cpds. - 25655B/13
FMCC 03.10.77 FMC CORP D25 E19 =GB 2006-848
Activator for per:oxygenated bleach - 25936B/14
FMCC 03.10.77 FMC CORP D25 E12 F06 =GB 2006-849
Low temp. bleaching of fabrics with peroxy cpds. - 07600B/04
FODA 30.04.73 FOREMOST MCKESSON D15 =J5 0026-774
Water treatment by reverse osmosis - 79254V/46
FODA 30.04.73 FOREMOST MCKESSON I D15 =J7 9008-473
Water treatment by reverse osmosis - 79254V/46
FRAN/ 07.12.77 FRANK H D12 *DL -134-041
Fish filleting machine guide element - 35307B/19
FREU- 07.01.71 FREUND SANGYO KK D14 J04 =J4 7013-642
Coating pan appts. - 36358B/19
FREU- 07.01.71 FREUND SANGYO KK D14 J04 *J7 9007-747
Coating pan appts. - 36358B/19
FRRR 21.09.77 FERRERO P & CIA SPA D13 =SW 7809-870
Filled floatable spherical food prod. - 08058B/05
FUJI 07.09.77 FUJISAWA PHARM IND KK D16 E13 *J5 4041-384
Fermentative prodn. of 2-deoxy-D-glucose - 36023B/19
FUKO 08.09.77 FUJI OIL KK D13 =J5 4041-907
Hard vegetable butter compsn. for chocolate - 22530B/12
FUSO 06.09.77 FUSO KAGAKU KOGYO K D13 *J5 4041-340
Foodstuffs additive for controlling pH - 36011B/19
FUSO 06.09.77 FUSO KAGAKU KOGYO K D13 *J5 4041-341
Controlling properties of foodstuffs etc. - 36012B/19

GASI= 20.09.76 GAS IND EQUIPT RES D15 J09 *SU -613-162
Reaction vessel for thermal decontamination of waste water - 36721B/19
GASP/ 27.10.77 GASPAR T A D12 *DT 2748-445
Sieve plate in filling line of sausage machine - 35532B/19
GENE 17.05.78 GENERAL ELECTRIC CO D14 *US 4150-607
Coffee brewing apparatus with hot water generator - 36866B/19
GENE- 08.11.77 GENENTECH INC B04 D16 *BE -871-782
Recombining plasmid for transformation of bacteria - 35257B/19
GENM 02.12.74 GENERAL MILLS INC D11 *US 4151-307
Doughs contg. starch prods. and tempeh - 37090B/19
GENO 01.11.77 GENERAL FOODS CORP D13 *DT 2846-515
Free-flowing coffee agglomerate leaving no sediment - 35665B/19
GENO 27.10.78 GENERAL FOODS CORP D13 =GB 2006-603
Free-flowing coffee agglomerate leaving no sediment - 35665B/19
GIME= 21.05.74 GIMELFARB N M D12 *SU -518-202
Animal hides cleaning installation - 36516B/19
GIVA 27.06.77 GIVAUDAN L & CIE SA D13 E15 (D21 D23) =J5 4041-846
Perfoume and flavouring compsn. for food, drink, tobacco etc. - 04386B/03
GIVA 04.08.77 GIVAUDAN L & CIE SA D23 E17 =FR 2399-240
Tri:methyl-octanol(s) and di:methyl-nonanol(s) odorants - 12500B/07
GORY/ 08.05.73 GORYAEV M I C03 D13 *SU -517-293
Storage stable protein-fat concentrate powder prodn. - 36513B/19
GREC 20.10.77 GREEN CROSS CORP B04 D13 =GB 2006-596
Preventing intestinal diverticulum - 29674B/15

HAAS- 27.10.77 HAAS W E & SOHN D14 *DT 2748-190
Roasting and baking oven with indirectly heated muffles - 35500B/19
HARA/ 06.09.77 HARA K A97 D23 H07 (A23) *J5 4040-803
Removing impurities from mineral, animal, vegetable oil etc. - 35850B/19
HENK 04.12.67 HENKEL KG AUF AKTIEN B05 C03 D25 E14 (D22) =DS 642-065
Nitro-alkyl-N-phenyl carbamates - 35910F/00
HENK 13.10.69 HENKEL KG AUF AKTIEN D18 =J7 9008-721
Leather fatting agents - 28198S/16
HENK 16.04.74 HENKEL KG AUF AKTIEN D22 E17 (E15) =DS 2418-362
Anhydrous, deodorising cosmetic prods esp. aerosols - 72481W/44
HENK 07.06.74 HENKEL KG AUF AKTIEN D23 E15 =DS 2427-500
Acetals useful in perfumery - 84972W/52
HENK 29.07.77 HENKEL KG AUF AKTIEN D25 E33 =BR 7804-876
Prepn. of cation-exchanging aluminosilicate(s) - 08024B/05
HENK 05.08.77 HENKEL KG AUF AKTIEN D15 E33 J01 =FR 2399-383
Mfr. of aluminosilicate cation exchangers contg. surfactants - 09982B/06
HEWI- 02.02.77 HEWITT SOAP CO INC D25 E19 (D21) *US 4151-105
Low pH milled synthetic detergent bar - 36994B/19
HIEJ 12.09.77 HITACHI PLANT ENG CONS D15 J01 *J5 4043-183
Electrodialysis appts. e.g. for water desalination - 36341B/19
HIGA- 06.09.77 HIGASHIMARU SHOYU KK D13 (D16) *J5 4041-395
Seasoning suitable for Japanese cooking - 36033B/19
HITA 09.09.77 HITACHI KK D15 *J5 4041-271
Treating domestic waste water - 35970B/19
HITA 09.09.77 HITACHI KK D15 K07 =J5 4041-272
Radioactive waste disposal control - 26366B/14
*HITA 09.09.77 HITACHI KK D15 *J5 4041-556
Treating organic effluent contg. large amt. of nitrogen components - 36053B/19
*HITA 09.09.77 HITACHI KK D15 J01 K06 *J5 4042-375
Operation of reverse osmotic equipment - 36216B/19
*HITA 12.09.77 HITACHI KK D15 J01 *J5 4043-183
Electrodialysis appts. e.g. for water desalination - 36341B/19
*HITB 30.12.70 HITACHI CHEMICAL KK D15 *J7 9008-623
Concentration of slurries, e.g. contg. phenol - 36430B/19
*HITD 13.09.77 HITACHI CABLE KK D15 M14 *J5 4043-133
Treating metal washing water - 36309B/19
*HITD 13.09.77 HITACHI CABLE KK D15 M14 *J5 4043-134
Treating prim. and sec. metal-washing waters - 36310B/19
HOFF 24.08.71 HOFFMANN-LA ROCHE INC B04 D16 =US 4151-268
Antibodies specific for 5-substd. barbituric acid derivs. - 15597B/08
HOFF 01.03.74 HOFFMANN-LA ROCHE AG A97 B05 D13 E19 =J7 9008-649
Acetylene-carbinols isomerised to alpha-beta unsatd. oxo-cpds. - 60808W/37
HOUS- 08.02.75 HOUSE SHOKUHIN KOGY D13 =J5 1125-768
Antioxidation treatment of foodstuff contg. oil and fat - 36372B/19
*HOUS- 08.02.75 HOUSE SHOKUHIN KOGY D13 *J7 9007-861
Antioxidation treatment of foodstuff contg. oil and fat - 36372B/19
HUGO- 27.02.73 SOC ET HUGONNET D13 =DS 2404-848
Soft cheese mould cells - 64910V/37
HURK/ 21.10.77 HURKMANS A D11 =NL 7711-612
Volumetric depositor for paste esp. edible paste - 31576B/17
HYDR- 21.01.74 HYDROCYCLONICS CORP D15 J01 =DS 2501-547
Rotary screen dewatering appts. - 27301W/16

*ICIL 19.01.77 IMPERIAL CHEM INDS LTD D15 E16 H03 *GB 1545-401
Oil containment on water surface - 35763B/19
ICIL 02.08.77 IMPERIAL CHEM INDS LTD A97 D16 E13 (D17) =FR 2399-435
Enzyme fixed to support - 08018B/05
ICIL 02.08.77 IMPERIAL CHEM INDS LTD A97 D16 E13 (D17) =J5 4041-383
Enzyme fixed to support - 08018B/05
ICIL 09.08.77 IMPERIAL CHEM INDS LTD D16 (D13) =BR 7805-083
Industrial aerobic fermentation - 11897B/07
IGCC- 20.10.77 IGC CORP D15 E36 J04 =DT 2845-748
Regenerator for wet spent active carbon - 33878B/18
IKED- 18.07.75 IKEDA BUSSAN KK D15 F07 H03 J01 =J7 9008-636
Collection of mineral oils floating on water - 18750Y/11
*INFL 15.09.76 INT FLAVORS & FRAGR INC D25 E17 (D23) *US 4151-103
Perfumed soap compsn. prepn. - 36992B/19
INFL 04.02.77 INT FLAVORS & FRAGR INC B05 D13 E15 (B07) =US 4151-309
Alpha-substd.-3,3-di:methyl-2-norbornane-methanol cpds. - 21476A/11
*INFL 08.03.78 INT FLAVORS & FRAGR INC D23 E13 *US 4151-181
Maltyl tiglate - 37036B/19
*INMI= 23.01.76 IND MICROORG SELECT C03 D13 (D16) *SU -590-989
Strains of Micrococcus glutamicus producing L-lysine - 36588B/19
*INRE- 01.11.77 IND RES INST D15 E36 J01 *DT 2837-595
Deoxygenation of water using oxygen-free nitrogen - 35614B/19
INRG 06.08.75 INST NAT RECH AGRON A97 D16 =GB 1545-545
Enzymatic processes using microorganisms in polymer matrix - 09340Y/06
INRG 27.10.77 INST NAT RECH AGRON C02 D13 =DT 2846-956
Orotic acid and urea feedstuff additive - 18062B/10
INTT 06.08.77 INT STAND ELEC CORP D11 =FR 2399-624
Dough proving oven ventilating system - 14390B/08
IONI 25.03.70 IONICS INC D15 J04 #DS 2014-498
Determination of carbon in polluted aqueous solutions - 19285R/12
*ISHH 02.09.77 ISHIHARA INDUSTRIES KK B04 D16 *J5 4041-393
Xanthomycin-type antibiotic A-5945 - 36032B/19
*ITOH/ 08.10.77 ITCH K D16 *WP 7900-216
Composting appts. e.g. for municipal garbage - 37125B/19

JANA- 01.08.77 JANAR CO INC A96 B06 D21 (A25) =J5 4041-598
Fluorided dental floss - 16236B/09
JAPE 11.11.75 JAPAN EXLAN KK A97 D15 J01 =J7 9008-633
Adsorbent for liquid wastes - 69446Y/39
JAPE 17.11.75 JAPAN EXLAN KK A97 D15 J01 =J7 9008-634
Granular absorbing agent mfr. from activated sludge - 47579Y/27
JAPG 01.02.75 NIPPON ZEON KK D15 J01 (D13 D16) =J5 1101-790
Device with hollow semi-permeable fibres bundle - 61921X/33
JAPG 01.02.75 NIPPON ZEON D15 J01 (D13 D16) =J7 9008-551
Device with hollow semi-permeable fibres bundle - 61921X/33
JAPM 25.03.76 JAPAN MONOPOLY CORP D22 E13 =J7 9008-680
Umbelliferone prepn. - 80385Y/45
*JENP 23.01.76 JENAPHARM VEB C03 D13 (D16) *SU -590-989
Strains of Micrococcus glutamicus producing L-lysine - 36588B/19
JOHJ 02.06.77 JOHNSON & JOHNSON A96 D22 E12 =BR 7803-538
Binder for orthopaedic bandage - 90017A/50

JOHJ 27.10.77 JOHNSON & JOHNSON D21 L02 =DT 2844-959
Low temp. maturing dental glaze - 78140A/43
JOHJ 27.10.77 JOHNSON & JOHNSON A96 D22 (A26) =DT 2846-714
Orthopaedic hardenable bandage of improved water resistance - 11668B/06
JOHJ 27.10.77 JOHNSON & JOHNSON D21 L02 =GB 2006-747
Low temp. maturing dental glaze - 78140A/43
*JOHM 14.09.77 JOHNS MANVILLE CORP D13 E33 (D23) *GB 2006-729
Coarse synthetic hydrous calcium silicate - 35797B/19
*JOHN/ 28.04.76 JOHNSON W E D16 *GB 1545-298
Beer home brewing container - 35761B/19
JOUL/ 21.10.77 JOULIN G D11 =NL 7810-546
Mfr. of loaves of bread, esp. French sticks - 14242B/08

KAKE 09.03.76 KAKEN KAGAKU KK B04 C03 D16 =J7 9008-641
New antibiotic 5057, esp. effective against Gram positive bacteria - 76509Y/43
KANE 12.01.74 KANEBO KK D13 =J5 0100-261
Chewing gun with improved flavour, prodn. - 36373B/19
*KANE 12.01.74 KANEBO KK D13 *J7 9007-868
Chewing gun with improved flavour, prodn. - 36373B/19
*KANF 06.09.77 KANEGAFUCHI CHEM KK D16 *J5 4041-381
Aerobic incubation of microorganisms - 36022B/19
*KANF 09.09.77 KANEGAFUCHI CHEM KK D13 F01 *J5 4042-423
Protein fibre or film mfr. - 36246B/19
KAOS 25.02.77 KAO SOAP KK D25 E11 =GB 1545-456
Metal wire cleaning pad, e.g. for cooking utensils - 40395A/23
KAOS 01.08.77 KAO SOAP KK D25 E13 (D16) =FR 2399-438
Dehydration purification of hydrated sophorolipid - 14599B/08
*KARL/ 01.11.77 KARLSSON L H D23 *DT 2847-422
Heat candle mfr. - 35708B/19
*KAWI 12.09.77 KAWASAKI STEEL KK D15 L02 M24 *J5 4042-848
Treating waste water discharged from leaching of blast furnace slag - 36277B/19
*KDFO= 22.05.72 KRASD FOOD IND RES D23 J01 *SU -543-416
Cleaning and classifying sunflower seeds - 36561B/19
*KELT- 27.10.77 KELTEK PROCESSING A89 D16 G06 M25 (A35) *US 4150-977
Recovery of silver and film base from photographic materials - 36926B/19
*KEYS- 01.11.77 KEYSTONE FOODS CORP D12 *DT 2847-286
Densified frozen, meat-fibre slices with surface grooves - 35699B/19
*KIFO= 07.10.76 KIEV FOOD IND TECH D16 (D11) *SU -612-954
Baker's yeast prodn. by fermentation of sugar prod. waste - 36670B/19
KIKK 27.12.72 KIKKOMAN SHOYU KK A97 D13 =J4 9086-562
Acidic peptide soln. prodn. for use as a beverage - 36448B/19
*KIKK 27.12.72 KIKKOMAN SHOYU KK A97 D13 *J7 9008-731
Acidic peptide soln. prodn. for use as a beverage - 36448B/19
KIRI- 06.09.77 KIRIN SEEGRAM KK B04 D16 =J5 4041-801
Antitumour substance KS-2-A prepd. by fermentation - 76734A/43
*KLEW 24.10.78 KLEINEWEFERS D15 *DT 2846-169
Pulp clarifying plant - 35648B/19
*KNYL/ 13.12.77 KNY L A97 D25 E19 K07 (A25) *DL -134-119
Aq. soln. cleaning radioactively contaminated instruments etc. - 35328B/19
*KOEB/ 22.11.77 KOEBNER A D23 F09 *US 4151-160
Removing unsaponifiable cpds. from tall oil heads - 37028B/19
*KOMI/ 01.09.77 KOMIYA Y D11 *J5 4041-362
Glutinous rice cracker prodn. - 36018B/19
*KONG- 08.09.77 KONGO KK D12 *J5 4041-356
Synthetically coloured meat - 36016B/19
KONN 16.05.75 GIST-BROCADES NV B03 C02 D13 =GB 1545-474
Antibiotic dihydromocimycin and its salts - 90985X/49
KONN 16.05.75 GIST-BROCADES NV B03 C02 D13 =NL 7811-282
Antibiotic dihydromocimycin and its salts - 90985X/49
KONN 20.07.77 GIST-BROCADES NV A81 B04 D25 (A96 A97 D16) =FR 2399-434
Enzyme particles resistant to powdering under pressure - 06068B/04
*KREM= 03.03.76 KREMENCHUG CAR WORK D17 *SU -612-959
Sugar beet cutter - 36674B/19
KROF/ 02.11.77 KROFCHAK D D16 L02 M11 (M25) #DT 2748-994
Waste liquids and sludge treatment - 88321A/49
*KRPP 21.10.77 KRUPP F GMBH D15 *DT 2747-215
Desalination plant for distilled water and salts recovery - 35460B/19
*KUBI 10 09.77 KUBOTA KK D15 *J5 4042-362
Dehydration of sludge - 36208B/19
*KUBI 10.09.77 KUBOTA KK D15 *J5 4042-850
Aerobic digestion of human waste - 36279B/19
KUNZ/ 31.08.76 KUNZ P D13 =DS 2639-117
Pumpkin peeling machine - 19796A/11
*KURS 06.09.77 KURARAY KK B03 C02 D23 E13 *J5 4041-809
Perfume agent beta,gamma-epoxy ketone(s) - 36068B/19
KYOW 08.03.66 KYOWA HAKKO KOGYO B04 D16 =DS 1617-397
Treatment of streptococcus haemolyticus and resultant - 28655F/00
KYOW 19.02.71 KYOWA HAKKO KOGYO K B03 D13 E13 =J7 9008-752
Flavonoid polyglucosides - 58217T/37
KYOW 14.04.71 KYOWA HAKKO KOGYO B03 D16 =J4 8001-190
Heterocyclic ribosides microbiological prodn - 74405T/47
KYOW 14.04.71 KYOWA HAKKO KOGYO C B03 D16 =J7 9008-755
Heterocyclic ribosides microbiological prodn - 74405T/47
KYOW 22.07.75 KYOWA HAKKO KOGYOK D12 =J7 9008-735
Dried Euphausia pacific prodn. - 18799Y/11
*KYOW 02.09.77 KYOWA FERMENTATION KK B03 D16 E13 *J5 4041-386
L-Proline prodn. - 36025B/19

LABS- 07.06.74 SOC LAB D15 J01 =US 4151-091
Separation of solid particles from fluids - 74165W/45
LAND- 19.10.77 LANDUSTRIE SNEEK D15 =NL 7711-505
Aerator with vertically adjustable drive mechanism - 31567B/17
*LAUE/ 01.12.77 LAUERMANN G A97 D15 J01 (D23) *DL -134-192
Breaking oil-water or fat-water emulsions - 35337B/19
*LCHO 01.08.77 CHOAY SA A96 B04 D16 *FR 2399-250
Antibacterial serum fraction - 35725B/19
*LEEC= 02.08.76 LENGD ECONOM ACAD D15 *SU -613-774
Wash-water collection and discharge appts. - 36779B/19
*LEEH/ 13.09.77 LEE H L A96 D21 G02 (A14 A82) *US 4150-485
Liq. paint-on dental restorative compsns. - 36855B/19
*LEEP 26.10.77 LEE PHARMACEUTICALS A96 D21 G03 *GB 2006-792
Orthodontic adhesive for bonding teeth to brackets - 35802B/19
*LEEP= 22.12.76 LENGD EPIDEM MICROB D16 *SU -604-343
Live combined parotitis and measles vaccine prodn. - 36605B/19
LESA 03.07.75 SOC IND LESAFFRE D16 (D11) =DS 2629-952
Dried bakers yeast for sugary dough and yeast strains - 05601Y/04
LINM 16.09.71 LINDE AG D15 =J7 9008-031
Effluent purification process - 10858U/08
*LIOC 08.09.77 LION DENTIFRICE KK A96 D21 (D25) *J5 4041-909
Shampoo compsn. - 36117B/19
*LIOC 20.10.77 LION DENTIFRICE KK B06 D21 E32 *DT 2845-822
Caries-preventing dental treatment compsn. - 35643B/19
*LIOY 07.09.77 LION FAT & OIL KK A97 D22 (A14 A25) *J5 4040-810
Film-forming cleaning compsn. - 35854B/19
*LITO= 17.04.70 LITOVSK BUTTER CHEE D13 *SU -501-742
Soured cream having gel consistency prodn. - 36496B/19
LOHM 16.09.77 LOHMANN KG D22 F07 =DK 7804-091
Elastic net bandage - 26246B/14

*MAGN- 21.10.77 MAGNETO-CHEMIE BV D15 E36 J03 *NL 7711-588
Electrolytic halogen prodn., halogenation or oxidation - 36457B/19
*MALI/ 03.04.78 MALIK L W D15 *US 4151-085
Water purificn. in mechanical and germicidal filters - 36979B/19
MARI- 16.09.77 MARINA SEAFOODS CON D12 =DK 7704-106
Transportation and storage of fresh fish - 30117B/16
MARI- 16.09.77 MARINA SEAFOODS CON D12 =DT 2840-901
Transportation and storage of fresh fish - 30117B/16
*MARI- 28.09.77 MARISCOMAR IND COM D12 *BR 7706-466
Crab meat extraction process - B/19
*MARK/ 12.09.74 MARKOVSKII V I A60 D22 E16 *SU -502-003
Chloro-di:nitro-methyl bis-methyl-carbamyl hydrazine - 36499B/19
MAUG 09.07.77 AUGSBURG NURNBERG AG D15 =J5 4042-366
Water desalination system - 06241B/04
MEAC 22.08.77 MEAD CORP A92 D13 =BR 7805-399
Aseptic packaging of acid foodstuffs - 15978B/09
MEIJ 23.08.76 MEIJI SEIKA KAISHA B03 D16 E13 (D17) =US 4151-041
Microbiological malto-pentose and malto-hexose prodn. - 18097A/10
*MEIJ 31.10.77 MEIJI SEIKA KAISHA B04 D16 *D1 2846-320
Antibiotic BN-213 with antibacterial activity - 35651B/19
MEIJ 31.10.77 MEIJI SEIKA KAISHA B04 D16 =GB 2006-750
Antibiotic BN-213 with antibacterial activity - 35651B/19
MERE 30.09.75 MERCK PATENT GMBH D13 E14 =DS 2543-543
Compsn. for determining degree of oxidn. of fats - 25399Y/15
MERI 01.08.77 MERCK & CO INC B04 D16 =FR 2399-252
Antigenic meningococcal polysaccharide with high mol. wt. - 82019A
MERI 05.08.77 MERCK & CO INC B04 D16 =FR 2399-479
Preserving vaccine from polysaccharide(s) of Neisseria meningiti
07792B/04
MERI 19.09.77 MERCK & CO INC B04 C03 D16 =DK 7804-118
Prepn. of antigenic and immunogenic herpes virus sub-unit - 26475B
MERI 19.09.77 MERCK & CO INC B04 C03 D16 =NO 7803-143
Prepn. of antigenic and immunogenic herpes virus sub-unit - 26475B
*METZ 22.10.77 METZELER AB A88 D15 J01 *DT 2747-469
Filtration plant for sepg. oil particles from effluents - 35465B/19
MGEI 14.07.70 MASCH H GEIGER D15 =DS 2034-796
Sewage sand trap - 08494T/06
*MIHA/ 07.09.77 MIHASHI K D15 *J5 4041-269
Nitrogen removal from waste water - 35968B/19
MILE 15.08.77 MILES LABORATORIES INC B04 D16 J04 =BR 7805-21
Device for liq. control soln. prepn. - 14632B/08
MILE 28.10.77 MILES LABORATORIES INC D13 =DT 2842-070
Juicy self-basting sausage-like food prods. - 07733B/04
MILE 28.10.77 MILES LABORATORIES INC D13 =GB 2006-602
Juicy self-basting sausage-like food prods. - 07733B/04

MILE- 09.01.78 MILERB AG D13 *BE -873-360
Preserving herbs to avoid loss of volatiles - 35303B/19
MINN 29.07.77 MINNESOTA MINING CO A96 D21 (A14) =J5 4041-337
Sun protection compsns. - 14474B/08
MITC 05.03.75 MITSUI PETROCHEM IND KK A97 D16 F09 =J7 9008-583
Cultivating mushrooms - 80393X/43
MITK 04.06.76 MITSUI TOATSU CHEM INC A97 D15 J01 (A17) =J7 9008-637
Vegetable fibrous oil-absorbing material prepn. - 07465A/04
MITQ 19.12.75 MITSUBISHI DENKI KK D22 E36 J03 (J01) =GB 1545-635
Ozonisation process utilising fine pored synthetic zeolite - 47271Y/27
MITQ 12.09.77 MITSUBISHI ELECTRIC CORP D15 J01 *J5 4043-171
Sludge freezing and fusing appts. - 36332B/19
MITR 08.09.77 MITSUBISHI RAYON KK A97 D15 (A17 A23) *J5 4041-553
Oil-absorbing waste water treating material - 36052B/19
MITR 12.09.77 MITSUBISHI RAYON KK A88 D15 J01 (A14 A32) *J5 4042-424
Hollow fibres for ultrafiltration membranes - 36247B/19
MITU 06.09.77 MITSUBISHI CHEM IND KK B03 D13 E13 *J5 4041-898
Purifying stevioside - 36109B/19
MITU 06.09.77 MITSUBISHI CHEM IND KK A91 B03 D13 E13 *J5 4041-899
Stevioside purificn. from soln. - 36110B/19
MITU 06.09.77 MITSUBISHI CHEM IND KK B03 D13 E13 *J5 4041-900
Purificn. of aq. soln. of stevioside contg. calcium hydroxide - 36111B/19
MITU 07.09.77 MITSUBISHI CHEM IND KK B04 D16 *J5 4041-392
Prepn. of plasmid used as vector in gene rearrangement - 36031B/19
MOFO= 15.01.76 MOSC FOOD IND TECH D17 *SU -576-884
Dextrin prodn. from starch - 36575B/19
MOMD 22.03.76 MOSCOW MEAT DAIRY INST D13 *SU -613-750
Freezing liquid food products - 36761B/19
MOMI 19.06.75 MORINAGA & CO LTD D13 =J7 9008-738
Confectionery prods. contg. (beta)-lactose - 11758Y/07
MONS 05.11.75 MONSANTO CO D22 E15 =GB 1545-561
Air freshener compsn. - 32763Y/19
MONS 15.12.75 MONSANTO CO D22 E15 =GB 1545-562
Air fresheners contg. cycloalkyl alcohol derivs. - 43934Y/25
MONS 15.12.75 MONSANTO CO D22 E15 =GB 1545-563
Air fresheners contg. cycloalkyl alcohol derivs. - 43934Y/25
MONS 01.11.76 MONSANTO CO B05 D21 E17 *US 4151-271
Oral compsns. for inhibiting dental calculus - 37076B/19
MONT 13.08.76 MONTEDISON SPA A60 C03 D23 E14 =US 4151-201
(2)-Hydroxy-benzaldehyde(s) prepn. - 14434A/08

NAAR 22.07.77 NAARDEN INT NV D22 E19 =J5 4041-328
Chemically active deodorant compsn. - 10235B/06
NAKA/ 04.08.75 NAKAI S D25 E13 (E34 E36) =J7 9008-482
Detergent compsn. for cleaning tableware, wood, metal, leather - 21012Y/12
NALC 01.03.76 NALCO CHEMICAL CO A12 D15 (A91) *US 4151-202
Free radical polymerisation of di:allyl di:methyl ammonium chloride - 37046B/19
NALC 05.06.78 NALCO CHEMICAL CO D15 *US 4151-079
Regenerating ion exchange resins used with boiler feed water - 36974B/19
NATR 22.09.71 NATIONAL RES DEV CORP B04 D16 =J7 9008-318
Enzyme prepns from nocardia microorginisms - 19943U/15
NEDR- 28.10.77 NEDRE NORRLANDS D13 =DT 2845-486
Whey based products prepn. from milk serum from cheese or caseinate - 16020B/09
NEDR- 28.10.77 NEDRE NORRLANDS PRO D13 =GB 2006-601
Whey based products prepn. from milk serum from cheese or caseinate - 16020B/09
IEST 02.08.76 SOC PRODS NESTLE D13 =GB 1545-333
Fresh cheese having high storage stability - 12609A/07
IEST 25.10.77 SOC PROD NESTLE SA D11 =GB 2006-599
Instant pasta prepn. with high liq. absorption capacity - 33671B/18
IEST 25.10.77 SOC PROD NESTLE SA D11 =NL 7810-614
Instant pasta prepn. with high liq. absorption capacity - 33671B/18
IIBU- 12.09.77 NIPPON BLG MAINTENA D15 *J5 4042-846
Agent for treating pollutants and polluted waste water - 36276B/19
IIED/ 04.07.77 NIEDECKER H D22 =DS 2730-121
Dividing filled hose esp. sausage string - 04313B/03
IIHA- 09.09.77 NIPPON HAIGO SHIRYO D13 *J5 4041-360
Strengthening agent for coating egg-shells - 36017B/19
IIHS 09.09.77 NIPPON SURFACTANT KK A96 D21 *J5 4041-336
Cosmetic compsn. contg. oil-swelling inorganic powder (gel) - 36009B/19
IIHS 09.09.77 NIPPON SURFACTANT KK D21 E19 G01 *J5 4042-378
Modified clay material used as cosmetic gelling and thickening agent - 36218B/19
IKN 07.09.77 NIPPON KOKAN KK D15 M24 *J5 4041-550
Steel plant waste treatment - 36049B/19
IPK 23.06.76 NIPPON KAYAKU KK B02 D16 =J7 9008-754
Penicillin or cephalosporin derivs. prodn. - 11599A/06
IPK 18.08.77 NIPPON KAYAKU KK B03 D16 *J5 4041-387
3-S-1′-Phenyl:ethylamino-propylamino-bleomycin deriv. prepn. - 36026B/19

*NIRA 09.09.77 UNITIKA KK A91 D15 J01 M25 (A25) *J5 4042-386
Adsorbent with excellent selectivity for metal ions - 36222B/19
*NIRA 31.10.77 UNITIKA KK A96 B04 D22 (B05) *DT 2748-858
Polymer articles prodn. with reduced thrombogenic tendency - 35563B/19
NITL 13.09.73 NITTO ELECTRIC IND KK A94 D15 (A18 A35) =J5 0054-578
Mfg. chemically resistant porous sheet - 36414B/19
*NITL 13.09.73 NITTO ELECTRIC IND KK A94 D15 (A18 A35) *J7 9008-354
Mfg. chemically resistant porous sheet - 36414B/19
*NITL 09.09.77 NITTO ELECTRIC IND KK A88 D15 J01 *J5 4042-376
Reverse osmosis sepn. process - 36217B/19
NITN 20.09.76 NIHON TOKUSHU NOYAK B05 C01 D22 =DL -134-187
(N)-Sulphamoyl phosphoric acid ester amide derivs. - 23602A/13
NMHB 19.09.77 NORDISCH MASCH R BAADER D12 =SW 7714-382
Fish fillet skinning machine - 38622A/22
*NMHB 01.02.78 NORDISCH MASCH R BAADER D12 *DS 2804-232
Fish processing conveyor - 35445B/19
*NMHB 22.02.78 NORDISCH MASCH R BAADER D12 *DL -134-042
Fish skinning machine - 35308B/19
*NNSH 07.09.77 NIPPON SHINYAKU KK D13 *J5 4041-368
Flavoured seasoning mfr. - 36021B/19
NODH 05.05.72 NORDSEE DEUTSCHE HO GMBH D12 =DS 2222-205
Shaped frozen food - 15004U/11
NOGU/ 28.04.76 DIAZ NOGUEIRA E D15 E36 J03 =US 4151-077
Treating aq. effluent to remove mercury - 61260Y/35
*NOSC 17.02.77 NOSCO PLASTICS INC A88 D14 *US 4150-496
Plastic trays for use in fruit dryer - 36856B/19
*NOVO/ 14.05.76 NOVOZHILOV E V D16 *SU -612-962
Mono:saccharide-contg. soln. prepn. - 36677B/19

OAKE- 20.07.78 OAKES E T LTD D13 =GB 2006-597
Porous chocolate prodn. using continuous mixer - 14447B/08
*OETT/ 16.12.77 OETTEL R D22 *DL -134-433
Sterilising system - 35415B/19
*OGAS/ 12.09.77 OGASAWARA T A97 D15 E34 L02 *J5 4043-169
Making industrial waste harmless - 36330B/19
*OMRO 08.09.77 OMRON TATEISI ELTRN KK B04 D16 J04 *J5 4041-191
Enzyme electrode assembly for determn. of glucose and oxygen - 35926B/19
OREA 22.12.65 L'OREAL SA D21 E13 =US 4151-301
Aminoacid-amine salts containing sulphur - 27726U/20
OREA 04.06.71 L'OREAL SA A96 D21 E21 =US 4151-162
Pyridine-azo dyes - 20716X/12
*ORIY 05.09.77 ORIENTAL YEAST KK D11 *J5 4041-343
High quality bread mfr. - 36013B/19
*OTHM/ 11.06.76 OTHMER D F D15 *US 4151-075
Continuous separation of two liquids of differing density - 36972B/19

PASE 01.08.77 PASSAVANTW MICHELBACHER D15 =FR 2399-272
Sewage aerator cowl - 12204B/07
PATP- 02.09.77 PATPAN INC . D18 J08 =BR 7805-726
Flat material drying machine - 20291B/11
*PECE- 02.08.77 PEC-ENGINEERING D15 *FR 2399-386
Surface aerator for biological purificn. of waste water - 35740B/19
PENN 06.04.76 PENNWALT CORP D11 E16 (E33 E34) #GB 1545-320
Dough improver compsn contg oxidising agent - 38025X/20
PENN 16.08.76 PENNWALT CORP A96 D21 =GB 1545-684
Acrylic dental compsn. - 16212A/09
PERU 09.09.76 PORTALS WATER TREAT D15 =GB 1545-559
Nozzle device for jetting mixt. of gas and liquid into liquid - 61860A/34
PETZ- 26.09.77 MASCH PETZHOLDT J S D13 =BR 7806-317
Continuous cocoa paste roasting process - 08081B/05
PFIZ 16.04.74 PFIZER INC B04 C03 D16 (D13) =J7 9008-760
Antibacterial antibiotics from Actinoplanes auranticolor ATCC 31011 - 72489W/44
PFIZ 06.08.75 PFIZER INC B02 C02 D13 =J7 9008-679
Antimicrobial 1,3-dihydro furo-(3,4-b) quinoxaline 4,9-dioxides - 88659X/47
PFIZ 12.11.76 PFIZER INC D23 E13 (D13) =DL -134-349
Gamma pyrone(s) esp. maltol and ethyl maltol prepn. - 34952A/20
PHIG 03.08.77 PHILIPS GLOEILAMPEN NV B04 D16 J04 =FR 2399-666
Appts. for component concn. determn. in biological fluid - 12524B/07
*PHIM 24.01.77 PHILIP MORRIS INC D18 *US 4150-677
Extn. of tobacco flavouring volatiles - 36879B/19
PHIM 08.08.77 PHILIP MORRIS INC D18 =J5 4041-398
Swelling tobacco by impregnating with liquid carbon di:oxide - 87871A/49
*PHYS= 23.07.74 PHYS CHEM INST C04 D15 K08 *SU -582-727
Irradiation of farm and domestic waste water purificn. residue - 36577B/19
*POKK 03.09.77 POLA KASEI KOGYO KK A96 D21 E12 (E17) *J5 4041 335
Cosmetic compsn. contg. aq. sodium lactate soln. - 36008B/19
*POME= 05.04.76 POLT MED STOMATOLOGY INS D22 L02 *SU -613-755
Material for mfr. of artificial teeth - 36762B/19

*PRES= 20.07.76 PRESERV VEG DRYING D13 *SU -595-891
Dehydration of potatoes or vegetables - 36590B/19
PROC 13 01.75 PROCTER & GAMBLE CO A97 D21 =GB 1545-311
Keratinous materials protected against detergents - 56322X/30
PROC 03.06 77 PROCTER & GAMBLE CO D13 E13 =J5 4041-367
Dry mix for forming dietetic carbonated instant beverage - 88223A/49
*PROC 21.09.77 PROCTER & GAMBLE CO D13 *GB 2006-598
Fabricated potato crisp mfr. - 35780B/19
*PROC 12.10.77 PROCTER & GAMBLE CO D13 *GB 2006-810
Fluid shortening useful in frying or grilling of foodstuffs - 35803B/19

QPPP 19.09.73 Q.P. CORP D13 =J5 0053-572
Prepn. of emulsified foodstuffs stable at low temp. - 36375B/19
*QPPP 19.09.73 Q.P. CORP D13 *J7 9007-870
Prepn. of emulsified foodstuffs stable at low temp. - 36375B/19
QPPP 30.07.75 Q.P. CORP D13 =J7 9008-739
Acid emulsified food, e.g. mayonnaise, prodn. - 21083Y/12

*RAIT/ 31.10.77 RAITH A D22 *DT 2748-752
Long-lasting, odour-suppressing litter for small animals - 35553B/19
RANG 01.06.77 RANK HOVIS MCDOUGAL LTD D16 =BR 7803-491
Aerobic fermentation acceleration - 91709A/51
*RAUS/ 23.08.78 RAUSCHENBERG R R D16 *BR 7805-444
Evaporator integral with alcohol distn. appts. - B/19
*RAVA/ 02.11.77 RAVA A D22 *DT 2748-882
Plaster protecting wound against infection - 35566B/19
REAK- 02.06.77 REAKTOR-BRENNELEMEN D15 K07 =BR 7803-398
Decontaminating radioactive nuclear fuel prodn. effluent - 89897A/50
*RECO- 03.08.77 RECOVERY SYST INC C03 D13 *US 4150-795
Conversion of waste food to animal feed - 36896B/19
REDK- 19.06.75 REDKEN LABORATORIES A96 D21 =GB 1545-297
Sprayable hair curl fixer - 02285Y/02
REGC 23.09.77 UNIV OF CALIFORNIA B04 D16 =SW 7806-087
Purifying nucleotide sequences for insertion into microorganisms - 80247A/45
*REIL/ 12.01.78 REILLY J D12 *US 4150-521
Appts. for packaging meat joints in sleeve of elasticated netting - 36858B/19
RHON 18.05.77 RHONE-POULENC INDUSTRIES A91 B04 C03 D13 =FR 2399-214
Pure protein(s) prodn. from milk and milk products - 84094A/47
RHON 04.08.77 RHONE-POULENC INDUSTRIES B02 C02 D13 =FR 2399-247
Antibiotic 35665 RP useful as animal growth promoter - 09974B/06
*RIKA 10.09.77 RIKAGAKU RES LABS KK D15 J01 M25 *J5 4042-387
Complex magnetic adsorbent for uranium - 36223B/19
ROMO- 03.08.77 ROMO N P D15 =BR 7804-969
Multicompartment activated sludge treatment tank - 87870A/49
ROMO- 03.08.77 ROMO NP D15 =FR 2399-385
Multicompartment activated sludge treatment tank - 87870A/49
ROQF 04.01.74 ROQUETTE FRERES SA C03 D13 F09 (D15) =DS 2500-200
Fluids recovering potato protein from amniotic liqs. - 48101W/29
ROTO- 31.10.77 ROTOCROP INT LTD D16 =DT 2847-674
Machine to chop vegetable waste for compost - 18082B/10
*RUTH/ 02.11.77 RUTHNER O D16 *DT 2846-604
Continuous mushroom prodn. - 35669B/19

*SAGA 09.08.77 SAGAMI CHEM RES CENTRE D23 E15 *J5 4041-859
7-Alkyl-nor:camphor perfume prepn. - 36092B/19
*SAGA 09.08.77 SAGAMI CHEM RES CENTRE D23 E15 *J5 4041-860
2-Chloro-2-cyano-7-alkylidene bi:cyclo(2,21) heptane prodn. - 36093B/19
*SAGA 09.08.77 SAGAMI CHEM RES CENTRE D23 E15 *J5 4041-861
Perfume component 7-alkylidene-nor:camphor - 36094B/19
SAKA 08.05.71 OTSUKA PHARM KK B04 D16 =J4 7043-290
Prepn. of new pepsin inhibitor PI-X - 36450B/19
*SAKA 08.05.71 OTSUKA PHARM KK B04 D16 *J7 9008-757
Prepn. of new pepsin inhibitor PI-X - 36450B/19
*SALI- 03.08.77 CIE SALINS MIDI EST C03 D13 *FR 2399-217
Non-proteinaceous nitrogen-based cattle lick - 35718B/19
*SANT/ 26.09.78 SANTANCHE L M D15 *BR 7806-547
Treatment of chemical and domestic effluents - B/19
SAPB 02.04.74 SAPPORO BREWERIES D16 =J5 0129-349
Cultivation of edible mushroom such as Shiitake - 36351B/19
*SAPB 02.04.74 SAPPORO BREWERIES D16 *J7 9007-695
Cultivation of edible mushroom such as Shiitake - 36351B/19
SARS 14.05.76 SARTORIUS MEMBRANFI GMBH A88 D15 J01 (A11 A32) =GB 1545-540
Cellulose triacetate osmotic membranes prepn. - 82861Y/46
*SCAN- 20.09.77 SCAN VAST EK FOR D12 *SW 7710-511
Sausage stuffer with stuffing tubes mounted on rotary holder - B/19
SCHA/ 24.09.76 SCHANZE R C03 D13 =DS 2643-093
Feed or feed additives for cattle from agricultural waste - 12320A/07
*SCHD 20.10.77 SCHERING AG D15 M25 (M14) *DT 2747-562
Metal recovery from chemical surface treatment waste waters - 35468B/19

SCHO- 28.10.77 SCHOXI AG D11 =GB 2006-600
Whipped foam for cakes - 72923A/41
SCHW- 28.07.77 VEB SYNTH WERK SCHWARZHE A96 D22 (A25) =J5 4042-893
Medical dressing prepd. from soft polyurethane foam - 86171A/48
SCMZ 17.03.77 SCM CORP D23 =DL -134-244
Rapid hydrogenation of soap-contaminated glyceride oil - 30207A/17
SCSP- 04.05.70 SCIENCE-SPECTRUM B04 D16 =J4 6006-848
Bacterial sensitivity testing to antibiotics and chemotherapeutics by
75625S/48
SCSP- 04.05.70 SCIE SPECTRUM INC B04 D16 =J7 9008-746
Bacterial sensitivity testing to antibiotics and chemotherapeutics by
75625S/48
SEAC- 31.05.72 SEACLEAN SA D15 H03 =US 4151-081
Hydromechanical liquid/liquid skimmer - 81644T/52
*SHEL 19.10.77 SHELL INT RES MIJ BV D23 E15 *NL 7810-355
Carvone prepn. - 36463B/19
*SHIN/ 07.09.77 SHINOZAKI M D22 J01 *J5 4041-288
Decolourising, deodorising agent prodn. from soft stone material
35981B/19
SHIS 11.04.77 SHISEIDO KK A96 D21 (A25) #US 4151-269
Hair cosmetics contg. polyether cpd(s). - 39164Y/22
*SHIS 09.09.77 SHISEIDO KK D24 E13 (E12) *J5 4041-908
Transparent soap prepn. - 36116B/19
*SHOY 06.09.77 SHOWA YAKUHIN KAKO KK A96 B07 D21 (A11) *J5 4041-322
Stable ointment base compsn. - 36003B/19
*SICL/ 19.05.77 SICLARI A D12 *US 4150-459
Domestic meatball maker - 36852B/19
*SIGM 19.11.76 SIGMA CHEM CO B04 D16 J04 *US 4151-043
Enzyme determn. in biological fluids esp. of aldolase - 36952B/19
SIGV/ 24.10.77 SIGVARD H C J D15 =WP 7900-230
Purificn. of water with magnetic sepn. of pptd. sludge - 31595B/17
*SILC 25.11.76 STILL C FA D15 H09 *US 4151-082
Settling unit for closed cycle circulated coke quenching wate
36976B/19
*SIMA/ 29.09.77 SIMARD A D12 *BR 7706-513
Fish-scaling machine - B/19
SMHL 10.01.76 SIMON HARTLEY LTD D15 =US 4151-231
Vertical axis aerating rotor for waste water - 27204Y/16
SMHL 20.10.77 SIMON-HARTLEY LTD B04 D16 (D13 D15) =DT 2845-55
Biological purificn. of waste water, fermentation of yeasts et
14223B/08
SMHL 20.10.77 SIMON-HARTLEY LTD B04 D16 (D13 D15) =NL 7810-53
Biological purificn. of waste water, fermentation of yeasts et
14223B/08
SNAM 20.10.77 SNAMPROGETTI SPA B07 D13 E13 (B03) =NL 7810-53
2,5-Di:alkyl-4-hydroxy-di:hydro:furanone prodn. - 31582B/17
SNOW 06.09.76 SNOW BRAND MILK PRODUCTS D13 =J5 3032-149
Readily cooked cheese hamburger - 36449B/19
*SNOW 06.09.76 SNOW BRAND MILK PRODUCTS D13 *J7 9008-732
Readily cooked cheese hamburger - 36449B/19
SODA- 29.07.77 SODASTREAM LTD D15 =BR 7804-898
Portable water carbonator for sparkling drinks - 84161A/47
*SOYU= 31.12.75 SOYUZVODOKANALPROEK D15 *SU -585-673
Sewage biological purification aerator - 36579B/19
SPOF 02.08.77 SPOFA SPOJENE PODNI B02 C02 D13 =FR 2399-416
2-Formyl-quinoxaline-1,4-di:oxide-cyano-acetyl hydrazone deriv
14438B/08
SQUI 22.06.70 SQUIBB E R & SONS INC B05 D15 E14 (B03 E13) =
7811-648
Tetrahydronaphthoxypropanolamines - 01836T/02
*STAR= 15.01.76 STARCH PRODS RES INST D17 *SU -576-884
Dextrin prodn. from starch - 36575B/19
STAU/ 29.09.75 STAUSBERG H D15 =GB 1545-595
Ultraviolet irradiation for continuous sterilization of water - 09439Y/
STEM 28.09.77 STEINMULLER L & C GMBH D15 J01 =BR 7806-380
Exchanger resin regeneration - 26332B/14
*STER 10.11.77 STERLING DRUG INC D15 *BE -871-813
Treating waste water by biological oxidn. and carbon adsorpt
35262B/19
*SUMH 07.09.77 SUMITOMO SHIPBUILD KK D15 *J5 4041-270
Treating waste water contg. heavy metal ions - 35969B/19
SUTR- 26.12.69 SUTRAMED SARL A27 D22 (A96) =DS 2063-099
Surgical sutures - 45321S/27
SVRA- 15.04.77 SVENSKA RAYON AB D15 J01 =US 4151-076
Liq. extn. process - 79387A/44

TAIS 06.03.73 TAISHO PHARMACEUT KK B04 D16 =J7 9008-759
Physiologically active E64 substance - 31398W/19
TAKE 31.03.77 TAKEDA CHEMICAL IND KK B02 D16 =US 4151-042
Maytansinol, maytanacin and maytansinol propionate pre
88577A/49
TAKE 04.08.77 TAKEDA CHEMICAL IND KK B04 D16 (D22) =FR 2
436
Antibiotic C-14482 A1, antibacterial and antitumour agent - 12493B
TAKE 06.08.77 TAKEDA CHEMICAL IND KK B02 C02 D22 E13 =FR 2
432
2-Carbamoyl-oximino-acetamido cephalosporin derivs. - 16259B/

TAKE 09.09.77 TAKEDA CHEMICAL IND KK B02 D16 *J5 4041-389
5'-Purine-ribonucleotide prodn. - 36028B/19
TAKE 09.09.77 TAKEDA CHEMICAL IND KK B02 D16 *J5 4041-390
5'-Purine ribonucleotide(s) prodn. - 36029B/19
TAKE/ 22.11.74 TAKEUCHI M D16 =J5 1063-245
Cultivation of edible mushrooms - 36352B/19
TAKE/ 22.11.74 TAKEUCHI M D16 *J7 9007-698
Cultivation of edible mushrooms - 36352B/19
TAKS 21.04.73 TAKASAGO PERFUMERY KK D13 (D16) =J4 9132-267
Beverage prepd. from Aloe leaves - 36374B/19
TAKS 21.04.73 TAKASAGO PERFUMERY KK D13 (D16) *J7 9007-869
Beverage prepd. from Aloe leaves - 36374B/19
TAKS 02.09.77 TAKASAGO PERFUMERY KK B03 D13 E12 *J5 4041-862
Per:acetyl steviol bioside tri:butyl:tin prepn. - 36095B/19
TAKS 02.09.77 TAKASAGO PERFUMERY KK B03 D13 E13 *J5 4041-863
Stevioside analogue prepn. - 36096B/19
TAMA- 02.09.77 TAMA SEIKAGAKU KENKYUSHO B03 D13 E12 *J5 4041-862
Per:acetyl steviol bioside tri:butyl:tin prepn. - 36095B/19
TANA 07.09.77 TANABE PHARMACEUTICAL KK D23 E19 *J5 4041-338
Perfume compsn. imparting almond or sponge-cake like odour - 36010B/19
TDCO 11.07.77 TELEDYNE INDUSTRIES D15 J01 *US 4151-092
Portable water filter with removable cartridge - 36984B/19
TEBB/ 27.10.77 TEBBENHOFF E D15 *DT 2748-084
Water clarification system for intensive fish farming - 35485B/19
TEEP 28.09.77 TEE PAK INC A97 DJ2 =BR 7806-375
Internally coated cellulose sausage casings - 13989B/07
TEEP 17.03.78 TEE PAK INC A97 D12 (A11 A35) *US 4150-697
Improving cellulosic sausage casing adhesion to filling - 36883B/19
TEIJ 14.06.72 TEIJIN KK A14 D22 G03 (A81 A96) =DS 2330-328
Pressure sensitive adhesive - 00594V/01
TEIJ 13.09.77 TEIJIN KK A88 D15 J01 (A21) =J5 4043-182
Permselective membrane contg. epoxy polymer - 88152A/49
TENC 22.08.77 TENNECO CHEMICALS A81 D22 E13 G03 =J5 4040-833
Aq. adhesive compsns. contg. polyoxymethylene oxazolidine cpds. - 82192A/46
TEXC 31.10.77 TEXACO DEV CORP D15 =DT 2845-914
Treating waste water contg. cyanide and formate(s) - 33367B/18
TEXC 31.10.77 TEXACO DEV CORP D15 =GB 2006-741
Treating waste water contg. cyanide and formate(s) - 33367B/18
THER- 29.12.72 THERMO KINETICS D14 J01 *US 4151-094
Moving belt filter employing rotating brush - 36986B/19
THOM 05.11.77 THOMAE K GMBH B02 D13 E13 *BE -871-772
Furo and thieno (3,2-d)-isothiazole-3-one-1,1 di:oxide(s) - 35252B/19
TISI/ 17.05.77 TISI G D13 *BR 7706-458
Flaked ice cream mfg. machine - B/19
TOAE- 12.09.77 TOHO AEN KK D15 =J5 4042-847
Reducing COD of effluent water - 25184B/13
TOAE- 12.09.77 TOHO AEN KK D15 =J5 4042-847
Reducing COD of effluent water - 25184B/13
TOKU 28.06.74 TOKUYAMA SODA KK D15 J01 =J7 9008-474
Heavy metal adsorption agent - 15461X/09
TOKU 08.09.77 TOKUYAMA SODA KK D15 J04 *J5 4041-194
Gas chromatographic determn. of organic substances in water - 35927B/19
TOKZ 05.04.71 TOKYO ORG CHEM IND KK A91 D15 =J4 7033-877
Water purificn. process control - 36357B/19
TOKZ 05.04.71 TOKYO ORG CHEM IND KK A91 D15 *J7 9007-746
Water purificn. process control - 36357B/19
TOPP 07.09.77 TOPPAN PRINTING KK D12 *J5 4041-355
Maintaining freshness of raw meat - 36015B/19
TOXF 06.09.77 TOHO BESLON KK B02 D16 E13 *J5 4041-391
Coproporphyrin-III prodn. - 36030B/19
OXN 17.01.72 TOYO BREWING KK D16 =J7 9008-758
Novel alkaline protease inhibitor, S-SI - 06377V/04
OXN 20.02.75 TOYO BREWING KK A97 B04 D16 J04 =J7 9008-549
Semi permeable, cellulose microcapsules contg. powdered adsorbent - 68361W/41
OYE 09.09.77 TOYO PULP KK A11 D15 J01 (A91) *J5 4042-385
Modified cellulose anion exchange material prepn. - 36221B/19
OYJ 27.04.76 TOYO SODA KK A85 D15 J03 (A91) =DS 2718-307
Fluorinated cation exchange resins - 83238Y/47
OYM 10.01.78 TOYO BOSEKI KK D15 J01 *BE -873-354
Semipermeable membrane fluid separator of hollow fibres - 35300B/19
SUJ/ 06.09.77 TSUJISAKA Y D16 E19 *J5 4041-385
Terpene alcohol ester synthesis - 36024B/19

JAGR= 11.06.74 UKR AGRIC MECHN ELE D15 J01 *SU -509-463
Liquid fractions separator and degreaser - 36507B/19
JBEI 02.09.77 UBE INDUSTRIES KK B05 C03 D23 E14 *J5 4041-838
4-Hydroxybenzoic acid deriv. prepn. - 36083B/19
JFOO= 14.05.76 UKR FOOD SUPPLY EQU D17 *SU -612-960
Cleaning of sugar juice extractor screen - 36675B/19
JGIN 29.07.77 UGINE KUHLMANN D15 J01 =BR 7804-900
Continuous prepn. of zeolite-A of uniform quality - 06080B/04

UNIC 10.05.73 UNION CARBIDE CORP D15 J01 =J5 0015-788
Ultra filtration using porous tubes - 83108V/48
UNIC 10.05.73 UNION CARBIDE CORP D15 J01 =J7 9008-471
Ultra filtration using porous tubes - 83108V/48
UNIC 25.08.77 UNION CARBIDE CORP D22 =BR 7805-478
Shrink wrapped stick of concertina folded tubular sausage casing - 15999B/09
UNIC 13.10.77 UNION CARBIDE CORP C04 D15 =GB 2006-743
Combined aerobic and anaerobic sludge digestion - 29750B/16
UNIL 05.11.76 LEVER BROTHERS CO D21 E13 =US 4151-304
Cosmetic water-in-oil emulsions - 62216A/35
UNIL 26.10.77 UNILEVER NV A97 D25 (A14 A25) =DT 2846-047
Stain removing compsn. esp. for use in cold rinse - 33336B/18
UNIL 31.10.77 UNILEVER NV D25 E19 =DT 2846-921
Fabric softener compsn. - 33373B/18
UNIL 28.10.78 UNILEVER LTD A97 D25 (A14 A25) =GB 2006-811
Stain removing compsn. esp. for use in cold rinse - 33336B/18
UNIS- 01.11.77 UNISCOPE INC A97 C03 D13 =DT 2813-117
Lubricating binder for animal feeds - 65374A/37
*UNIV 05.10.76 UNIV OF KANSAS D13 E13 *US 4151-178
Fatty acid ester(s) of ascorbic acid prodn. in high yield - 37034B/19
*UNIX 21.10.77 UNISEARCH LTD A88 D15 J01 K05 *DT 2845-797
Anisotropic, synthetic, multilayer, molecular sieve membrane - 35640B/19
UNIX 21.10.77 UNISEARCH LTD A88 D15 J01 K05 =GB 2006-643
Anisotropic, synthetic, multilayer, molecular sieve membrane - 35640B/19
*USAS 04.04.78 NAT AERO & SPACE ADMIN D15 J01 *US 4151-086
Aq. sample collection and distribution system - 36980B/19
*USAT 20.10.77 US DEPT ENERGY C03 D15 K08 (C04 D13 D22) *US 4151-419
Appts. for irradiating pathogen-contg. solids - 37117B/19
USHE/ 25.10.77 USHER T A D14 =NL 7810-500
Machine to trim heads of carrots, etc. for canning - 18055B/10
*USSH 17.05.78 US SEC OF HEALTH D15 J01 K06 *US 4151-089
Flow through counter current chromatography appts. - 36982B/19
UYMA- 20.10.77 UNIV MANCHESTER INS B04 D16 (D13 D15) =DT 2845-552
Biological purificn. of waste water, fermentation of yeasts etc. - 14223B/08
UYMA- 20.10.77 UNIV MANCHESTER INS B04 D16 (D13 D15) =NL 7810-531
Biological purificn. of waste water, fermentation of yeasts etc. - 14223B/08
UYRA- 04.08.77 RAMOT UNIV APP RES A96 B04 D16 (A11 A14) =FR 2399-442
Isocyanide derivs. of poly:hydroxy polymers - 14479B/08

VARO- 04.08.77 VAROSEPITESI TUDOMA D15 =FR 2399-384
Biological surface water purificn. - 14435B/08
*VENZ/ 26.07.76 VENZO D D11 *US 4150-935
Appts. for automatically cutting and rolling cannoli - 36910B/19
VEOS 02.03.77 VER OSTERR EISEN & STAHL D15 M12 =DL -134-077
Neutralising acid contg. liquors esp. metal cleaning liquors - 49760A/28
*VERN- 01.08.77 VERNIERS SA D16 E24 *FR 2399-467
Betalaine colourant prodn. from beet juice - 35748B/19
*VOSG/ 01.08.77 VOSGANIANTZ J J D23 E17 *FR 2399-239
Solid perfume compsn. contg. alkali soap gelling agent - 35722B/19
VUKE/ 10.12.76 VUKELIC B D17 =US 4151-004
Sugar cane milling roll unit - 58810A/33
VZUI/ 21.10.77 VAN ZUILICHEM D J D13 =NL 7807-872
Shelling cocoa pods by IR irradiation - 31580B/17

*WACH/ 28.10.77 WACHTEL S D22 E24 G04 *DL -134-191
Indicator for testing hot air sterilisation esp. for medicines - 35336B/19
*WARN 09.09.77 NIPPON WARNER LAMBE A97 D13 *J5 4041-364
Chewing gum compsn. with no sucrose and/or glucose - 36019B/19
WASS- 22.12.71 INST WASSERWIRTSCHA D15 =DL --94-329
Water oxygenator/chemical treatment plant - 11179U/09
*WATE- 06.10.77 WATER PURIFICATION D15 J01 *US 4151-084
Lamella separator for solids-contg. liq. - 36978B/19
WELC- 13.09.77 WELCH FOODS INC B07 D13 E24 (B04 D21) =GB 2006-802
Anthocyanin pigment recovery from plant materials - 24208B/13
*WERN 07.07.78 WERNER & PFLEIDERER D11 *DS 2829-937
Air circulation baking oven - 35447B/19
*WESI 07.06.76 WEST LABORATORIES INC A96 D22 E36 (A14) *US 4151-275
Stabilised iodine tincture - 37079B/19
WESS 17.08.76 WESTFALIA SEPARATOR AG D13 =DS 2636-882
Continuous mfr. of cream cheese from skimmed milk - 90107Y/51
*WIBA 11.09.78 WIBAU GMBH D15 *DS 2839-410
Scavenger for floating matter in sewage settling tank - 35449B/19
*WILL/ 08.11.76 WILLIAMS M A D13 *US 4151-306
Hydrolysis of keratin-contg. materials - 37089B/19
*WINK 02.11.77 FR WINKLER KG D11 *DT 2748-959
Dough dividing machine - 35578B/19
*WINK 02.11.77 FR WINKLER KG D11 *DT 2748-988
Dough dividing machine ejecting several portions simultaneously -

•WOLF/ 29.11.77 WOLF F A97 D18 (A11) *DL -134-190
Retaining moisture in e.g. tobacco using carboxy methycellulose - 35335B/19
WORL- 29.08.77 WORLD DEV LABS D15 J01 =BR 7805-596
Reducing impurity concn. of solution by reverse osmosis - 18520B/10
WRIL 26.09.77 WRIGLEY W JR CO D13 E17 =US 4151-270
Chewing gum for stimulating saliva flow, esp. for athletes - 65304A/37

•YABU/ 10.09.77 YABUTA K D15 M11 *J5 4042-363
Treatment of sludge contg. heavy metals - 36209B/19
•YAWA/ 10.09.77 YAWATA M D15 J01 *J5 4042-365
Liq. evaporation appts. - 36211B/19
YOKI- 13.12.71 YOKIJIRUSHI NYOGYO D13 =J7 9008-737
Yogurt prepn - 74861U/49

ZAID 01.10.71 MICROBIAL CHEM RES FOUND B05 D16 =J7 9008-747
New antibiotic - 52956U/37
ZAID 15.03.77 ZAIDAN HOJIN BISEIB B04 D16 =US 4151-347
Isolation of coformycin and related cpds. from aq. soln. - 92049A/51
•ZENK- 02.09.77 ZENKOKU TSUKEMONO K D13 *J5 4041-348
Prodn. of pickle - 36014B/19
ZILL- 04.06.76 ZILLI & BELLINI D14 =US 4150-611
Machine to continuously stone and halve fruits esp. peaches - 21908A/12
ZOJA 04.08.77 AESCULAPIUS LAB CHI B05 D13 E11 =FR 2399-251
Extn. process for recovery of phospholipid(s) from animal organs - 16374B/09

8655-F BD
ZA 6701-303 Q00
NL -133-199 S35
CH -526-959 T47
CA -950-847 V30
AU 6718-613 Q01
BE -695-122 Q01
FM ---6-516 Q01
US 3477-914 Q01
NL 6703-623 Q01
J6 8006-690 Q01
GB 1132-676 Q01
FR 1527-870 Q01
SU -520-055 Y14
DS 1617-397 B19

5910-F BCDE
NL 6810-408 Q00+
ZA 6804-792 Q00
BE -718-398 Q00
CA -827-702 Q00
CH -483-789 R12
7 0016-236 R23
GB 1227-167 S13
US 3592-929 S32
US 3592-892 S32
DS 1668-195 X18
DS 1642-062 Y19
DS 1642-066 A39
DS 1642-065 B19

285-R DJ
GB 1185-290 R12
E -747-895 R39
T 2014-498 S42
S 2014-498 B19+

896-R DE
T 2026-056 R48+
H -545-285 V07
H -557-813 W09
S 3890-353 W26+
S 2026-056 W29+
S 3904-651 W38+
S 3907-831 W40+
L 7007-855 R48
R 2043-784 S17
B 1266-093 T10
B 1266-092 T10
B 1266-091 T10
H -523-879 T34
7 9008-677 B19+

666-S DJK
S 3549-526 S06
E -756-320 S12
A 7006-096 S40
L 7013-506 T13
T 2045-492 T13
A -927-532 U25
R 2105-032 T29+
A -953-825 V37+
B 1329-016 U36
A -953-826 V37
9008-469 B19+
9008-468 B19+

198-S D
-757-382 S16
1951-557 S24
2065-350 S42
B 1259-427 T01
S 3765-833 U44
1951-557 Y27
9008-721 B19

321-S AD
2063-099 S27
7018-731 S28
H -507-714 S32
2072-066 S51
B 1300-988 T52
S 3729-007 U19
A -940-785 V06
2063-099 B19

472-S DE
A -878-421 S34+
1695-505 B19+

327-S D
B 1248-645 S39
1959-851 B19

525-S BD
2121-994 S48
2091-133 T16
B 1313-041 U15

US 3730-842 U20
CA -949-770 V28
SU -409-428 W42
J4 6006-848 B19
J7 9008-746 B19

01836-T BDE
DT 2130-393 T02
NL 7108-564 T02
J4 7001-573 T06
FR 2100-811 T26
CH -548-978 V26
GB 1358-721 V27
CH -550-770 V30
CA -979-912 X01
J7 5038-101 X02
J5 1125-054 X51
NL 7811-648 B19

06277-T DE
BE -769-985 T04
NL 7108-954 T08
DT 2038-804 T08
FR 2105-848 T30
GB 1352-408 V19
US 3836-554 V39
DS 2038-804 B19

08494-T D
DT 2034-796 T06
DS 2034-796 B19

44570-T BDE
DT 2163-868 T28+
NL 7117-650 T28
J4 7013-411 T31
FR 2119-580 T48
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CH -544-511 V07
CH -544-803 V07
GB 1379-038 W01+
CH -557-645 W09
CH -561-271 W21
US 3928-402 X01+
US 3953-377 X19+
J5 1125-014 X51+
J7 8001-824 A07+
J7 9008-652 B19+

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FR 2125-582 U02
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US 3878-191 W17
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CA -991-574 X28
J7 9008-752 B19

74405-T BD
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J4 7028-188 T51
FR 2126-437 U03
US 3763-006 U41
GB 1381-932 W05+
CA -989-341 X23+
J7 7012-276 Y17
J7 7024-117 Y29
DS 2209-078 A07+
J4 8001-190 B19
J7 9008-755 B19

81644-T DH
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NL 7207-506 T52
BE -784-347 U01
ZA 7203-790 U17
CH -529-265 U22
DL --97-692 U27
GB 1396-155 W23
IL --39-509 W25
CA -992-005 X29
NL -154-290 Y37
US 4151-081 B19+

02884-U BD
DT 2227-739 U03
GB 1395-907 W22
US 3977-943 X37
CH -584-755 Y16
US 4071-536 A07
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J7 9008-753 B19

10858-U D
BE -787-791 U08
NL 7212-319 U14
DT 2146-403 U15
FR 2152-922 U26
J4 8040-259 U31
CH -544-039 V03
DS 2146-403 W28
GB 1401-874 W32
US 4029-574 Y25
J7 9008-031 B19

11179-U D
DL --94-329 U09
DL --94-329 B19

15004-U D
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BE -787-773 U14
FR 2150-473 U23
DT 2222-205 U48
ZA 7205-756 V22+
CH -556-141 V52+
GB 1407-823 W39+
CA 1000-556 X51+
OE 7207-201 Y05
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DS 2222-205 B19

19943-U BD
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NL 7212-811 U15
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GB 1385-319 W09+
US 3907-645 W40+
US 3907-642 W40+
SW 7601-808 X41+
J5 2052-692 Y23+
J5 2057-394 Y25+
CH -588-077 Y27+
CH -596-553 A15+
J5 3094-994 A38+
J5 3107-897 A43+
CA 1046-437 B05+
J7 9008-318 B19+

27726-U DE
NL 7214-520 U20
BE -790-592 U20
DT 2252-882 U21
FR 2158-018 U34
US 3879-560 W18+
GB 1397-622 W24
CH -570-163 X07
OE 7209-143 X20
US 4002-671 Y04+
CA 1024-446 A06
US 4151-301 B19+

52956-U BD
J4 8040-993 U37
J7 9008-747 B19

74861-U D
J4 8062-971 U49
J7 9008-737 B19

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NL 7308-139 V01+
DT 2330-328 V03+
J4 9032-933 V43
J4 9018-924 V43
GB 1423-633 X06+
US 3971-766 X32+
US 3983-297 X41+
CA 1012-683 Y27+
NL -153-594 Y28+
DS 2330-328 B19+

06377-V D
J4 8075-786 V04
J7 9008-758 B19

38274-V ADEF
BE -807-058 V21
NL 7315-251 V22
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ZA 7308-611 V43
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DL -110-292 W11
OE 7309-401 W19
GB 1427-379 X11
CH -573-010 X15
J7 9005-409 B15
DS 2255-058 B19

64910-V D
DT 2404-848 V37
FR 2218-822 V51+
DS 2404-848 B19

69810-V AD
DT 2411-760 V40
FR 2221-115 W02
J5 0000-687 W10
GB 1430-303 X14+
J7 9008-039 B19

79254-V D
BE -814-332 V46+
NL 7405-748 V46+
DT 2419-729 V47+
FR 2227-228 W08+
PT --61-848 W20+
ZA 7402-563 W22
AR -201-767 W46+
GB 1445-799 X33+
NL -154-708 Y47+
CA 1033-306 A27+
J5 0026-774 B19+
J7 9008-473 B19+

83108-V DJ
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BE -814-799 V48
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DK 7402-521 W03
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GB 1468-928 Y13
OE 7403-904 Y31
J5 0015-788 B19
J7 9008-471 B19

27301-W DJ
US 3876-548 W16+
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NL 7500-429 W32
SW 7415-877 W37
NO 7500-156 W38
SF 7500-093 W44
FR 2258-213 W45
DK 7406-892 W46
IL --46-322 X45
OE 7500-133 Y22
CH -591-273 Y41
GB 1500-733 A06
CA 1036-076 A34
DS 2501-547 B19

31398-W BD
J4 9110-882 W19
US 3911-111 W42
J7 9008-759 B19

40938-W BD
BE -822-843 W25+
NL 7415-037 W26+
SW 7415-324 W31+
DK 7406-370 W35+
SF 7403-513 W36+
J5 0089-588 W37+
FR 2254-026 W39+
AR -201-067 W40+
DL -115-759 X01+
DT 2439-348 X11+
ZA 7407-732 X13
GB 1435-400 X20+
DT 2361-169 W26
HU T012-561 X50+
OE 7409-740 Y01+
DK 7604-668 Y05+
CS 7408-375 Y10
IL --46-073 Y26+
DS 2439-348 Y38
DS 2361-169 A04
CS 7602-701 A43
IT 1026-827 B01+
CA 1044-582 B02+
SU -613-731 B19

48101-W CDF
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NL 7500-083 W30
NO 7500-021 W35
DK 7406-901 W41
FR 2256-727 W43
SW 7500-072 X10
CS 7500-057 Y33
OE 7500-042 B04
DS 2500-200 B19

60808-W ABDE
DT 2508-778 W37
BE -826-112 W37
NL 7500-922 W38
J5 0117-709 W46
FR 2272-971 X12
US 3981-896 X40
OE 7501-589 Y01
GB 1481-577 Y31
CH -601-156 A28
J7 9008-649 B19

68361-W ABDJ
NL 7503-577 W41+
SW 7503-445 W46+
FR 2265-449 X03+
DT 2512-920 X38+
J5 1095-989 X41
J5 0125-979 Y51
J7 7046-555 Y51
GB 1499-174 A04+
US 4118-336 A41
US 4123-381 A45
DS 2512-920 B15+
J7 9008-549 B19

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NL 7503-335 W44
DT 2418-362 W47
SW 7503-217 W49
FR 2267-757 X06
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CA 1050-892 B13
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NL 7504-453 W44+
DT 2516-020 W48+
SW 7503-724 W49+
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CA 1044-072 B01
GB 1545-320 B19+

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NL 7602-760 X41
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